

FINANCIAL INFORMATION EXCHANGE PROTOCOL (FIX)

Version 4.4 with Errata 20030618

VOLUME 1 – INTRODUCTION TO THE FIX PROTOCOL

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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PREFACE

The Financial Information eXchange (FIX) effort was initiated in 1992 by a group of institutions and brokers interested in streamlining their trading processes. These firms felt that they, and the industry as a whole, could benefit from efficiencies derived through the electronic communication of indications, orders and executions. The result is FIX, an open message standard controlled by no single entity, that can be structured to match the business requirements of each firm. The benefits are:

- * From the business flow perspective, FIX provides institutions, brokers, and other market participants a means of reducing the clutter of unnecessary telephone calls and scraps of paper, and facilitates targeting high quality information to specific individuals.
- * For technologists, FIX provides an open standard that leverages the development effort so that they can efficiently create links with a wide range of counter-parties.
- * For vendors, FIX provides ready access to the industry, with the incumbent reduction in marketing effort and increase in potential client base.

Openness has been the key to FIX's success. For that reason, while encouraging vendors to participate with the standard, FIX has remained vendor neutral. Similarly, FIX avoids over-standardization. It does not demand a single type of carrier (e.g., it will work with leased lines, frame relay, Internet, etc.), nor a single security protocol. It leaves many of these decisions to the individual firms that are using it. We do expect that, over time, the rules of engagement in these non-standardized areas will converge as technologies mature.

FIX is now used by a variety of firms and vendors. It has clearly emerged as the inter-firm messaging protocol of choice. FIX has grown from its original buy-side-to-sell-side equity trading roots. It is now used by markets (exchanges, "ECNs", etc) and other market participants. In addition to equities, FIX currently supports four other products: Collective Investment Vehicles (CIVs), Derivatives, Fixed Income, and Foreign Exchange. The process for modifications to the specification is very open with input and feedback encouraged from the community. Those interested in providing input to the protocol are encouraged use the FIX website Discussion section or contact the FIX Global Technical Committee Chairpersons, Scott Atwell, American Century Investments, (US) 816-340-7053 (scott_atwell@americancentury.com) or Dean Kauffman, TradeWeb LLC, (US) 201-536-5827 (dean.kauffman@tradeweb.com). **The FIX website at <http://www.fixprotocol.org> is the main source of information, discussion, and notification of FIX-related events.**

We look forward to your participation.

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About FIX Protocol Limited

FIX Protocol Limited (FPL) oversees and manages the development of the FIX Protocol specification and encourages its use throughout the industry. FPL is open to due paying members representing business and technology professionals interested in guiding the growth and adoption of the FIX Protocol that work for: Buy-side Firms, Sell-side Firms, Exchanges, ECNs/ATSS, Utilities, Vendors, and Other Associations. See the FIX website for more information about membership.

FIX Protocol Limited is represented by the following high-level organization structure:

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- [Asia/Pac Region](#)
- [Europe Region](#)
- [Japan Region](#)
- [Global Derivatives](#)
- [Global Education & Marketing**](#)
- [Global Fixed Income](#)
- [Global Technical***](#)

* Position on committee through appointment/election
 ** Consist of members of each Region/Product Education & Marketing Subcommittee
 *** Consists of members of each Region/Product Technical Subcommittee
 Note: Position on committee governance boards also by appointment/election

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|-------------------------------------|--------------------------------------|---|
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| Alliance Capital | Cazenove | E*TRADE Group |
| Allianz Dresdner Asset Management | CBOE | Euronext-Liffe |
| American Century | CBOT | F&C Management Ltd |
| AXA Rosenberg | Charles River Development | Fidelity Capital Markets |
| Baillie Gifford | Citygroup Global Markets Inc. | Fidelity Investments |
| Bank of America Securities | CityIQ | Fimat |
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| Barclays Stockbrokers | CME | Franklin Templeton Investments |
| Baring Asset Management | | Gartmore Investment Management Deleted: Commerzbank Securities |
| Bear Stearns | CSFB | GL Trade |
| BFT- Beauchamp Financial Technology | Daiwa Securities Group Inc. | Goldman Sachs |
| Bloomberg | DCE Consultants Ltd. | HSBC |
| Boston Stock Exchange | Deutsche Asset Management | ING Deleted: April 30, 2003 |
| Cameron Systems | Deutsche Securities | Insight Investment |

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|--|------------------------------------|---|
| Instinet | New York Stock Exchange | SimCorp |
| ITG | Newton Investment Management Ltd. | SolutionForge Ltd. |
| JF Asset Management | Nikko Asset Management | SunGard |
| JP Morgan Securities | Nomura Asset Management | SynTEGRA |
| Knight Securities | Nomura Securities | SWIFT |
| Lehman Brothers | Northern Trust | The Sumitomo Trust & Banking Co., Ltd |
| London Stock Exchange | NYFIX/Javelin Technologies | Thomson Financial |
| MacGregor | OM | TNS |
| Market Axess | Omgeo | Townsend Analytics |
| Massachusetts Financial | Options Clearing Corporation (OCC) | TradeWeb |
| Merrill Lynch | Putnam Investments | UBS Warburg |
| Mitsui Asset Trust and Banking Co., Ltd. | Radianz | Vint-x |
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| | |
|----|--------------|
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| 61 | Inserted: 62 |
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FINANCIAL INFORMATION EXCHANGE PROTOCOL

INTRODUCTION

The Financial Information Exchange (FIX) Protocol is a message standard developed to facilitate the electronic exchange of information related to securities transactions. It is intended for use between trading partners wishing to automate communications.

The message protocol, as defined, will support a variety of business functions. FIX was originally defined for use in supporting US domestic equity trading with message traffic flowing directly between principals. As the protocol evolved, a number of fields were added to support cross-border trading, derivatives, fixed income, and other products. Similarly, the protocol was expanded to allow third parties to participate in the delivery of messages between trading partners. As subsequent versions of FIX are released, it is expected that functionality will continue to expand.

The protocol is defined at two levels: session and application. The session level is concerned with the delivery of data while the application level defines business related data content. This document is divided into volumes and organized to reflect the distinction.

DOCUMENT NAVIGATION

One useful tip when navigating within a volume is to take advantage of the fact that each document contains “bookmarks” to its main sections. You can use the word processor’s “Goto” function (e.g. Ctrl-G) to quickly navigate from one key section or appendix to another.

Third parties or volunteers have historically built useful utilities “generated” using the specification document as their basis which provide cross-reference and lookup capabilities. Such free utilities are available via the FIX website.

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FIX PROTOCOL SYNTAX

The FIX Protocol currently exists in two syntaxes:

1. "Tag=Value" syntax
2. FIXML syntax

The same business message flow applies to either syntax. A specific syntax is simply a slightly different way to represent the same thing in much the same way that "3" and "three" represent the same thing.

COMMON FIX SYNTAX RULES

The following section summarizes general specifications for constructing FIX messages which are applicable to both "Tag=Value" and FIXML syntaxes.

Data Types:

Data types (with the exception of those of type "data") are mapped to ASCII strings as follows:

- **int:** Sequence of digits without commas or decimals and optional sign character (ASCII characters "-" and "0" - "9"). The sign character utilizes one byte (i.e. positive int is "99999" while negative int is "-99999"). Note that int values may contain leading zeros (e.g. "00023" = "23").

Examples: 723 in field 21 would be mapped int as |21=723|.
 -723 in field 12 would be mapped int as |12=-723|

-
- **Length:** int field (see definition of "int" above) representing the length in bytes. Value must be positive.
- **NumInGroup:** int field (see definition of "int" above) representing the number of entries in a repeating group. Value must be positive.
- **SeqNum:** int field (see definition of "int" above) representing a message sequence number. Value must be positive.
- **TagNum:** int field (see definition of "int" above) representing a field's tag number when using FIX "Tag=Value" syntax. Value must be positive and may **not** contain leading zeros.
- **DayOfMonth:** int field (see definition of "int" above) representing a day during a particular month (values 1-31).
- **float:** Sequence of digits with optional decimal point and sign character (ASCII characters "-", "0" - "9" and "."); the absence of the decimal point within the string will be interpreted as the float representation of an integer value. All float fields must accommodate up to fifteen significant digits. The number of decimal places used should be a factor of business/market needs and mutual agreement between counterparties. Note that float values may contain leading zeros (e.g. "00023.23" = "23.23") and may contain or omit trailing zeros after the decimal point (e.g. "23.0" = "23.0000" = "23" = "23.").

~~▼ Note that fields which are derived from float may contain negative values unless explicitly specified otherwise.~~

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- **Qty:** float field (see definition of “float” above) capable of storing either a whole number (no decimal places) of “shares” (securities denominated in whole units) or a decimal value containing decimal places for non-share quantity asset classes (securities denominated in fractional units).
- **Price:** float field (see definition of “float” above) representing a price. Note the number of decimal places may vary. For certain asset classes prices may be negative values. For example, prices for options strategies can be negative under certain market conditions. Refer to *Volume 7: FIX Usage by Product* for asset classes that support negative price values.
- **PriceOffset:** float field (see definition of “float” above) representing a price offset, which can be mathematically added to a "Price". Note the number of decimal places may vary and some fields such as LastForwardPoints may be negative.
- **Amt:** float field (see definition of “float” above) typically representing a Price times a Qty.
- **Percentage:** float field (see definition of “float” above) representing a percentage (e.g. .05 represents 5% and .9525 represents 95.25%). Note the number of decimal places may vary.

- **char:** Single character value, can include any alphanumeric character or punctuation except the delimiter. All char fields are case sensitive (i.e. **m** ≠ **M**).
 - **Boolean:** a char field (see definition of “char” above) containing one of two values:
 - 'Y' = True/Yes
 - 'N' = False/No
- **String:** Alpha-numeric free format strings, can include any character or punctuation except the delimiter. All char fields are case sensitive (i.e. **morstatt** ≠ **Morstatt**).
 - **MultipleValueString:** String field (see definition of “String” above) containing one or more space delimited values.
 - **Country:** String field (see definition of “String” above) representing a country using ISO 3166 Country code (2 character) values.
Valid values:
 - *See "Appendix 6-B - FIX Fields Based Upon Other Standards"*
 - **Currency:** String field (see definition of “String” above) representing a currency type using ISO 4217 Currency code (3 character) values.
Valid values:
 - *See "Appendix 6-A - Currency Codes - ISO 4217 Currency codes"*
 - **Exchange:** String field (see definition of “String” above) representing a market or exchange.
Valid values:
 - *See "Appendix 6-C - Exchange Codes - ISO 10383 Market Identifier Code (MIC)"*

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- **month-year:** String field representing month of a year. An optional day of the month can be appended or an optional week code.

Valid formats:

YYYYMM
 YYYYMMDD
 YYYYMMWW

Valid values:

- YYYY = 0000-9999, MM = 01-12, DD = 01-31, WW = w1, w2, w3, w4, w5.
- **UTCTimestamp:** Time/date combination represented in UTC (Universal Time Coordinated, also known as “GMT”) in **either** YYYYMMDD-HH:MM:SS (whole seconds) or YYYYMMDD-HH:MM:SS.sss (milliseconds) format, colons, dash, and period required.

Valid values:

- YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-60 (60 only if UTC leap second) (without milliseconds).
- YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-60 (60 only if UTC leap second), sss=000-999 (indicating milliseconds).

Leap Seconds: Note that UTC includes corrections for leap seconds, which are inserted to account for slowing of the rotation of the earth. Leap second insertion is declared by the International Earth Rotation Service (IERS) and has, since 1972, only occurred on the night of Dec. 31 or Jun 30. The IERS considers March 31 and September 30 as secondary dates for leap second insertion, but has never utilized these dates. During a leap second insertion, a *UTCTimestamp* field may read "19981231-23:59:59", "19981231-23:59:60", "19990101-00:00:00". (see <http://tycho.usno.navy.mil/leapsec.html>)

- **UTCTimeOnly:** Time-only represented in UTC (Universal Time Coordinated, also known as “GMT”) in **either** HH:MM:SS (whole seconds) or HH:MM:SS.sss (milliseconds) format, colons, and period required. This special-purpose field is paired with UTCDateOnly to form a proper UTCTimestamp for bandwidth-sensitive messages.

Valid values:

- HH = 00-23, MM = 00-60 (60 only if UTC leap second), SS = 00-59. (without milliseconds)
- HH = 00-23, MM = 00-59, SS = 00-60 (60 only if UTC leap second), sss=000-999 (indicating milliseconds).
- **UTCDateOnly:** Date represented in UTC (Universal Time Coordinated, also known as “GMT”) in YYYYMMDD format. This special-purpose field is paired with UTCTimeOnly to form a proper UTCTimestamp for bandwidth-sensitive messages.

Valid values:

- YYYY = 0000-9999, MM = 01-12, DD = 01-31.

- ~~**LocalMktDate:** Date of Local Market (vs. UTC) in YYYYMMDD format. This is the “normal” date field used by the FIX protocol.~~

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Valid values:

- YYYY = 0000-9999, MM = 01-12, DD = 01-31.
- **data:** Raw data with no format or content restrictions. Data fields are always immediately preceded by a length field. The length field should specify the number of bytes of the value of the *data* field (up to but not including the terminating SOH). *Caution: the value of one of these fields may contain the delimiter (SOH) character. Note that the value specified for this field should be followed by the delimiter (SOH) character as all fields are terminated with an "SOH".*

Required Fields:

Each message within the protocol is comprised of *required*, *optional* and *conditionally required* (fields which are required based on the presence or value of other fields) fields. Systems should be designed to operate when only the required and conditionally required fields are present.

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FIX “Tag=Value” SYNTAX

The following section summarizes general specifications for constructing FIX messages in “Tag=Value” syntax.

Message Format

The general format of a FIX message is a standard header followed by the message body fields and terminated with a standard trailer.

Each message is constructed of a stream of <tag>=<value> fields with a field delimiter between fields in the stream. Tags are of data type *TagNum*. **All tags must have a value specified. Optional fields without values should simply not be specified in the FIX message. A Reject message is the appropriate response to a tag with no value.**

Except where noted, fields within a message can be defined in any sequence (Relative position of a field within a message is inconsequential.) The exceptions to this rule are:

1. **General message format is composed of the standard header followed by the body followed by the standard trailer.**
2. **The first three fields in the standard header are BeginString (tag #8) followed by BodyLength (tag #9) followed by MessageType (tag #35).**
3. **The last field in the standard trailer is the CheckSum (tag #10).**
4. **Fields within repeating data groups must be specified in the order that the fields are specified in the message definition within the FIX specification document. The NoXXX field where XXX is the field being counted specifies the number of repeating group instances that must immediately precede the repeating group contents.**
5. **A tag number (field) should only appear in a message once. If it appears more than once in the message it should be considered an error with the specification document. The error should be pointed out to the FIX Global Technical Committee.**

In addition, certain fields of the data type *MultipleValueString* can contain multiple individual values separated by a space within the “value” portion of that field followed by a single “SOH” character (e.g. “18=2 9 C<SOH>” represents 3 individual values: ‘2’, ‘9’, and ‘C’).

It is also possible for a field to be contained in both the clear text portion and the encrypted data sections of the same message. This is normally used for validation and verification. For example, sending the *SenderCompID* in the encrypted data section can be used as a rudimentary validation technique. In the cases where the clear text data differs from the encrypted data, the encrypted data should be considered more reliable. (A security warning should be generated).

Field Delimiter:

All fields (including those of data type *data* i.e. SecureData, RawData, SignatureData, XmlData, etc.) in a FIX message are terminated by a delimiter character. The non-printing, ASCII “SOH” (#001, hex: 0x01, referred to in this document as <SOH>), is used for field termination. Messages are delimited by the “SOH” character following the CheckSum field. All messages begin with the “8=FIX.x.y<SOH>” string and terminate with “10=nnn<SOH>”.

There shall be no embedded delimiter characters within fields except for data type *data*.

Repeating Groups:

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It is permissible for fields to be repeated within a repeating group (e.g. "384=2<SOH>372=6<SOH>385=R<SOH>372=7<SOH>385=R<SOH>" represents a repeating group with two repeating instances "delimited" by tag 372 (first field in the repeating group).)

- If the repeating group is used, the first field of the repeating group is required. This allows implementations of the protocol to use the first field as a "delimiter" indicating a new repeating group entry. The first field listed after the NoXXX, then becomes conditionally required if the NoXXX field is greater than zero.
- The NoXXX field (for example: NoTradingSessions, NoAllocs) which specifies the number of repeating group instances occurs once for a repeating group and must immediately precede the repeating group contents.
- The NoXXX field is required if one of the fields in the repeating group is required. If all members of a repeating group are optional, then the NoXXX field should also be optional.
- If a repeating group field is listed as required, then it must appear in every repeated instance of that repeating group.
- Repeating groups are designated within the message definition via indentation and the → symbol.

Some repeating groups are nested within another repeating group (potentially more than one level of nesting).

- Nested repeating groups are designated within the message definition via indentation and the → symbol followed by another → symbol.
- If a nested repeating group is used, then the outer repeating group must be specified

Example of a repeating group:

| <i>Part of message</i> | | | | |
|--------------------------------------|--------------|--------------------|---|--|
| 215 | NoRoutingIDs | | N | Required if any RoutingType and RoutingIDs are specified. Indicates the number within repeating group. |
| → | 216 | <i>RoutingType</i> | N | Indicates type of RoutingID. Required if NoRoutingIDs is > 0. |
| → | 217 | <i>RoutingID</i> | N | Identifies routing destination. Required if NoRoutingIDs is > 0. |
| <i>Rest of the message not shown</i> | | | | |

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Example of nested repeating group

| Portion of New Order - List message showing a nested repeating group for allocations for each order. Note the NoAllocs repeating group is nested within the NoOrders repeating group and as such each instance of the orders repeating group may contain a repeating group of allocations. | | | | | |
|---|---------------------------|---------------------------------|-------------------|--|---|
| 73 | NoOrders | | Y | Number of orders in this message (number of repeating groups to follow) | |
| → | 11 | ClOrdID | Y | Must be the first field in the repeating group. | |
| → | 526 | SecondaryClOrdID | N | | |
| → | 67 | ListSeqNo | Y | Order number within the list | |
| → | 583 | ClOrdLinkID | N | | |
| → | 160 | SettlInstMode | N | | |
| → | component block <Parties> | | N | Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" | |
| → | 229 | TradeOriginationDate | N | | |
| → | 1 | Account | N | | |
| → | 581 | AccountType | N | | |
| → | 589 | DayBookingInst | N | | |
| → | 590 | BookingUnit | N | | |
| → | 591 | PreallocMethod | N | | |
| → | 78 | NoAllocs | N | Indicates number of pre-trade allocation accounts to follow | |
| → | → | 79 | AllocAccount | N | Required if NoAllocs > 0. Must be the first field in the repeating group. |
| → | → | 467 | IndividualAllocID | N | |
| → | → | component block <NestedParties> | N | Insert here the set of "Nested Parties" (firm identification "nested" within additional repeating group) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" | |
| → | → | 80 | AllocQty | N | |
| → | 63 | SettlmntTyp | N | | |
| → | 64 | FutSettDate | N | Takes precedence over SettlmntTyp value and conditionally required/omitted for specific SettlmntTyp values. | |
| <i>Rest of the message not shown</i> | | | | | |

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User Defined Fields:

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In order to provide maximum flexibility for its users, the FIX protocol accommodates *User Defined Fields*. These fields are intended to be implemented between consenting trading partners and should be used with caution to avoid conflicts, which will arise as multiple parties begin implementation of the protocol. It is suggested that if trading partners find that particular User Defined Fields add value, they should be recommended to the FIX Global Technical Committee for inclusion in a future FIX version.

The tag numbers 5000 to 9999 have been reserved for use with user defined fields, which are used as part of inter-firm communication. These tags can be registered/reserved via the FIX website.

The tag numbers greater than or equal to 10000 have been reserved for internal use (within a single firm) and do not need to be registered/reserved via the FIX website.

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Example Usage of Encoded Fields For Japanese Language Support

Example 1 - Specify the ASCII/English value as Issuer plus Japanese character set as EncodedIssuer

| Tag | Field Name | Value |
|--|------------------|-----------|
| <i>...Other Standard Header fields</i> | | |
| 347 | MessageEncoding | Shift_JIS |
| <i>...Other Standard Header fields</i> | | |
| <i>...Other Message Body fields</i> | | |
| 106 | Issuer | HITACHI |
| 348 | EncodedIssuerLen | 10 |
| 349 | EncodedIssuer | 日立製作所 |
| <i>...Other Message Body fields</i> | | |

Example 2 - Specify the ASCII/English value as Issuer plus Japanese character set as EncodedIssuer. Specify the ASCII/English value as Text plus Japanese character set as EncodedText.

| Tag | Field Name | Value |
|--|------------------|----------------|
| <i>...Other Standard Header fields</i> | | |
| 347 | MessageEncoding | Shift_JIS |
| <i>...Other Standard Header fields</i> | | |
| <i>...Other Message Body fields</i> | | |
| 106 | Issuer | HITACHI |
| 348 | EncodedIssuerLen | 10 |
| 349 | EncodedIssuer | 日立製作所 |
| <i>...Other Message Body fields</i> | | |
| 58 | Text | This is a test |
| 356 | EncodedTextLen | 17 |
| 357 | EncodedText | これはテストです。 |
| <i>...Other Message Body fields</i> | | |

Precautions when using UNICODE

There is the possibility that an SOH may be included in the character data when using UNICODE encoding. To avoid parsing problems, a FIX engine should use the EncodedLen value to extract the proper number of bytes.

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FIXML SYNTAX

Background

The FPL FIXML Working Group began investigating the XML format in 1998 and published a White Paper supporting an evolutionary approach to migrating the FIX Protocol to an XML format. The working group released an initial version of the FIXML DTDs on January 15th, 1999. There are currently DTDs based on FIX Protocol versions 4.1, 4.2 and 4.3. A FIXML Schema based version of FIXML will be provided after the release of FIX 4.4. The FIXML Schema version will be able to provide reduced message size via the use of attributes and contextual abbreviations.

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FIXML Highlights

- FIXML is the XML vocabulary for creating FIX messages.
- Uses the same FIX data dictionary and business logic.
- Focuses primarily on the FIX Application Messages and does not provide a session layer.
- Can be encapsulated within the FIX Session Protocol or within another protocol like MQ Series, TIBCO, SOAP, etc.

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This document incorporates FIXML in two distinct ways:

- 1) A reference to the FIXML element corresponding to the message name is provided for each message.
- 2) Each item in the data dictionary has a corresponding DTD equivalent provided in the data dictionary in Volume 6. This will be expanded to include the FIXML Schema definition for the field.

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Note: The DTD, followed by the FIXML 4.4 Schema, shall be the official standard specification in the event of a discrepancy between the specification documents and the DTD and Schema documents.

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FIXML 4.4 will also eventually be supplemented by an XML Schema version, which has recently been approved as a W3C Recommendation. The XML Schema version of FIXML will contain optimizations to optimize transport efficiency by decreasing message size. Increased usage of attributes and incorporation of contextual abbreviations within messages will accomplish the transport optimization. Contextual abbreviations are the removal of field prefixes that are obvious from within the context that the message is used.

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FIXML Design Rules

General

Elements can contain other Elements, EMPTY content, or PCDATA (text) content and Attributes.

Element names within FIXML start with the full names from the FIX specification and are abbreviated using the abbreviations specified as an appendix to this volume. FIXML uses camel case notation in which elements and attributes may be made up of multiple abbreviated words with each abbreviation beginning with a capital letter

FIXML requires content to be ordered. This differs from the traditional FIX approach (“tag=value” syntax) which allows fields to be in any order (other than the first couple and last).

The FIXML is composed of ComponentTypes that correspond to the components that make up the FIX protocol specification.

The following component types are defined for FIXML.

| FIXML ComponentType | Description |
|---------------------|---|
| Message | Corresponds to a FIX message from the FIX specification |
| Field | FIX Field |
| Block | FIX Component Block - group of fields that are related and always appear together. Examples: Instrument Component Block Component Blocks for FIX and FIXML are specified within this volume. |
| RepeatingGroup | A repeating group of fields within a FIX Message The cardinality of the repeating group is defined with a field of type NumInGroup. FIXML does not require a separate data item to store the cardinality (number of items in the group). However, meta data for the NumInGroup field associated with a repeating group is provided to assist in mapping between FIX and FIXML. |
| BlockRepeating | FIX Component Block that is also a repeating group, such as Parties Component Block. |

FIXML provides metadata for each ComponentType that provides a mapping to the FIX document (such as Fullname of the field, tag value, FIX datatype). Metadata is provided as XML attributes within the DTD for FIXML. Metadata is provided as elements to the data type definitions for each component within the FIXML Schema version. **Validation of these attributes must happen at the application level.**

The meta data items for each ComponentType are defined below.

ComponentType - Field

Fields are the basic data elements that make up a FIX message. Each field is given a tag number and a FIX data type. Enumerations and value ranges are optionally used for fields.

Meta data provided for FIXML Fields

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| FIXML Field Metadata | |
|-----------------------------|---|
| Metadata Item | Description |
| <u>FIXTag</u> | <u>contains the FIX Protocol Field ID (Tag number)</u> |
| <u>DataType</u> | <u>One of the FIX datatypes defined in this specification (char, int, float, etc.).</u> |
| <u>FullName</u> | <u>Full name of the field within the FIX specification prior to abbreviation</u> |
| <u>ComponentType</u> | <u>"Field"</u> |
| <u>Value</u> | <u>Enumerated values - if applicable</u> |
| <u>SDValue</u> | <u>Self Describing values that correspond to the enumerated values in the Value attribute</u> |

Templates used to generate Fields in DTD

Fields that use enums and values

```

<!ELEMENT **XMLName** EMPTY>
<!-- **XMLName**
  FIXTag CDATA #FIXED '**Tag**'
  DataType CDATA #FIXED '**Type**'
  FullName CDATA #FIXED '**FieldName**'
  ComponentType CDATA #FIXED 'Field'
  Value **Value** #REQUIRED
  SDValue **SDValue** #IMPLIED >

```

Fields that use others standards or enums only

```

<!ELEMENT **XMLName** EMPTY>
<!-- **XMLName**
  FIXTag CDATA #FIXED '**Tag**'
  DataType CDATA #FIXED '**Type**'
  FullName CDATA #FIXED '**FieldName**'
  ComponentType CDATA #FIXED 'Field'
  Value **Value** #REQUIRED >

```

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Other fields

```
<!ELEMENT **XMLName** (#PCDATA)>
<!ATTLIST **XMLName**
  FIXTag CDATA #FIXED '**Tag**'
  DataType CDATA #FIXED '**Type**'
  FullName CDATA #FIXED '**FieldName**'
  ComponentType CDATA #FIXED 'Field' >
```

Field Example in DTD

```
<!ELEMENT OrdQty (#PCDATA)>
<!ATTLIST OrdQty
  FIXTag CDATA #FIXED "38"
  DataType CDATA #FIXED "Qty"
  FullName CDATA #FIXED "OrderQty"
  ComponentType CDATA #FIXED "Field"
>
```

FIXML allows for the XML parser to validate enumerations from the FIX Specification. These elements are defined with EMPTY content models and an attribute called **Value**. The acceptable values for FIXML attribute enumerations come from the FIX Specification. An optional attribute list named **SDValue** (SelfDescribingValue) contains the human-readable equivalent of the FIX specification values. The linkage between Value and SDValue cannot be validated using the DTD.

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```
<!ELEMENT SettTyp EMPTY>
<!ATTLIST SettTyp
  FIXTag CDATA #FIXED "63"
  DataType CDATA #FIXED "char"
  FullName CDATA #FIXED "SettType"
  ComponentType CDATA #FIXED "Field"
  Value (0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9) #REQUIRED
  SDValue (Regular | Cash | NextDay | T2 | T3 | T4 | Future | WhenIssued | T5 | T1) #IMPLIED
>
```

ComponentType - Block

The FIX Component Blocks defined in Volume 1 that do not start off with a repeating group are identified as "Block" within FIXML.

Meta data provided for FIXML Blocks

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FIXML Block Metadata

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| Metadata Item | Description |
|----------------------|--|
| <u>FullName</u> | <u>Full name of the field within the FIX specification prior to abbreviation</u> |
| <u>Category</u> | <u>Name of the category to which the element belongs</u> |
| <u>ComponentType</u> | <u>"Block"</u> |

Template used to generate Component Blocks in DTD

```

<!ENTITY % **CompName**Custom "" >
<!ENTITY % **CompName**Content "***FieldList** %**CompName**Custom;" >
<!ELEMENT **CompName** (%**CompName**Content;)>
<!ATTLIST **CompName**
  FullName CDATA #FIXED "***ComponentName**"
  ComponentType CDATA #FIXED "Block"
  Category CDATA #FIXED "Common">

```

Block Example

```

<!ENTITY % InstrmtCustom "">
<!ENTITY % InstrmtContent "Sym?, SymSfx?, SecID?, SecIDSrc?, SecAltIDGrp*, Prod?,
CFICode?, SecTyp?, SecSubTyp?, MatMoYr?, MatDt?, CpnPmtDt?, IssDt?, RepoCollSecTyp?,
RepoTrm?, RepoRt?, Fctr?, CreditRtng?, InstrRgstry?, CtryOfIss?, StOrProvinceOfIss?,
LocaleOfIss?, RedDt?, StrkPx?, StrkCvy?, OptAttribute?, CntractMultiplier?, CpnRt?, SecExch?,
Issr?, EnclssrLen?, Enclssr?, SecDesc?, EncSecDescLen?, EncSecDesc?, Pool?, CntractSettlMo?,
CPPProgram?, CPRegTyp?, EventsGrp*, DtdDt?, IntAcrlDt? %InstrmtCustom;">
<!ELEMENT Instrmt (%InstrmtContent;)>
<!ATTLIST Instrmt
  FullName CDATA #FIXED "Instrument"
  ComponentType CDATA #FIXED "ComponentBlock"
  Category CDATA #FIXED "Common"
>

```

ComponentType - RepeatingGroup

Repeating groups from FIX messages have been identified. Many of the repeating groups are the same across multiple messages - even though they are not declared explicitly as component blocks. Repeating groups from within the spec that occur in multiple places have been identified in the repository as being implicit components. This permits the common naming and reuse of repeating group definitions across messages.

Meta data provided for FIXML Repeating Groups



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| Metadata Item | Description |
|-----------------------|---|
| <u>NumInGrp_FIELD</u> | <u>Name of the NumInGrp field that is used in the FIX tag=value version of FIX for the repeating group.</u> |
| <u>FIXTag</u> | <u>Tag # of the NumInGrp field</u> |
| <u>Category</u> | <u>Name of the category to which the element belongs</u> |
| <u>ComponentType</u> | <u>"RepeatingGroup"</u> |

Template used to generate RepeatingGroup component in DTD

```

<!ENTITY % **ElementName**Custom "" >
<!ENTITY % **ElementName**Content "**FieldList** %**ElementName**Custom." >
<!ELEMENT **ElementName** (%**ElementName**Content;)+>
<!ATTLIST **ElementName**
  NumInGrp_FIELD CDATA #FIXED '**CounterName**'
  FIXTag CDATA #FIXED '**CounterTag**'
  ComponentType CDATA #FIXED '**ComponentType**'
  Category CDATA #FIXED '**Category**' >

```

RepeatingGroup Example

```

<!ENTITY % AllocGrpCustom "">
<!ENTITY % AllocGrpContent "AllocAcct?, AllocAcctIDSrc?, MtchStat?, AllocPx?, AllocQty?,
IndAllocID?, ProcessCode?, NstPtys?, NotifyBrkrOfCredit?, AllocHandlInst?, AllocText?,
EncAllocTextLen?, EncAllocText?, CommData?, AllocAvgPx?, AllocNetMny?, SettlCurrAmt?,
AllocSettlCurrAmt?, SettlCcy?, AllocSettlCcy?, SettlCurrFxRt?, SettlCurrFxRtCalc?,
AllocAcrdIntAmt?, AllocIntAtMat?, MiscFeesGrp*, ClrInstGrp*, AllocSettlInstTyp?
%AllocGrpCustom.">
<!ELEMENT AllocGrp (%AllocGrpContent;)+>
<!ATTLIST AllocGrp
  NumInGrp_FIELD CDATA #FIXED "NoAllocs"
  FIXTag CDATA #FIXED "78"
  ComponentType CDATA #FIXED "RepeatingGroup"
  Category CDATA #FIXED "Allocation"
>

```

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ComponentType - BlockRepeating

Component Blocks that themselves are also repeating groups have been designated as BlockRepeating components within FIXML. This differentiation was done in order to minimize nesting of elements and to accommodate the additional meta data required for Repeating Groups (NumInGrp_FIELD, FIXTag).

Meta data provided for FIXML BlockRepeating

| FIXML BlockRepeating Metadata | |
|--------------------------------------|---|
| Metadata Item | Description |
| <u>NumInGrp_FIELD</u> | <u>Name of the NumInGrp field that is used in the FIX tag=value version of FIX for the repeating group.</u> |
| <u>FIXTag</u> | <u>Tag # of the NumInGrp field</u> |
| <u>Data Type</u> | <u>One of the FIX datatypes defined in this specification (char, int, float, etc.).</u> |
| <u>FullName</u> | <u>Full name of the field within the FIX specification prior to abbreviation</u> |
| <u>Category</u> | <u>Name of the category to which the element belongs</u> |
| <u>ComponentType</u> | <u>"BlockRepeating"</u> |

Template used to generate BlockRepeating Components in DTD (Same as RepeatingGroups template above)

```
<!ENTITY % **ElementName**Custom "" >
<!ENTITY % **ElementName**Content "**FieldList** %**ElementName**Custom;" >
<!ELEMENT **ElementName** (%**ElementName**Content;)+>
<!ATTLIST **ElementName**
  FullName CDATA #FIXED "**ComponentName**"
  NumInGrp_FIELD CDATA #FIXED '**CounterName**'
  FIXTag CDATA #FIXED '**CounterTag**'
  ComponentType CDATA #FIXED '**ComponentType**'
  Category CDATA #FIXED '**Category**'>
```

BlockRepeating Example

```
<!ENTITY % PtypsCustom "">
<!ENTITY % PtypsContent "PtyID?, PtyIDSrc?, PtyRole?, PtySubIDsGrp* %PtypsCustom;">
<!ELEMENT Ptyps (%PtypsContent;)+>
<!ATTLIST Ptyps
  NumInGrp_FIELD CDATA #FIXED "NoPtyIDs"
  FIXTag CDATA #FIXED "453"
  ComponentType CDATA #FIXED "BlockRepeating"
  Category CDATA #FIXED "Common"
```

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>

ComponentType - Message

FIX Messages are represented in FIXML using the same name.

Meta data provided for FIXML Messages

| FIXML Field Metadata | |
|-----------------------------|--|
| Metadata Item | Description |
| <u>FullName</u> | <u>Full name of the field within the FIX specification prior to abbreviation</u> |
| <u>Category</u> | <u>Name of the category to which the element belongs</u> |
| <u>ComponentType</u> | <u>"Message"</u> |
| <u>FixSpecVolume</u> | <u>Number of the FIX volume where the message is documented</u> |
| <u>FIXMsgType</u> | <u>The enumeration (Value) of the MsgType (Tag 35) field in the FIX specification for this message</u> |

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Template used to generate FIXML DTD

```

<!ENTITY % **MsgName**Custom "" >
<!ENTITY % **MsgName**Content "**FieldList** %**MsgName**Custom:" >
<!ELEMENT **MsgName** (%**MsgName**Content:)>
<!ATTLIST **MsgName**
    FIXMsgType ENUM CDATA #FIXED "**MsgType**"
    Category CDATA #FIXED "**Category**"
    FIXSpecVolume CDATA #FIXED '**Volume**'
    FullName CDATA #FIXED "**MessageName**"
    ComponentType CDATA #FIXED "Message" >

```

Message Example

```

<!ENTITY % NewOrdSingleCustom "">
<!ENTITY % NewOrdSingleContent "COrdID, ScndCOrdID?, COrdLinkID?, TrdOriginationDt?,
TrdDt?, Acct?, AcctIDSrc?, AcctTyp?, DayBkngInst?, BkngUnit?, PreallocMethod?, AllocID?,
PreAllocGrp*, SettlTyp?, SettlDt?, CshMgn?, ClearingFeeInd?, HandlInst?, ExecInst?, MinQty?,
MaxFloor?, ExDest?, TrdgSesGrp*, ProcessCode?, PrevClsPx?, Side, LocReqd?, TransactTm,
QtyTyp?, OrdTyp, PxTyp?, Px?, StopPx?, Ccy?, ComplianceID?, SolicitedFlag?, IOIID?, QuotID?,
TmInForce?, EfctvTm?, ExpireDt?, ExpireTm?, GTBkngInst?, OrdCpcty?, OrdRstctions?,
CustOrdCpcty?, ForexReq?, SettlCcy?, BkngTyp?, Text?, EncTextLen?, EncText?, SettlDt2?,
OrdQty2?, Px2?, PosEffect?, CoveredOrUncovered?, MaxShow?, TgtStrategy?,
TgtStrategyParameters?, ParticipationRt?, CxllationRights?, MnyLaunderingStat?, RegistID?,
Designation? %NewOrdSingleCustom:">
<!ELEMENT NewOrdSingle (%NewOrdSingleContent:)>
<!ATTLIST NewOrdSingle
    FIXMsgType CDATA #FIXED "D"
    Category CDATA #FIXED "SingleGeneralOrderHandling"
    FIXSpecVolume CDATA #FIXED "Volume4"
    FullName CDATA #FIXED "NewOrderSingle"
    ComponentType CDATA #FIXED "Message"
>

```

FIXML permits the inclusion of custom (user defined fields) in order to be compliant with the FIX specification. ComponentTypes: Block, RepeatingGroup, BlockRepeating, and Message are all implemented using entities to permit this customization. For example, all application messages have a custom entity that can be redefined to extend the content model of the particular message. In the following example, the Position Maintenance Request message has two Entities - PosMntReqCustom and PosMntReqContent. PosMntReqCustom is defined as an empty string. PosMntReqContent is a string of all the -components- that -make- -up- -the- -PosMntReq- -message.- PosMntReqContent- also -includes- the -PosMntReqCustom- entity.

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Deleted: FIXML requires ordered content model. This differs from the traditional FIX approach ("tag=value" syntax) which allows fields to be in any order (other than the first couple and last).¶

Deleted: <#>FIXML supports conditionally required content models. Options must contain a Strike Price.¶

```

<!ELEMENT Option (StrikePrice,
OptAttribute?)>¶
<!ATTLIST Option FIXTag CDATA
#FIXED '167'¶
    DataType CDATA #FIXED
'String'¶
    Value CDATA #FIXED
'OPT' >¶
¶

```

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Custom fields are added to the PosMntReqCustom entity between the double quotes, each custom field must be preceded by a comma. Once added, the custom fields are automatically picked up as part of the PosMntReqContent entity.

```
<!ENTITY % PosMntReqCustom "">
<!ENTITY % PosMntReqContent "PosReqID, PosTransTyp, PosMaintActn, OrigPosReqRefID?,
PosMaintRptRefID?, ClearingBizDt, SettlSessID?, SettlSessSubID?, Acct, AcctIDSrc?, AcctTyp,
Ccy?, TrdgSesGrp*, TransactTm, AdjmentTyp?, CntraryInstretmInd?, PriorSpreadInd?,
ThresholdAmt?, Text?, EncTextLen?, EncText? %PosMntReqCustom;">
<!ELEMENT PosMntReq (%PosMntReqContent);>
<!ATTLIST PosMntReq
    FixMsgType CDATA #FIXED "AL"
    Category CDATA #FIXED "PositionMaintenance"
    FIXSpecVolume CDATA #FIXED "Volume5"
    FullName CDATA #FIXED "PositionMaintenanceRequest"
    ComponentType CDATA #FIXED "Message"
```

Certain FIX Fields are grouped into parent/child relationships. Referential information is contained in two places. The attribute FIXTags contains a list of valid tags in the content model and each field has its own attribute.

```
<!ELEMENT Sender (CompID, SubID?, LocationID?)>
<!ELEMENT CompID (#PCDATA)>
<!ATTLIST CompID
    FIXTag CDATA #FIXED "49-56-115-128"
    SenderFIXTag CDATA #FIXED "49"
    TargetFIXTag CDATA #FIXED "56"
    OnBehalfOfFIXTag CDATA #FIXED "115"
    DeliverToFIXTag CDATA #FIXED "128"
    DataType CDATA #FIXED "char">
```

For example:

49=ssmb

becomes

<Sender><CompID SenderFIXTag="49">ssmb</CompID></Sender>

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Deleted: The following illustrates the ListExecute message:

```
<!ENTITY % ListExecuteCustom "">
<!ENTITY % ListExecuteContent
"ListID,ClientBidID?,BidID?,TransactTi
me,Text?,EncodedTextGroup?
%ListExecuteCustom;">
<!ELEMENT ListExecute
(%ListExecuteContent);>
<!ATTLIST ListExecute FIXTag
CDATA #FIXED '35'
    DataType CDATA #FIXED 'String'
    Value CDATA #FIXED 'L'>
<!DOCTYPE fixml SYSTEM
"fixmlmain.dtd" [
<!ENTITY % ListExecuteCustom ",
InternalTransNumber?">
<!ELEMENT InternalTransNumber
(#PCDATA)>
]
After entity reference resolution the
Indication content model will look like:
<!ELEMENT ListExecute
(ListID,ClientBidID?,BidID?,TransactTi
me,Text?,EncodedTextGroup?,
InternalTransNumber? )>
```

Deleted: FIXTag - contains the FIX Protocol Field ID (Tag).
DataType - reflects data types (char, int, float, month-year, day-of-month, time, date) from the FIX specification.

Deleted: <#> When fields are conditionally required based on the value of other fields, the Tag=Value pair becomes an element. For example, ExecRefID is required when ExecTransType = Cancel. The attribute Value is added and contains the valid FIX Specification value.

```
<!ELEMENT
GTDTimeInForce (ExpireTime)>
<!ATTLIST GTDTimeInForce
    FIXTag CDATA #FIXED "59"
    DataType CDATA #FIXED "char"
    Value CDATA #FIXED "6"
    SDValue CDATA #FIXED
"GoodTillDate" >
```

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Applies to:

Sender, Target, Location, OnBehalfOf, DeliverTo

Deleted: <#>FIX repeating groups are supported through the use of collection elements. To support conversions between FIX and FIXML, fields that identify the number of repeating elements are contained in the content model of the collection element. ¶

```
¶  
<!ELEMENT BidComponentList  
(NoBidComponents? ,  
BidComponentGroup+)>¶  
<!ELEMENT BidComponentGroup (  
ListID?, Side?,TradingSessionID?,  
TradingSessionSubID?,NetGrossInd?,  
Settlement?, Account? )>¶  
¶
```

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COMMON COMPONENTS OF APPLICATION MESSAGES - Component Blocks
(Included in pre-trade, trade, and post-trade messages)

Many of the FIX Application Messages are composed of common "building blocks" or sets of data fields. For instance, almost every FIX Application Message has the set of symbology-related fields used to define the "Instrument": Symbol, SymbolSfx, SecurityIDSource, SecurityID..... EncodedSecurityDesc. Rather than replicate a common group of fields, the FIX specification specifies several key component blocks below which are simply referenced by component name within each Application Message which uses them. Thus when reviewing a specific message definition, the appropriate group of fields should be expanded and used whenever a component block is identified.

Note that some component blocks may be part of repeating groups thus if the component block is denoted as part of a repeating group, then the entire group of fields representing the component block are to be specified at the component block's repeating group "level" in the message definition and follow repeating group rules concerning field order. See "Repeating Groups" for more details.

Instrument (symbology) component block -

| <Instrument> | | | | |
|--------------|------------------|----------------------|--|--|
| Tag | Field Name | Req'd | Comments | |
| 55 | Symbol | *** | Common, "human understood" representation of the security. SecurityID value can be specified if no symbol exists (e.g. non-exchange traded Collective Investment Vehicles) Use "[N/A]" for products which do not have a symbol. | |
| 65 | SymbolSfx | N | Used in Fixed Income with a value of "WI" to indicate "When Issued" for a security to be reissued under an old CUSIP or ISIN or with a value of "CD" to indicate a EUCP with lump-sum interest rather than discount price. | |
| 48 | SecurityID | N | Takes precedence in identifying security to counterparty over SecurityAltID block. Requires SecurityIDSource if specified. | |
| 22 | SecurityIDSource | N | Required if SecurityID is specified. | |
| 454 | NoSecurityAltID | N | Number of alternate Security Identifiers | |
| → | 455 | SecurityAltID | N | Security Alternate identifier for this security First member of repeating group - must be specified if NoSecurityAltID > 0 The Security Alternative identifier block should not be populated unless SecurityID and SecurityIDSource are populated and should not duplicate the SecurityID and SecurityIDSource values contained in the SecurityID/SecurityIDSource tags. Use of SecurityAltID may be used if bilaterally agreed to assist in security identification, and does not imply an obligation on the receiver of the message to ensure validity or consistency with the SecurityID and SecurityIDSource fields which take precedence. |

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| | | | | |
|-----|----------------------------|---------------------|---|---|
| → | 456 | SecurityAltIDSource | N | Source of SecurityAltID. Required if SecurityAltID is specified. |
| 460 | Product | | N | Indicates the type of product the security is associated with (high-level category) |
| 461 | CFICode | | N | Indicates the type of security using ISO 10962 standard, Classification of Financial Instruments (CFI code) values. It is recommended that CFICode be used instead of SecurityType for non-Fixed Income instruments. |
| 167 | SecurityType | | N | It is recommended that CFICode be used instead of SecurityType for non-Fixed Income instruments. Required for Fixed Income. Refer to Volume 7 – Fixed Income Futures and Options should be specified using the CFICode[461] field instead of SecurityType[167] (Refer to Volume 7 – Recommendations and Guidelines for Futures and Options Markets.) |
| 762 | SecuritySubType | | N | Sub-type qualification/identification of the SecurityType (e.g. for SecurityType="MLEG"). If specified, SecurityType is required. |
| 200 | MaturityMonthYear | | N | Specifies the month and year of maturity. Applicable for standardized derivatives which are typically only referenced by month and year (e.g. S&P futures). Note MaturityDate (a full date) can also be specified. |
| 541 | MaturityDate | | N | Specifies date of maturity (a full date). Note that standardized derivatives which are typically only referenced by month and year (e.g. S&P futures), may use MaturityMonthYear and/or this field. When using MaturityMonthYear, it is recommended that markets and sell sides report the MaturityDate on all outbound messages as a means of data enrichment. |
| 224 | CouponPaymentDate | | N | Date interest is to be paid. Used in identifying Corporate Bond issues. |
| 225 | IssueDate | | N | Date instrument was issued. For Fixed Income IOIs for new issues, specifies the issue date. |
| 239 | RepoCollateralSecurityType | | N | (Deprecated, use UnderlyingSecurityType (310)) |
| 226 | RepurchaseTerm | | N | (Deprecated, use TerminationType (788)) |
| 227 | RepurchaseRate | | N | (Deprecated, use Price (44)) |
| 228 | Factor | | N | For Fixed Income: Amortization Factor for deriving Current face from Original face for ABS or MBS securities, note the fraction may be greater than, equal to or less than 1. In TIPS securities this is the Inflation index. Qty * Factor * Price = Gross Trade Amount For Derivatives: Contract Value Factor by which price must be adjusted to determine the true nominal value of one futures/options contract. (Qty * Price) * Factor = Nominal Value |

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| | | | |
|----------------|-------------------------------|---|--|
| 255 | CreditRating | N | |
| 543 | InstrRegistry | N | The location at which records of ownership are maintained for this instrument, and at which ownership changes must be recorded. Can be used in conjunction with ISIN to address ISIN uniqueness issues. |
| 470 | CountryOfIssue | N | ISO Country code of instrument issue (e.g. the country portion typically used in ISIN). Can be used in conjunction with non-ISIN SecurityID (e.g. CUSIP for Municipal Bonds without ISIN) to provide uniqueness. |
| 471 | StateOrProvinceOfIssue | N | A two-character state or province abbreviation. |
| 472 | LocaleOfIssue | N | The three-character IATA code for a locale (e.g. airport code for Municipal Bonds). |
| 240 | RedemptionDate | N | (Deprecated , use YieldRedemptionDate (696) in <YieldData> component block) |
| 202 | StrikePrice | N | Used for derivatives, such as options and covered warrants |
| 947 | StrikeCurrency | N | Used for derivatives |
| 206 | OptAttribute | N | Used for derivatives, such as options and covered warrants to indicate a versioning of the contract when required due to corporate actions to the underlying. Should not be used to indicate type of option – use the CFICode[461] for this purpose. |
| 231 | ContractMultiplier | N | For Fixed Income, Convertible Bonds, Derivatives, etc. Note: If used, quantities should be expressed in the "nominal" (e.g. contracts vs. shares) amount. |
| 223 | CouponRate | N | For Fixed Income. |
| 207 | SecurityExchange | N | Can be used to identify the security. |
| 106 | Issuer | N | |
| 348 | EncodedIssuerLen | N | Must be set if EncodedIssuer field is specified and must immediately precede it. |
| 349 | EncodedIssuer | N | Encoded (non-ASCII characters) representation of the Issuer field in the encoded format specified via the MessageEncoding field. |
| 107 | SecurityDesc | N | |
| 350 | EncodedSecurityDescLen | N | Must be set if EncodedSecurityDesc field is specified and must immediately precede it. |
| 351 | EncodedSecurityDesc | N | Encoded (non-ASCII characters) representation of the SecurityDesc field in the encoded format specified via the MessageEncoding field. |
| 667 | ContractSettlMonth | N | Must be present for MBS/TBA |
| 875 | CPPProgram | N | The program under which a commercial paper is issued |

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| | | | | |
|---------------|---------------------|-----------|--|--|
| 876 | CPRegType | N | The registration type of a commercial paper issuance | |
| 864 | NoEvents | N | Number of repeating EventType group entries. | |
| → | 865 | EventType | N | Put, Call, Tender, Sinking Fund Call, etc. |
| → | 866 | EventDate | N | Date of event |
| → | 867 | EventPx | N | Predetermined price of issue at event, if applicable |
| → | 868 | EventText | N | Comments |
| 873 | DatedDate | N | If different from IssueDate | |
| 874 | InterestAccrualDate | N | If different from IssueDate and DatedDate | |
| </Instrument> | | | | |

*** = Required status should match "Req'd" setting for <Instrument> component block in the message definition

| |
|---|
| <i>http://www.fxprotocol.org for details</i> |
| <i>Refer to FIXML Element Instrmt</i> |

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Examples using Alternative Security Ids

The first example is from an order for shares in Daimler Chrysler, which has an ISIN DE0007100000, a CUSIP D1668R123, and a Sedol 5529027

| Field (tag) | Value | Explanation |
|-----------------------------|--------------|---------------------------------------|
| Symbol (55) | DCX | Symbol = DCX (Daimler Chrysler) |
| SecurityID (48) | DE0007100000 | |
| SecurityIDSource (22) | 4 | ID Type is ISIN |
| NoSecurityAltID (454) | 2 | Two additional security IDs specified |
| → SecurityAltID (455) | D1668R123 | |
| → SecurityAltIDSource (456) | 1 | SecurityID type is Cusip |
| → SecurityAltID (455) | 5529027 | |
| → SecurityAltIDSource (456) | 2 | SecurityID type is Sedol |

The second example is from an order for shares in IBM, which has an ISIN US4592001014, and a QUICK (Japanese) code of 000006680

| Field (tag) | Value | Explanation |
|-----------------------------|--------------|--|
| Symbol (55) | IBM | Symbol = IBM (International Business Machines) |
| SecurityID (48) | US4592001014 | |
| SecurityIDSource (22) | 4 | ID Type is ISIN |
| NoSecurityAltID (454) | 1 | One additional security ID specified |
| → SecurityAltID (455) | 000006680 | |
| → SecurityAltIDSource (456) | 3 | SecurityID type is Quick |

Specifying an FpML product specification from within the FIX Instrument Block

| Field (tag) | Value | Explanation |
|-----------------------|--------------------|--|
| Symbol (55) | [N/A] | |
| SecurityID (48) | FpML specification | Contains the FpML specification as an XML string |
| SecurityIDSource (22) | I | ISDA/FpML Product Specification |

There are two alternative approaches to referencing the FpML specification.

| SecurityID(48) Value | Explanation |
|----------------------|---|
| URL | Specify a separate URL to reference a separate location for the FpML specification. |

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| | |
|---|---|
| | Example: http://www.cme.com/product/irswap.jpg?id=122345 |
| / | Local URL - the FpML specification is contained in the XMLDataLen (tag 212), XMLData (tag 213) of the FIX Session Layer |

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UnderlyingInstrument (underlying instrument) component block -

Refer to the Instrument component block comments as this component block mirrors Instrument.

| <UnderlyingInstrument> | | | |
|------------------------|--------------------------------------|-------|---|
| Tag | Field Name | Req'd | Comments |
| 311 | UnderlyingSymbol | *** | |
| 312 | UnderlyingSymbolSfx | N | |
| 309 | UnderlyingSecurityID | N | |
| 305 | UnderlyingSecurityIDSource | N | |
| 457 | NoUnderlyingSecurityAltID | N | |
| → | 458 UnderlyingSecurityAltID | N | |
| → | 459 UnderlyingSecurityAltIDSource | N | |
| 462 | UnderlyingProduct | N | |
| 463 | UnderlyingCFICode | N | |
| 310 | UnderlyingSecurityType | N | |
| 763 | UnderlyingSecuritySubType | N | |
| 313 | UnderlyingMaturityMonthYear | N | |
| 542 | UnderlyingMaturityDate | N | |
| 241 | UnderlyingCouponPaymentDate | N | |
| 242 | UnderlyingIssueDate | N | |
| 243 | UnderlyingRepoCollateralSecurityType | N | (Deprecated, not applicable/used for Repos) |
| 244 | UnderlyingRepurchaseTerm | N | (Deprecated, not applicable/used for Repos) |
| 245 | UnderlyingRepurchaseRate | N | (Deprecated, not applicable/used for Repos) |
| 246 | UnderlyingFactor | N | |
| 256 | UnderlyingCreditRating | N | |
| 595 | UnderlyingInstrRegistry | N | |
| 592 | UnderlyingCountryOfIssue | N | |
| 593 | UnderlyingStateOrProvinceOfIssue | N | Deleted: April 30, 2003 |
| 594 | UnderlyingLocaleOfIssue | N | |

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| | | | |
|----------------|----------------------------------|--------------|---|
| 247 | UnderlyingRedemptionDate | N | (Deprecated, use YieldRedemptionDate (696) in <YieldData> component block) |
| 315 | UnderlyingPutOrCall | N | |
| 316 | UnderlyingStrikePrice | N | |
| 941 | UnderlyingStrikeCurrency | N | |
| 317 | UnderlyingOptAttribute | N | |
| 436 | UnderlyingContractMultiplier | N | |
| 435 | UnderlyingCouponRate | N | |
| 308 | UnderlyingSecurityExchange | N | |
| 306 | UnderlyingIssuer | N | |
| 362 | EncodedUnderlyingIssuerLen | N | |
| 363 | EncodedUnderlyingIssuer | N | |
| 307 | UnderlyingSecurityDesc | N | |
| 364 | EncodedUnderlyingSecurityDescLen | N | |
| 365 | EncodedUnderlyingSecurityDesc | N | |
| 877 | UnderlyingCPPProgram | N | |
| 878 | UnderlyingCPRegType | N | |
| 318 | UnderlyingCurrency | N | Specific to the <UnderlyingInstrument> (not in <Instrument>) |
| 879 | UnderlyingQty | N | Specific to the <UnderlyingInstrument> (not in <Instrument>) Unit amount of the underlying security (par, shares, currency, etc.) |
| 810 | UnderlyingPx | N | Specific to the <UnderlyingInstrument> (not in <Instrument>) In a financing deal clean price (percent-of-par or per unit) of the underlying security or basket. |
| 882 | UnderlyingDirtyPrice | N | Specific to the <UnderlyingInstrument> (not in <Instrument>) In a financing deal price (percent-of-par or per unit) of the underlying security or basket. "Dirty" means it includes accrued interest |
| 883 | UnderlyingEndPrice | N | Specific to the <UnderlyingInstrument> (not in <Instrument>) In a financing deal price (percent-of-par or per unit) of the underlying security or basket at the end of the agreement. |
| 884 | UnderlyingStartValue | N | Specific to the <UnderlyingInstrument> (not in <Instrument>) Currency value attributed to this collateral at the start of the agreement |

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| | | | |
|---|------------------------|---|---|
| 885 | UnderlyingCurrentValue | N | Specific to the <UnderlyingInstrument> (not in <Instrument>) Currency value currently attributed to this collateral |
| 886 | UnderlyingEndValue | N | Specific to the <UnderlyingInstrument> (not in <Instrument>) Currency value attributed to this collateral at the end of the agreement |
| <UnderlyingStipulations> Component Block | | N | Specific to the <UnderlyingInstrument> (not in <Instrument>) Insert here the contents of the <UnderlyingStipulations> Component Block |
| </ UnderlyingInstrument > | | | |

*** = Required status should match "Req'd" setting for <UnderlyingInstrument> component block in the message definition

<http://www.fixprotocol.org> for details

Refer to FIXML element [UndInstrmt](#)

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Instrument Leg (symbology) component block -

Refer to the Instrument component block comments as this component block mirrors Instrument.

Several multileg-oriented messages specify an instrument leg component block. An instrument can have zero or more instrument legs. The fundamental business rule that applies to the multileg instrument is that the multileg instrument is defined as the combination of instrument legs. The multileg instrument must be able to be traded atomically – that all instrument legs are traded or none are traded.

The LegRatioQty[623] is used to define the quantity of the leg that makes up a single unit of the multileg instrument. An option butterfly strategy is made up of three option legs.

| <InstrumentLeg> | | | |
|-----------------|-------------------------------|-------------------------------|--|
| Tag | Field Name | Req'd | Comments |
| 600 | LegSymbol | *** | |
| 601 | LegSymbolSfx | N | |
| 602 | LegSecurityID | N | |
| 603 | LegSecurityIDSource | N | |
| 604 | NoLegSecurityAltID | N | |
| → | 605 | LegSecurityAltID | N |
| → | 606 | LegSecurityAltIDSource | N |
| 607 | LegProduct | N | |
| 608 | LegCFICode | N | |
| 609 | LegSecurityType | N | |
| 764 | LegSecuritySubType | N | |
| 610 | LegMaturityMonthYear | N | |
| 611 | LegMaturityDate | N | |
| 248 | LegCouponPaymentDate | N | |
| 249 | LegIssueDate | N | |
| 250 | LegRepoCollateralSecurityType | N | (Deprecated, not applicable/used for Repos) |
| 251 | LegRepurchaseTerm | N | (Deprecated, not applicable/used for Repos) |
| 252 | LegRepurchaseRate | N | (Deprecated, not applicable/used for Repos) |
| 253 | LegFactor | N | |
| 257 | LegCreditRating | N | |
| 599 | LegInstrRegistry | N | |

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| | | | |
|------------------|---------------------------|--------------|---|
| 596 | LegCountryOfIssue | N | |
| 597 | LegStateOrProvinceOfIssue | N | |
| 598 | LegLocaleOfIssue | N | |
| 254 | LegRedemptionDate | N | (Deprecated, use YieldRedemptionDate (696) in <YieldData> component block) |
| 612 | LegStrikePrice | N | |
| 942 | LegStrikeCurrency | N | |
| 613 | LegOptAttribute | N | |
| 614 | LegContractMultiplier | N | |
| 615 | LegCouponRate | N | |
| 616 | LegSecurityExchange | N | |
| 617 | LegIssuer | N | |
| 618 | EncodedLegIssuerLen | N | |
| 619 | EncodedLegIssuer | N | |
| 620 | LegSecurityDesc | N | |
| 621 | EncodedLegSecurityDescLen | N | |
| 622 | EncodedLegSecurityDesc | N | |
| 623 | LegRatioQty | N | Specific to the <InstrumentLeg> (not in <Instrument>) |
| 624 | LegSide | N | Specific to the <InstrumentLeg> (not in <Instrument>) |
| 556 | LegCurrency | N | Specific to the <InstrumentLeg> (not in <Instrument>) |
| 740 | LegPool | N | Identifies MBS / ABS pool |
| 739 | LegDatedDate | N | |
| 955 | LegContractSettlMonth | N | |
| 956 | LegInterestAccrualDate | N | |
| </InstrumentLeg> | | | |

- Deleted:** 739
- Deleted:** LegDeliveryForm
- Deleted:** N
- Deleted:** i.e. Book Entry or Bearer

*** = Required status should match "Req'd" setting for <OrderQtyData> component block in message definition

FIXML Definition for this Component Block– see <http://www.fixprotocol.org> for details

Refer to FIXML element InstrmtLeg

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InstrumentExtension component block -

| <InstrumentExtension> | | | |
|--------------------------|---------------|-------------------------|---|
| Tag | Field Name | Req'd | Comments |
| 668 | DeliveryForm | N | Identifies the form of delivery. |
| 869 | PctAtRisk | N | Percent at risk due to lowest possible call. |
| 870 | NoInstrAttrib | N | Number of repeating InstrAttrib group entries. |
| → | 871 | InstrAttribType | N Type of instrument attribute |
| → | 872 | InstrAttribValue | N Value of instrument attribute, if applicable |
| </ InstrumentExtension > | | | |

*** = Required status should match "Req'd" setting for <InstrumentExtension> component block in message definition

[FIXML Definition for this Component Block— see http://www.fixprotocol.org for details](http://www.fixprotocol.org)

[Refer to FIXML element InstrmtExtension](#)

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OrderQtyData component block -

| <OrderQtyData> | | | |
|-----------------|-------------------|-------|--|
| Tag | Field Name | Req'd | Comments |
| 38 | OrderQty | N | One of CashOrderQty, OrderQty, or (for CIV only) OrderPercent is required. Note that unless otherwise specified, only one of CashOrderQty, OrderQty, or OrderPercent should be specified. |
| 152 | CashOrderQty | N | One of CashOrderQty, OrderQty, or (for CIV only) OrderPercent is required. Note that unless otherwise specified, only one of CashOrderQty, OrderQty, or OrderPercent should be specified. Specifies the approximate "monetary quantity" for the order. Broker is responsible for converting and calculating OrderQty in tradeable units (e.g. shares) for subsequent messages. |
| 516 | OrderPercent | N | For CIV - Optional. One of CashOrderQty, OrderQty or (for CIV only) OrderPercent is required. Note that unless otherwise specified, only one of CashOrderQty, OrderQty, or OrderPercent should be specified. |
| 468 | RoundingDirection | N | For CIV – Optional |
| 469 | RoundingModulus | N | For CIV – Optional |
| </OrderQtyData> | | | |

*** = Required status should match "Req'd" setting for <OrderQtyData> component block in message definition

FIXML Definition for this Component Block – see <http://www.fixprotocol.org> for details

Refer to FIXML element OrdQtyData

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CommissionData component block -

| <CommissionData> | | | |
|-------------------|---------------|-------|--------------------|
| Tag | Field Name | Req'd | Comments |
| 12 | Commission | N | |
| 13 | CommType | N | |
| 479 | CommCurrency | N | For CIV - Optional |
| 497 | FundRenewWaiv | N | For CIV - Optional |
| </CommissionData> | | | |

*** = Required status should match "Req'd" setting for <CommissionData> component block in message definition

| |
|---|
| <i>http://www.fixprotocol.org for details</i> |
| <i>Refer to FIXML Element CommData</i> |

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Parties component block -

See "Volume 6 - APPENDIX 6-G - USE OF <PARTIES> COMPONENT BLOCK".

| <Parties> | | | | | |
|------------|------------|---------------|----------------|--|---|
| Tag | Field Name | | Req'd | Comments | |
| 453 | NoPartyIDs | | N | Repeating group below should contain unique combinations of PartyID, PartyIDSource, and PartyRole | |
| → | 448 | PartyID | N | Used to identify source of PartyID. Required if PartyIDSource is specified. Required if NoPartyIDs > 0. | |
| → | 447 | PartyIDSource | N | Used to identify class source of PartyID value (e.g. BIC). Required if PartyID is specified. Required if NoPartyIDs > 0. | |
| → | 452 | PartyRole | N | Identifies the type of PartyID (e.g. Executing Broker). Required if NoPartyIDs > 0. | |
| → | 802 | NoPartySubIDs | N | Repeating group of Party sub-identifiers. | |
| → | → | 523 | PartySubID | N | Sub-identifier (e.g. Clearing Acct for PartyID=Clearing Firm) if applicable. Required if NoPartySubIDs > 0. |
| → | → | 803 | PartySubIDType | N | Type of Sub-identifier. Required if NoPartySubIDs > 0. |
| </Parties> | | | | | |

*** = Required status should match "Req'd" setting for <Parties> component block in message definition

<http://www.fixprotocol.org> for details

Refer to FIXML element Prys

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NestedParties component block -

| <NestedParties> | | | | | |
|------------------|------------------|----------------------------|-----------------------------|--|---|
| Tag | Field Name | | Req'd | Comments | |
| 539 | NoNestedPartyIDs | | N | Repeating group below should contain unique combinations of NestedPartyID, NestedPartyIDSource, and NestedPartyRole | |
| → | 524 | <i>NestedPartyID</i> | N | Used to identify source of NestedPartyID. Required if NestedPartyIDSource is specified. Required if NoNestedPartyIDs > 0. | |
| → | 525 | <i>NestedPartyIDSource</i> | N | Used to identify class source of NestedPartyID value (e.g. BIC). Required if NestedPartyID is specified. Required if NoNestedPartyIDs > 0. | |
| → | 538 | <i>NestedPartyRole</i> | N | Identifies the type of NestedPartyID (e.g. Executing Broker). Required if NoNestedPartyIDs > 0. | |
| → | 804 | <i>NoNestedPartySubIDs</i> | N | Repeating group of NestedParty sub-identifiers. | |
| → | → | 545 | <i>NestedPartySubID</i> | N | Sub-identifier (e.g. Clearing Acct for PartyID=Clearing Firm) if applicable. Required if NoNestedPartySubIDs > 0. |
| → | → | 805 | <i>NestedPartySubIDType</i> | N | Type of Sub-identifier. Required if NoNestedPartySubIDs > 0. |
| </NestedParties> | | | | | |

*** = Required status should match "Req'd" setting for <NestedParties> component block in message definition

[FIXML Definition for this Component Block– see http://www.fixprotocol.org for details](http://www.fixprotocol.org)

[Refer to FIXML element NstPtvs](#)

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NestedParties2 (second instance of nesting) component block -

| <NestedParties2> | | | | | |
|-------------------|-------------------|-----------------------------|-------------------------------|---|--|
| Tag | Field Name | | Req'd | Comments | |
| 756 | NoNested2PartyIDs | | N | Repeating group below should contain unique combinations of Nested2PartyID, Nested2PartyIDSource, and Nested2PartyRole | |
| → | 757 | <i>Nested2PartyID</i> | N | Used to identify source of Nested2PartyID. Required if Nested2PartyIDSource is specified. Required if NoNested2PartyIDs > 0. | |
| → | 758 | <i>Nested2PartyIDSource</i> | N | Used to identify class source of Nested2PartyID value (e.g. BIC). Required if Nested2PartyID is specified. Required if NoNested2PartyIDs > 0. | |
| → | 759 | <i>Nested2PartyRole</i> | N | Identifies the type of Nested2PartyID (e.g. Executing Broker). Required if NoNested2PartyIDs > 0. | |
| → | 806 | <i>NoNested2PartySubIDs</i> | N | Repeating group of Nested2Party sub-identifiers. | |
| → | → | 760 | <i>Nested2PartySubID</i> | N | Sub-identifier (e.g. Clearing Acct for PartyID=Clearing Firm) if applicable. Required if NoNested2PartySubIDs > 0. |
| → | → | 807 | <i>Nested2PartySubID Type</i> | N | Type of Sub-identifier. Required if NoNested2PartySubIDs > 0. |
| </NestedParties2> | | | | | |

*** = Required status should match "Req'd" setting for <NestedParties2> component block in message definition

[FIXML Definition for this Component Block– see http://www.fixprotocol.org for details](http://www.fixprotocol.org)

[Refer to FIXML element NstPtvs2](#)

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NestedParties3 (third instance of nesting) component block -

| <u><NestedParties3></u> | | | | | |
|--------------------------------|--------------------------|-----------------------------|-------------------------------|---|--|
| <u>Tag</u> | <u>Field Name</u> | | <u>Req'd</u> | <u>Comments</u> | |
| <u>948</u> | <u>NoNested3PartyIDs</u> | | <u>N</u> | <u>Repeating group below should contain unique combinations of Nested3PartyID, Nested3PartyIDSource, and Nested3PartyRole</u> | |
| <u>→</u> | <u>949</u> | <u>Nested3PartyID</u> | <u>N</u> | <u>Used to identify source of Nested3PartyID. Required if Nested3PartyIDSource is specified. Required if NoNested3PartyIDs > 0.</u> | |
| <u>→</u> | <u>950</u> | <u>Nested3PartyIDSource</u> | <u>N</u> | <u>Used to identify class source of Nested3PartyID value (e.g. BIC). Required if Nested3PartyID is specified. Required if NoNested3PartyIDs > 0.</u> | |
| <u>→</u> | <u>951</u> | <u>Nested3PartyRole</u> | <u>N</u> | <u>Identifies the type of Nested3PartyID (e.g. Executing Broker). Required if NoNested3PartyIDs > 0.</u> | |
| <u>→</u> | <u>952</u> | <u>NoNested3PartySubIDs</u> | <u>N</u> | <u>Repeating group of Nested3Party sub-identifiers.</u> | |
| <u>→</u> | <u>→</u> | <u>953</u> | <u>Nested3PartySubID</u> | <u>N</u> | <u>Sub-identifier (e.g. Clearing Acct for PartyID=Clearing Firm) if applicable. Required if NoNested3PartySubIDs > 0.</u> |
| <u>→</u> | <u>→</u> | <u>954</u> | <u>Nested3PartySubID Type</u> | <u>N</u> | <u>Type of Sub-identifier. Required if NoNested3PartySubIDs > 0.</u> |
| <u></NestedParties3></u> | | | | | |

***** = Required status should match "Req'd" setting for <NestedParties3> component block in message definition**

FIXML Definition for this Component Block– see <http://www.fixprotocol.org> for details

Refer to FIXML element NstPtvs3

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SettlParties (settlement parties) component block -

| <SettlParties> | | | |
|-----------------|----------------------------------|-------|---|
| Tag | Field Name | Req'd | Comments |
| 781 | NoSettlPartyIDs | N | Repeating group below should contain unique combinations of SettlPartyID, SettlPartyIDSource, and SettlPartyRole |
| → | 782 <i>SettlPartyID</i> | N | Used to identify source of SettlPartyID. Required if SettlPartyIDSource is specified. Required if NoSettlPartyIDs > 0. |
| → | 783 <i>SettlPartyIDSource</i> | N | Used to identify class source of SettlPartyID value (e.g. BIC). Required if SettlPartyID is specified. Required if NoSettlPartyIDs > 0. |
| → | 784 <i>SettlPartyRole</i> | N | Identifies the type of SettlPartyID (e.g. Executing Broker). Required if NoSettlPartyIDs > 0. |
| → | 801 <i>NoSettlPartySubIDs</i> | N | Repeating group of SettlParty sub-identifiers. |
| → | → 785 <i>SettlPartySubID</i> | N | Sub-identifier (e.g. Clearing Acct for SettlPartyID=Clearing Firm) if applicable. Required if NoSettlPartySubIDs > 0. |
| → | → 786 <i>SettlPartySubIDType</i> | N | Type of Sub-identifier. Required if NoSettlPartySubIDs > 0. |
| </SettlParties> | | | |

*** = Required status should match "Req'd" setting for <SettlParties> component block in message definition

[FIXML Definition for this Component Block— see http://www.fixprotocol.org for details](http://www.fixprotocol.org)

[Refer to FIXML element SettlPtys](#)

SpreadOrBenchmarkCurveData component block -

| <SpreadOrBenchmarkCurveData> | | | |
|------------------------------|-------------------------------|--------------|------------------|
| Tag | Field Name | Req'd | Comments |
| 218 | Spread | N | For Fixed Income |
| 220 | BenchmarkCurveCurrency | N | |
| 221 | BenchmarkCurveName | N | |
| 222 | BenchmarkCurvePoint | N | |

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| | | | |
|-------------------------------|---------------------------|---|---|
| 662 | BenchmarkPrice | N | |
| 663 | BenchmarkPriceType | N | Must be present if BenchmarkPrice is used. |
| 699 | BenchmarkSecurityID | N | The identifier of the benchmark security, e.g. Treasury against Corporate bond. |
| 761 | BenchmarkSecurityIDSource | N | Source of BenchmarkSecurityID. If not specified, then ID Source is understood to be the same as that in the Instrument block. |
| </SpreadOrBenchmarkCurveData> | | | |

*** = Required status should match "Req'd" setting for <SpreadOrBenchmarkCurveData> component block in message definition

FIXML Definition for this Component Block– see <http://www.fixprotocol.org> for details

Refer to FIXML element [SpreadOrBnchmkCrvData](#)

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LegBenchmarkCurveData component block -

| < LegBenchmarkCurveData> | | | |
|---------------------------|---------------------------|-------|----------|
| Tag | Field Name | Req'd | Comments |
| 676 | LegBenchmarkCurveCurrency | N | |
| 677 | LegBenchmarkCurveName | N | |
| 678 | LegBenchmarkCurvePoint | N | |
| 679 | LegBenchmarkPrice | N | |
| 680 | LegBenchmarkPriceType | N | |
| </ LegBenchmarkCurveData> | | | |

*** = Required status should match "Req'd" setting for <LegBenchmarkCurveData> component block in message definition

| |
|--|
| <i>FIXML Definition for this Component Block– see http://www.fixprotocol.org for details</i> |
| <i>Refer to FIXML element LegBnchmkCrvData</i> |

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Stipulations component block -

| <Stipulations> | | | | |
|-----------------|----------------|-------------------------|----------|-------------------------------|
| Tag | Field Name | Req'd | Comments | |
| 232 | NoStipulations | N | | |
| → | 233 | <i>StipulationType</i> | N | Required if NoStipulations >0 |
| → | 234 | <i>StipulationValue</i> | N | |
| </Stipulations> | | | | |

*** = Required status should match "Req'd" setting for <Stipulations> component block in message definition

<http://www.fixprotocol.org> for details
 Refer to [FIXML element Stips](#)

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UnderlyingStipulations component block -

| <UnderlyingStipulations> | | | | |
|-----------------------------|-------------------|---------------------|----------|----------------------------------|
| Tag | Field Name | Req'd | Comments | |
| 887 | NoUnderlyingStips | N | | |
| → | 888 | UnderlyingStipType | N | Required if NoUnderlyingStips >0 |
| → | 889 | UnderlyingStipValue | N | |
| </ UnderlyingStipulations > | | | | |

*** = Required status should match "Req'd" setting for <UnderlyingStipulations> component block in message definition

[FIXML Definition for this Component Block– see http://www.fixprotocol.org for details](http://www.fixprotocol.org)

[Refer to FIXML element UndStips](#)

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LegStipulations component block -

| <LegStipulations> | | | |
|--------------------|----------------------------|-------|----------------------------------|
| Tag | Field Name | Req'd | Comments |
| 683 | NoLegStipulations | N | |
| → | 688 | N | Required if NoLegStipulations >0 |
| | <i>LegStipulationType</i> | | |
| → | 689 | N | |
| | <i>LegStipulationValue</i> | | |
| </LegStipulations> | | | |

*** = Required status should match "Req'd" setting for <LegStipulations> component block in message definition

FIXML Definition for this Component Block – see <http://www.fixprotocol.org> for details

Refer to FIXML element [LegStips](#)

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YieldData component block -

| <YieldData> | | | |
|--------------|--------------------------|-------|----------|
| Tag | Field Name | Req'd | Comments |
| 235 | YieldType | N | |
| 236 | Yield | N | |
| 701 | YieldCalcDate | N | |
| 696 | YieldRedemptionDate | N | |
| 697 | YieldRedemptionPrice | N | |
| 698 | YieldRedemptionPriceType | N | |
| </YieldData> | | | |

*** = Required status should match "Req'd" setting for <YieldData> component block in message definition

<http://www.fixprotocol.org> for details

Refer to FIXML element YldData

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PositionQty Component Block

{Need description here}

| <PositionQty> | | | |
|---------------|---|-------|--|
| Tag | Field Name | Req'd | Comments |
| 702 | NoPositions | *** | |
| → | 703 <i>PosType</i> | N | Required if NoPositions > 1 |
| → | 704 <i>LongQty</i> | N | |
| → | 705 <i>ShortQty</i> | N | |
| → | 706 <i>PosQtyStatus</i> | N | |
| → | <i>Component</i> <i>Block</i> < <i>NestedParties</i> > | N | Optional repeating group - used to associate or distribute position to a specific party other than the party that currently owns the position. |

{Need DTD }

{Need Examples Here in FIX and FIXML}

*** = Required status should match "Req'd" setting for <PositionQty> component block in message definition

[FIXML Definition for this Component Block](http://www.fixprotocol.org)– see <http://www.fixprotocol.org> for details

Refer to FIXML element PosQty

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PositionAmountData Component Block

| <PositionAmountData> | | | | |
|----------------------|------------|------------|-------|-----------------------------------|
| Tag | Field Name | | Req'd | Comments |
| 753 | NoPosAmt | | *** | Number of Position Amount entries |
| → | 707 | PosAmtType | *** | |
| → | 708 | PosAmt | *** | |

*** = Required status should match "Req'd" setting for <PositionAmountData> component block in message definition

<http://www.fixprotocol.org> for details

Refer to FIXML element [PosAmtData](#)

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TrdRegTimestamps component block -

| <TrdRegTimestamps> | | | | |
|---------------------|--------------------|------------------------------|-------|------------------------------------|
| Tag | Field Name | | Req'd | Comments |
| 768 | NoTrdRegTimestamps | | *** | |
| → | 769 | <i>TrdRegTimestamp</i> | N | Required if NoTrdRegTimestamps > 1 |
| → | 770 | <i>TrdRegTimestampType</i> | N | Required if NoTrdRegTimestamps > 1 |
| → | 771 | <i>TrdRegTimestampOrigin</i> | N | Optional |
| </TrdRegTimestamps> | | | | |

*** = Required status should match "Req'd" setting for <TrdRegTimestamps> component block in message definition

[FIXML Definition for this Component Block– see http://www.fixprotocol.org for details](http://www.fixprotocol.org)

[Refer to FIXML element TrdRegTmstampsGrp](#)

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SettlInstructionsData component block -

See “Volume 6 - APPENDIX 6-H - USE OF <SETTLINSTRUCTIONS> COMPONENT BLOCK”.

| <SettlInstructionsData> | | | | |
|--------------------------|--|------------------------|--|---|
| Tag | Field Name | Req'd | Comments | |
| 172 | SettlDeliveryType | N | Required if AllocSettlInstType = 1 or 2 | |
| 169 | StandInstDbType | N | Required if AllocSettlInstType = 3 (should not be populated otherwise) | |
| 170 | StandInstDbName | N | Required if AllocSettlInstType = 3 (should not be populated otherwise) | |
| 171 | StandInstDbID | N | Identifier used within the StandInstDbType Required if AllocSettlInstType = 3 (should not be populated otherwise) | |
| 85 | NoDlvyInst | N | Required (and must be > 0) if AllocSettlInstType = 2 (should not be populated otherwise) | |
| → | 165 | <i>SettlInstSource</i> | N | Used to identify whether these delivery instructions are for the buy-side or the sell-side. Required if NoDlvyInst > 0. |
| → | 787 | <i>DlvyInstType</i> | N | S – securities, C – cash, mandatory for each occurrence of this repeating group Required if NoDlvyInst > 0. |
| → | <i>Component Block</i> <SettlParties> | | N | Required if NoDlvyInst > 0. |
| </SettlInstructionsData> | | | | |

FIXML Definition for this Component Block – see <http://www.fixprotocol.org> for details

Refer to the FIXML element *SettlInstrctnsData*

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PegInstructions component block -

| <PegInstructions> | | | |
|--------------------|-------------------|-------|---|
| Tag | Field Name | Req'd | Comments |
| 211 | PegOffsetValue | N | Amount (signed) added to the peg for a pegged order in the context of the PegOffsetType |
| 835 | PegMoveType | N | Describes whether peg is static/fixed or floats |
| 836 | PegOffsetType | N | Type of Peg Offset (e.g. price offset, tick offset etc) |
| 837 | PegLimitType | N | Specifies nature of resulting pegged price (e.g. or better limit, strict limit etc) |
| 838 | PegRoundDirection | N | If the calculated peg price is not a valid tick price, specifies how to round the price (e.g. be more or less aggressive) |
| 840 | PegScope | N | The scope of the "related to" price of the peg (e.g. local, global etc) |
| </PegInstructions> | | | |

Note that Pegged orders are specified by the use of OrdType (to denote that the order is a pegged order) and ExecInst (to specify what price the order is pegged to).

<http://www.fixprotocol.org> for details

Refer to the FIXML element PegInstrctns

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DiscretionInstructions component block -

| <DiscretionInstructions> | | | |
|---------------------------|--------------------------|-------|---|
| Tag | Field Name | Req'd | Comments |
| 388 | DiscretionInst | N | What the discretionary price is related to (e.g. primary price, display price etc) |
| 389 | DiscretionOffsetValue | N | Amount (signed) added to the “related to” price specified via DiscretionInst, in the context of DiscretionOffsetType |
| 841 | DiscretionMoveType | N | Describes whether discretion price is static/fixed or floats |
| 842 | DiscretionOffsetType | N | Type of Discretion Offset (e.g. price offset, tick offset etc) |
| 843 | DiscretionLimitType | N | Specifies the nature of the resulting discretion price (e.g. or better limit, strict limit etc) |
| 844 | DiscretionRoundDirection | N | If the calculated discretion price is not a valid tick price, specifies how to round the price (e.g. to be more or less aggressive) |
| 846 | DiscretionScope | N | The scope of “related to” price of the discretion (e.g. local, global etc) |
| </DiscretionInstructions> | | | |

<http://www.fixprotocol.org> for details

Refer to the FIXML element DscnInstrctns

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FinancingDetails component block -

Component block is optionally used only for financing deals to identify the legal agreement under which the deal was made and other unique characteristics of the transaction. The AgreementDesc field refers to base standard documents such as MRA 1996 Repurchase Agreement, GMRA 2000 Bills Transaction (U.K.), MSLA 1993 Securities Loan – Amended 1998, for example.

| <FinancingDetails> | | | |
|----------------------|-------------------|-------|--|
| Tag | Field Name | Req'd | Comments |
| 913 | AgreementDesc | N | The full name of the base standard agreement, annexes and amendments in place between the principals and applicable to this deal |
| 914 | AgreementID | N | A common reference to the applicable standing agreement between the principals |
| 915 | AgreementDate | N | A reference to the date the underlying agreement was executed. |
| 918 | AgreementCurrency | N | Currency of the underlying agreement. |
| 788 | TerminationType | N | For Repos the timing or method for terminating the agreement. |
| 916 | StartDate | N | Settlement date of the beginning of the deal |
| 917 | EndDate | N | Repayment / repurchase date |
| 919 | DeliveryType | N | Delivery or custody arrangement for the underlying securities |
| 898 | MarginRatio | N | Percentage of cash value that underlying security collateral must meet. |
| </FinancingDetails > | | | |

*** = Required status should match "Req'd" setting for <FinancingDetails> component block in message definition

[FIXML Definition for this Component Block– see http://www.fixprotocol.org for details](http://www.fixprotocol.org)

[Refer to the FIXML element FinancingDetails](#)

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COMMON APPLICATION MESSAGES (Apply to pre-trade, trade, and post-trade)

Business Message Reject -

The Business Message Reject message can reject an application-level message which fulfills session-level rules and cannot be rejected via any other means. Note if the message fails a session-level rule (e.g. body length is incorrect), a session-level Reject message should be issued.

[See the session-level Reject message](#)

It should ***NOT*** be used in the following situations:

| Situation | Appropriate Response |
|---|--|
| Session-level problem meeting the criteria of the session-level Reject message | Use the session-level Reject message (MsgType=3) |
| In response to: <ul style="list-style-type: none"> Quote Request | Use the Quote Request Reject message |
| In response to: <ul style="list-style-type: none"> Quote Quote Cancel Quote Status Request Quote Response | Use the Quote Status Report message |
| In response to: <ul style="list-style-type: none"> Mass Quote | Use the Mass Quote Acknowledgment message |
| In response to: <ul style="list-style-type: none"> Market Data Request | Use the Market Data Request Reject message |
| In response to: <ul style="list-style-type: none"> Security Definition Request | Use the Security Definition message |
| In response to: <ul style="list-style-type: none"> Security Type Request | Use the SecurityTypes message |
| In response to: <ul style="list-style-type: none"> Security List Request | Use the Security List message |
| In response to: <ul style="list-style-type: none"> Derivative Security List Request | Use the Derivative Security List message |
| In response to: <ul style="list-style-type: none"> Security Status Request | Use the Security Status message |
| In response to: <ul style="list-style-type: none"> Trading Session Status Request | Use the Trading Session Status message |
| In response to: <ul style="list-style-type: none"> New Order - Single | Use the Execution Report message |

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| | |
|--|--|
| <ul style="list-style-type: none"> • Order Status Request • Order Mass Status Request • New Order – Cross • New Order – Multileg • New Order – List • List Execute | |
| In response to: <ul style="list-style-type: none"> • Order Cancel Request • Order Cancel/Replace Request • Cross Order Cancel Request • Cross Order Cancel/Replace Request • Multileg Order Cancel/Replace Request • List Cancel Request | Use the Order Cancel Reject message |
| In response to: <ul style="list-style-type: none"> • Execution Report | Use the Don't Know Trade (DK) message |
| In response to: <ul style="list-style-type: none"> • Order Mass Cancel Request | Use the Order Mass Cancel Report message |
| In response to: <ul style="list-style-type: none"> • List Status Request | Use the List Status message |
| In response to: <ul style="list-style-type: none"> • Allocation Instruction | Use the Allocation Instruction Ack message |
| In response to: <ul style="list-style-type: none"> • Allocation Report | Use the Allocation Report Ack message |
| In response to: <ul style="list-style-type: none"> • Confirmation | Use the Confirmation Ack message |
| In response to: <ul style="list-style-type: none"> • Registration Instructions | Use the Registration Instructions Response message |
| In response to: <ul style="list-style-type: none"> • Trade Capture Report Request | Use the Trade Capture Report message |
| In response to: <ul style="list-style-type: none"> • Bid Request | Use the Bid Response message |
| In response to: <ul style="list-style-type: none"> • Confirmation Request | Use the Confirmation message |
| In response to: | Use the Settlement Instructions message |

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| | |
|--|---|
| <ul style="list-style-type: none"> • Settlement Instruction Request | |
| In response to: <ul style="list-style-type: none"> • Position Maintenance Request | Use the Position Maintenance Report message |
| In response to: <ul style="list-style-type: none"> • Request for Positions | Use the Request for Positions Ack message |
| In response to: <ul style="list-style-type: none"> • Collateral Request | Use the Collateral Assignment message |
| In response to: <ul style="list-style-type: none"> • Collateral Assignment | Use the Collateral Response message |
| In response to: <ul style="list-style-type: none"> • Collateral Inquiry | Use the Collateral Inquiry Ack message |

Note the only exceptions to this rule are:

1. **in the event a business message is received, fulfills session-level rules, however, the message cannot be communicated to the business-level processing system.** In this situation a Business Message Reject with BusinessRejectReason = “Application not available at this time” can be issued if the system is unable to send the specific “reject” message listed above due to this condition.
2. **in the event a valid business message is received, fulfills session-level rules, however, the message type is not supported by the recipient.** In this situation a Business Message Reject with BusinessRejectReason = “Unsupported Message Type” can be issued if the system is unable to send the specific “reject” message listed above because the receiving system cannot generate the related “reject” message.
3. **In the event a business message is received, fulfills session-level rules, but lacks a field conditionally required by the FIX specification.** In this situation a Business Message Reject with BusinessRejectReason = “Conditionally Required Field Missing” can be issued if the system is unable to send the specific “reject” message listed above. One example of this would be a stop order missing StopPx. However, a Business Message Reject message **MUST NOT** be used to enforce proprietary rules more restrictive than those explicit in the FIX specification, such as a broker requiring an order to contain an Account, which the FIX specification considers an optional field.

Messages which can be referenced via the Business Message Reject message are:

(the “ID” field BusinessRejectRefID refers to noted in [])

- Indication of Interest (IOI) [IOIid]
- Advertisement [AdvId]
- News [Headline]
- Email [EmailThreadID]
- Order Cancel Reject [COrdID]
- Allocation Instruction ACK [AllocID]
- Allocation Report ACK [AllocID]
- List Status [ListID]

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- Don't Know Trade (DK) – may respond with Order Cancel Reject if attempting to cancel order [ExecID]
- Settlement Instructions [SettlInstID]
- Market Data-Snapshot/Full Refresh [MDReqID]
- Market Data-Incremental Refresh [MDReqID]
- Market Data Request Reject [MDReqID]
-
- Security Definition [SecurityResponseID]
- Security Status [SecurityStatusReqID]
- Trading Session Status [TradSesReqID]
- Order Mass Cancel Report [OrderID]
- Security Types [SecurityResponseID]
- Security List [SecurityResponseID]
- Derivative Security List [SecurityResponseID]
- Quote Request Reject [QuoteReqID]
- RFQ Request [RFQReqID]
- Quote Status Report [QuoteID]
- Registration Instructions Response [RegistID]
- Trade Capture Report [TradeReportID]
- Confirmation ACK [ConfirmID]
- Bid Response [BidID]
- List Strike Price [ListID]
- Settlement Instructions [SettlInstMsgID]
- Trade Capture Report Request Ack [TradeRequestID]
- Trade Capture Report Ack [TradeReportID]
- Position Maintenance Report [PosMaintRptID]
- Request for Positions Ack [PosMaintRptID]
- Positions Report [PosMaintRptID]
- Assignment Report [AsgnRptID]
- Collateral Response [CollRespID]
- Collateral Inquiry Ack [CollInquiryID]

Scenarios for Business Message Reject:

| BusinessRejectReason |
|---|
| 0 = Other |
| 1 = Unkown ID |
| 2 = Unknown Security |
| 3 = Unsupported Message Type (receive a valid, but unsupported MsgType) |
| 4 = Application not available |
| 5 = Conditionally Required Field Missing |

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Whenever possible, it is strongly recommended that the cause of the failure be described in the Text field (e.g. "UNKNOWN SYBMOL: XYZ").

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The business message reject format is as follows:

Business Message Reject

| Tag | Field Name | Req'd | Comments |
|-----|-------------------------|-------|--|
| | <i>Standard Header</i> | Y | MsgType = j (lowercase) |
| 45 | RefSeqNum | N | MsgSeqNum of rejected message |
| 372 | RefMsgType | Y | The MsgType of the FIX message being referenced. |
| 379 | BusinessRejectRefID | N | The value of the business-level "ID" field on the message being referenced. Required unless the corresponding ID field (see list above) was not specified. |
| 380 | BusinessRejectReason | Y | Code to identify reason for a Business Message Reject message. |
| 58 | Text | N | Where possible, message to explain reason for rejection |
| 354 | EncodedTextLen | N | Must be set if EncodedText field is specified and must immediately precede it. |
| 355 | EncodedText | N | Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field. |
| | <i>Standard Trailer</i> | Y | |

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FIXML Definition for this Message– see <http://www.fixprotocol.org> for details

Refer to the FIXML element BizMsgRej

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Network Status Messages

It is envisaged these messages will be used in two scenarios

Scenario A

Allow one counterparty using a “hub and spoke” FIX network to know whether another counterparty is currently connected to the hub.

Scenario B

Allow a counterparty connecting to a global brokerage to know which regions within that brokerage are currently available as order routing destinations.

Network (Counterparty System) Status Request Message

This message is send either immediately after logging on to inform a network (counterparty system) of the type of updates required or to at any other time in the FIX conversation to change the nature of the types of status updates required. It can also be used with a NetworkRequestType of Snapshot to request a one-off report of the status of a network (or counterparty) system. Finally this message can also be used to cancel a request to receive updates into the status of the counterparties on a network by sending a NetworkRequestStatusMessage with a NetworkRequestType of StopSubscribing.

Network (Counterparty System) Status Request

| Tag | Field Name | Req'd | Comments |
|-----|------------------------------------|--------------|---|
| | <i>Standard Header</i> | Y | MsgType = “BC” |
| 935 | NetworkRequestType | Y | |
| 933 | NetworkRequestID | Y | |
| 936 | NoCompIDs | N | Used to restrict updates/request to a list of specific CompID/SubID/LocationID/DeskID combinations. If not present request applies to all applicable available counterparties. EG Unless one sell side broker was a customer of another you would not expect to see information about other brokers, similarly one fund manager etc. |
| → | 930 <i>RefCompID</i> | N | Used to restrict updates/request to specific CompID |
| → | 931 <i>RefSubID</i> | N | Used to restrict updates/request to specific SubID |
| → | 283 <i>LocationID</i> | N | Used to restrict updates/request to specific LocationID |
| → | 284 <i>DeskID</i> | N | Used to restrict updates/request to specific DeskID |
| ▼ | <i>Standard Trailer</i> | Y | |

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FIXML Definition for this Message– see <http://www.fixprotocol.org> for details

Refer to the FIXML element [NtwkSysStatReq](#)

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Network (Counterparty System) Status Response Message

This message is sent in response to a Network (Counterparty System) Status Request Message.

If the network response payload is larger than the maximum permitted message size for that FIX conversation the response would be several Network Status Response Messages the first with a status of full and then as many messages, as updates to the first message, adding information as required.

Network (Counterparty System) Status Response

| Tag | Field Name | Req'd | Comments |
|-----|---------------------------------------|--------------|--|
| | Standard Header | Y | MsgType = "BD" |
| 937 | NetworkStatusResponseType | Y | |
| 933 | NetworkRequestID | N | |
| 932 | NetworkResponseID | Y | |
| 934 | LastNetworkResponseID | N | <u>Required when NetworkStatusResponseType=2</u> |
| 936 | NoCompIDs | Y | Specifies the number of repeating CompID's |
| → | 930 RefCompID | N | CompID that status is being report for. Required if NoCompIDs > 0, |
| → | 931 RefSubID | N | SubID that status is being report for. |
| → | 283 LocationID | N | LocationID that status is being report for. |
| → | 284 DeskID | N | DeskID that status is being report for. |
| → | 928 StatusValue | N | |
| → | 929 StatusText | N | Additional Information, i.e. "National Holiday" |
| | Standard Trailer | Y | |

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FIXML Definition for this Message– see <http://www.fixprotocol.org> for details
Refer to the FIXML element NtwkSysStatRsp

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User Administration Messages

The messages are provided in FIX to allow the passing of individual user information between two counterparties. The messages allow for the following function

- 1 – Individual User Logon
- 2 – Individual User Status Enquiries
- 3 – Individual User Logout
- 4 – Individual User password change

NOTE WELL, it is not encouraged to transmit passwords in a FIX conversation unless you can guarantee the end to end security of both the FIX conversation and any intermediate routing hubs that are involved in the routing.

User Request Message

This message is used to initiate a user action, logon, logout or password change. It can also be used to request a report on a user's status.

User Request

| Tag | Field Name | Req'd | Comments |
|-----|------------------|-------|---|
| | Standard Header | Y | MsgType = "BE" |
| 923 | UserRequestID | Y | |
| 924 | UserRequestType | Y | |
| 553 | Username | Y | |
| 554 | Password | N | |
| 925 | NewPassword | N | |
| 95 | RawDataLength | N | |
| 96 | RawData | N | Can be used to hand structures etc to other API's etc |
| | Standard Trailer | Y | |

[FIXML Definition for this Message– see http://www.fixprotocol.org for details](http://www.fixprotocol.org)

[Refer to the FIXML element UserReq](#)

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User Response Message

This message is used to respond to a user request message, it reports the status of the user after the completion of any action requested in the user request message.

User Response

| Tag | Field Name | Req'd | Comments |
|-----|------------------|-------|--------------------------------------|
| | Standard Header | Y | MsgType = "BF" |
| 923 | UserRequestID | Y | |
| 553 | UserName | Y | |
| 926 | UserStatus | N | |
| 927 | UserStatusText | N | Reason a request was not carried out |
| | Standard Trailer | Y | |

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FIXML Definition for this Message— see <http://www.fixprotocol.org> for details

Refer to the FIXML element UserRsp

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Glossary

Business Terms

The following glossary is an attempt to identify business terms used in this document or related to implementing FIX globally. Requests for new terms and/or suggested definitions should be posted in the FIX Web Site's Discussion section.

| Term | Definition | Field where used |
|-----------------------|--|---------------------------|
| Accrued Interest Rate | The amount the buyer compensates the seller for the portion of the next coupon interest payment the seller has earned but will not receive from the issuer because the issuer will send the next coupon payment to the buyer. Accrued Interest Rate is the annualized Accrued Interest amount divided by the purchase price of the bond. | |
| After Tax Yield | Municipals. The yield on the bond net of any tax consequences from holding the bond. The discount on municipal securities can be subject to both capital gains taxes and ordinary income taxes. Calculated from dollar price. | [YieldType] |
| All or None | A round-lot market or limit-price order that must be executed in its entirety or not at all; unlike Fill or Kill orders, AON orders are not treated as canceled if they are not executed as soon as represented in the Trading Crowd. | [ExecInst] |
| Annual Yield | The annual interest or dividend income an investment earns, expressed as a percentage of the investment's total value. | [YieldType] |
| As defined | Sides of the legs are the same as defined in the multileg instrument. | [Side] |
| At the close | Indicated price is to be around the closing price, however, not held to the closing price. | [IOIQualifier] |
| At the Opening | A market or limit-price order to be executed at the opening of the stock or not at all; all or part of any order not executed at the opening is treated as canceled. | [TimeInForce] |
| Basis Price | A price established by joint agreement of odd-lot dealers in 100-share-unit stocks when: <ul style="list-style-type: none"> - no round-lot has occurred during the trading session, - the spread between the closing bid and offer is two points or more, and - on odd-lot the dealer has been given a "basis-price" order. | [OrdType] |
| Book Yield | The yield of a security calculated by using its book value instead of the current market price. This term is typically used in the US domestic market. | [YieldType] |
| Broker Execution | According to US futures markets (CFTC): Time at which a broker executed the order for another broker. | [TrdRegTimest ampType] |
| Broker of Credit | Broker to receive trade credit. | [PartyRole] |
| Broker Receipt | According to US futures markets (CFTC): | [TrdRegTimest |

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| | Time at which broker received the order. | ampType] |
| Buy Minus | A round-lot market order to buy "minus" is an order to buy a stated amount of a stock provided that its price is: - not higher than the last sale if the last sale was a "minus" or "zero minus" tick and - not higher than the last sale minus the minimum fractional change in the stock if the last sale was a "plus" or "zero plus" tick. A limit price order to buy "minus" also states the highest price at which it can be executed. | [Side] |
| Cabinet Trade | An off-market transaction to close out a nearly worthless out-of-the-money option contract. | |
| Call Date | The date on which the issuer of a security has the right but not the obligation to repurchase the security at a predetermined price. | [EventType] |
| Call First | Refer to client before trading. | [ExecInst] |
| Cancel if Not Best | Indicates that an order should be cancelled if it is no longer the best bid if buying, or the best offer if selling. If the order is cancelled due to this instruction, the message cancelling it must carry ExecRestatementReason="Canceled, Not Best". | [ExecInst] |
| Cancel on System Failure | If a system failure interrupts trading or order routing, attempt to cancel this order. Note that depending on the type and severity of the failure, this might not be possible. | [ExecInst] |
| Cancel on Trading Halt | If trading in this instrument is halted, cancel this order and do not reinstate it when/if trading resumes. | [ExecInst] |
| CIV ("Collective Investment Vehicle") | Collective investment vehicle ("CIV") are set up for the purposes of collecting and pooling investor funds and issuing shares (or their equivalent). "Open-ended" CIVs entitle the holder to receive, on demand, an amount in value which is proportionate to the whole net asset value of the vehicle. Conversely "Closed-ended" CIVs do not grant this right to investors. CIVs are more commonly known as Mutual Funds, Unit Trusts, OEICS (Open Ended Investment Companies), SICAVs etc. A CIV may be legally constituted as a Limited Company with variable capital, a Trust or a Limited Partnership - depending on local legislation & tax regimes. CIVs typically invest in equities, bonds, derivatives etc. - as described in their prospectus. Other CIVs are Umbrella Fund (made up of sub-funds investing in equities, gilts etc), Fund Of Funds (invests only in other funds), Master-Feeder Fund (marketed to a specific group for investment in a central master fund), Multi-Manager Fund (whose asset management is divided between several managers), Side By Side (onshore and offshore funds with the same investment strategy) | [CFICode] and a "Product" within Volume 7 |
| Clearing Firm | Firm that will clear the trade. Used if different from the executing firm. | [PartyRole] |

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|--|---|----------------------|
| Clearing Organization | Identifies the Clearing Organization where the position is maintained. | [PartyRole] |
| Client ID | Firm identifier used in third party-transactions or for investor identification in intermediary transactions. (should not be a substitute for OnBehalfOfCompID/DeliverToCompID). | [PartyRole] |
| Closing Yield | The yield of a bond based on the closing price. | [YieldType] |
| Closing Yield Most Recent Month | The yield of a bond based on the closing price as of the most recent month's end. | [YieldType] |
| Closing Yield Most Recent Quarter | The yield of a bond based on the closing price as of the most recent quarter's end. | [YieldType] |
| Closing Yield Most Recent Year | The yield of a bond based on the closing price as of the most recent year's end. | [YieldType] |
| Compound Yield | The yield of certain Japanese bonds based on its price. Certain Japanese bonds have irregular first or last coupons, and the yield is calculated compound for these irregular periods. | [YieldType] |
| Contra Firm | The broker or other firm which is the contra side of the trade. | [PartyRole] |
| Contra Clearing Firm | Clearing firm of the broker or other firm which is the contra side of the trade. | [PartyRole] |
| Contra Trader | Individual usually identified by a trading badge number or initials that takes the opposite side of a trade. | [PartyRole] |
| Contract For Difference (CFD) | A single stock total return swap, combining financing and synthetic equity exposure in one transaction. | [BookingType] |
| Correspondent Broker | Identifies a correspondent broker. | [PartyRole] |
| Correspondent Clearing Firm | ClearingFirm that is going to carry the position on their books at another clearing house (exchanges). | [PartyRole] |
| Correspondent Clearing Organization | Identifies a correspondent clearing organization | [PartyRole] |
| Coupon Rate | The rate of interest that, when multiplied by the principal, par value, or face value of a bond, provides the currency amount of the periodic interest payment. The coupon is always cited, along with maturity, in any quotation of a bond's price. | |
| Cross | Client sends Broker a buy or sell order. Broker wishes to take the other side and cross with the client. Broker sends an order with Side=Cross to an exchange. | [OrdType] |
| Cross Short | Client wants to establish a short position, and so sends a Sell Short to Broker. Broker wants to cross with the Client, so Broker sends a Cross Short order to an exchange. Cross Short is crucial here because many exchanges have tick rules needing to be enforced, and the order getting converted from Sell Short to Cross (instead of Cross Short) could result in an illegal short sell. | [OrdType] |
| ▼Cross Short Exempt - - - - | Client wants to establish a short position, and is exempt from the uptick restriction. So Client sends Sell Short Exempt to Broker. Broker wants to cross with the Client, so Broker needs a way to | [OrdType] |

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| | send "Cross Short Exempt" to the exchange so that an audit trail traces back indicating that the party selling short was exempt from the uptick rule. | |
| Current Yield | Annual interest on a bond divided by the market value. The actual income rate of return as opposed to the coupon rate expressed as a percentage. | [YieldType] |
| Customer Account | Identifies the customer account associated with the message. | [PartyRole] |
| Dated Date | The effective date of a new securities issue determined by its underwriters. Often but not always the same as the "Issue Date" and the "Interest Accrual Date" | |
| Day Order | A buy or sell order that, if not executed expires at the end of the trading day on which it was entered. | [TimeInForce] |
| Discount | When a bond sells below its par value, it is said to be selling at a discount. A price with a PriceType of "discount" is the difference between 100 and the bond's percent-of-par price. | [PriceType] |
| Do Not Increase | A limit order to buy, a stop order to sell, or a stop-limit order to sell which is not to be increased in shares on the ex-dividend date as a result of a stock dividend or distribution. | [ExecInst] |
| Do Not Reduce | A limit order to buy, a stop order to sell, or a stop-limit order to sell that is not to be reduced in price by the amount of an ordinary cash dividend on the ex-dividend date. A do-not-reduce order applies only to ordinary cash dividends; it should be reduced for other distributions - such as when a stock goes "ex" stock dividend or "ex" rights. | [ExecInst] |
| Dollar Price | See "Percent of Par" | [PriceType] |
| Entering Firm | Broker who has recorded or reported an execution. This field is particularly useful where the trade is entered into a trade recording system by a broker who is not a party to the trade, as it allows any inquiries or problem resolution to be directed to the appropriate source. | [PartyRole] |
| Entering Trader | Individual usually identified by a trading badge number or initials that actually enters an order to a market (especially in open outcry markets). Usually the Entering Trader is the same as the Executing Trader. However, under some circumstances the Entering Trader will have the trade executed by another trader who is then identified as the Executing Trader. | [PartyRole] |
| Exchange | Exchange associated with the position. | [PartyRole] |
| Execution Time | According to US futures markets (CFTC): Non-qualified reporting time of order execution. | [TrdRegTimest ampType] |
| Executing Firm | Identifies executing / give-up broker. | [PartyRole] |
| Executing System | System Identifier where execution took place (e.g. some markets have multiple execution location such as an electronic book or automatic execution system). | [PartyRole] |

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| Executing Trader | Trader or broker id associated with Executing Firm who actually executes the trade. | [PartyRole] |
| Fill or Kill | A market or limit-price order that is to be executed in its entirety as soon as it is represented in the Trading Crowd; if not so executed, the order is to be canceled. Not to be confused with Immediate or Cancel. | [TimeInForce] |
| <u>FIX Connection</u> | <u>A FIX Connection is comprised of three parts: logon, message exchange, and logout.</u> | |
| <u>FIX Session</u> | <u>A FIX Session is comprised of one or more FIX Connections, meaning that a FIX Session spans multiple logins.</u> | |
| Fixed Price Cabinet Trade | Cabinet Trade executed at a price equal to the minimum tick size (or smallest possible price) . See "Cabinet Trade". | [PriceType] |
| Floating Price Cabinet Trade | Cabinet Trade executed at a price that can be different than the minimal price. See "Cabinet Trade". | [PriceType] |
| Forex - Swap | A "Swap" order for Foreign Exchange (currency trading). | [OrdType] |
| Funari | Japanese term for an order to buy or sell a stated amount of a security at the specified limit price with any unexecuted (leftover) quantity becoming a Market On Close order. | [OrdType] |
| Fund manager Client ID | <i>For CIV:</i> An identifier for an Investor or a broker or funds supermarket's nominee/custodian company which is recognized by the Fund manager. | [PartyRole] |
| Giveup Clearing Firm | Firm to which the trade is given up (carries the position that results from a trade). | [PartyRole] |
| Good Till Canceled | An order to buy or sell that remains in effect until it is either executed or canceled; sometimes called an "open order". | [TimeInForce] |
| Government Equivalent Yield | Ask yield based on semi-annual coupons compounding in all periods and actual/actual calendar. | [YieldType] |
| Held | The firm executing the order is held to best execution requirements, and may not make discretionary decisions. Opposite of Not Held | [ExecInst] |
| Ignore Price Validity Checks | Disables validity checking of price fields for an order or change request. | [ExecInst] |
| Immediate or Cancel | A market or limit-price order that is to be executed in whole or in part as soon as it is represented in the Trading Crowd; any portion not so executed is to be canceled. Not to be confused with Fill or Kill. | [TimeInForce] |
| Initiator | An "initiator" may be one of the following: <ul style="list-style-type: none"> • an institutional client • a financial planner • a retail broker representing a retail customer • a broker/dealer • an inter-dealer broker (or broker's broker) • an issuer | Quoting and other messages Volume 7 |

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| Institutions Only | Broker is restricted to dealing with other buy side firms. | [ExecInst] |
| Interest Accrual Date | The start date used for calculating accrued interest on debt instruments which are being sold between interest payment dates. Often but not always the same as the "Issue Date" and the "Dated Date". | |
| Introducing Firm | The broker or other intermediary with the closest association with the investor. | [PartyRole] |
| Inverse Floater Bond Yield | Inverse floater semi-annual bond equivalent rate. | [YieldType] |
| Investor ID | For Equities: Identifies beneficiary or broker acting on behalf of beneficiary. This field is mandatory for various exchanges either pre or post trade. Numerical entry containing no dashes. | [PartyRole] |
| | For CIV: An Investor identifier such as a taxpayer reference (NINO, NPN, DSS, SSN number etc) for an individual investor or a registration number (EIN, etc.) for a company. May contain alphanumeric and dashes. | [PartyRole] |
| Issue Date | The date on which a bond or stock offering is issued. It may or may not be the same as the effective date ("Dated Date") or the date on which interest begins to accrue ("Interest Accrual Date") | |
| Limit | An order to buy a security at or below a stated price, or to sell a security at or above a stated price. | [OrdType] |
| Limit or Better | Indicates an order to - buy a security at the indicated limit price or lower, or to - sell a security at the indicated limit price or higher. | [OrdType] |
| Limit With or Without | An order to be executed at a limit price, with or without round-lot sales; valid only for odd lot orders. | [OrdType] |
| Liquidity Provider | Identifies the individual that provided liquidity, e.g. was the market maker (specialist) involved in a trade. Used to identify the liquidity provider involved in a block of EFP trade for listed futures markets. | [PartyRole] |
| Locate/Lending Firm | Identity of the firm which is loaning the security in a short sale. | [PartyRole] |
| Marked To Market Yield | An adjustment in the valuation of a securities portfolio to reflect the current market values of the respective securities in the portfolio. | [YieldType] |
| Market | Indicates an order to buy or sell a stated amount of a security at the most advantageous price obtainable after the order is represented in the Trading Crowd. | [OrdType] |
| Market If Touched | Indicates an order to buy or sell a stated amount of a security or commodity as soon as a preset market price is reached, at which point it becomes a Market order. | [OrdType] |
| Market On Close | Indicated price is held to the closing price ("firm" instruction). | [IOIQualifier] |

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|-------------------------------|--|------------------------|
| Market Or Better | Indicates an order to buy or sell a stated amount of a security at the quoted market or better. | [OrdType] |
| Market with Leftover as Limit | Indicates an order to buy or sell a stated amount of a security at the prevailing market price with any unexecuted (leftover) quantity becoming a Limit order at the last executed price. | [OrdType] |
| Most Recent Closing Yield | The last available yield stored in history, computed using price. | [YieldType] |
| Next Fund Valuation Point | For CIV orders - indicates that the Investor wishes the order to be dealt at the unit price determined at the next Valuation Point, a.k.a. a Forward price. | [OrdType] |
| No Cross | The broker executing this trade is forbidden from taking the other side of the trade. Opposite of OK to Cross. | [ExecInst] |
| Not Held | The firm executing the order is not held to best execution requirements, and may be able to make some discretionary decisions. Opposite of Held. | [ExecInst] |
| OK to Cross | The broker executing this trade is allowed to take the other side of the trade. Opposite of No Cross. | [ExecInst] |
| Omnibus Account | An account where the positions for multiple entities (usually customers) are maintained. The omnibus accounting is usually done on a gross basis where long and short positions are not netted together. | [PartyRole] |
| On Basis | An order to buy or sell at the basis price. The basis price is established by joint agreement of odd lot dealers in 100 share unit stocks when no round lot sale has occurred during the trading session, the spread between the closing bid and offer is two points or more, and an odd lot dealer has been given a basis price order. (e.g. NYSE order type) | [OrdType] |
| Opposite | Sides of the legs are the opposite of their definition in the multileg instrument. | [Side] |
| Order Origination Firm | Buy-side firm associated with Order Origination Firm which originates/submits the order. | [PartyRole] |
| Order Origination Trader | Buy-side trader id associated with Order Origination Firm which originates/submits the order. | [PartyRole] |
| Par | Equal to the face value (nominal) of a security, i.e. A bond selling at par is worth an equivalent to its original issue value, typically \$1000/bond. | [QuantityType] |
| Participate Don't Initiate | An order that may participate in a transaction initiated by another party, but may not initiate a transaction. For example, on US ECNs / Exchanges, this may represent an order that will be quoted to the marketplace and will trade if another party initiates a trade (i.e. hits the posted quote), but cannot be routed to initiate a trade with another market or market maker. | [ExecInst] |
| Per Unit | The currency price per unit, i.e. per equity share or per contract. | [PriceType] |
| Percent of Par | The ratio between the current price of a bond and its par value | [PriceType] |

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| | adjusted for amortization or indexing and expressed as a percent. For example if a EUR1,000 bond is trading at EUR1032.50 its price is expressed as 103.25 or 103¼. In the US this is usually referred to as the "dollar price" even in scholarly material and handbooks. | |
| Position Account | Account for positions resulting from derivatives trades. Each position account has a long and short quantity. Position quantities stored in the long and short quantity fields can be kept net or gross. Accounts that are kept gross are usually omnibus accounts. | [PartyRole] |
| Percent of Volume | The sender does not want to be all of the volume on the floor. | [ExecInst] |
| Premium | When a bond sells above its par value, it is said to be selling at a premium. A price with a PriceType of "premium" is the difference between the bond's percent-of-par price and 100. | [PriceType] |
| Previous Fund Valuation Point | For CIV orders - indicates that the Investor prefers that the order be dealt at the unit price determined at the immediately preceding Valuation Point, a.k.a. a Historic price. (This can be overridden by the constitution of the fund or, in certain circumstances, by the Fund Manager.) | [OrdType] |
| Open Average Yield | The average yield of the respective securities in the portfolio. | [YieldType] |
| Order Originator | ID of the party entering the trade into the system (data entry, userid, buy side trader, etc.). | [PartyRole] |
| Put Date | The date on which the buyer of a security has the right but not the obligation to sell the security back to the issuer at a predetermined price. | [EventType] |
| Previous Close Yield | The yield of a bond based on the closing price 1 day ago. | [YieldType] |
| Previously indicated | An order sent in response to an Indication of Interest message. | [OrdType] |
| Previously quoted | An order sent in response to a Quote message. | [OrdType] |
| Proceeds Yield | The CD equivalent yield when the remaining time to maturity is less than two years. | [YieldType] |
| Redeem | For CIV: A "sell" order for CIV units which must be forwarded to the fund manager (or their transfer agent) rather than being matched / crossed with a "buy" order, e.g. by an intermediary, funds supermarket, broker/dealer etc. This would be used in markets where the originator requires specific tax treatment and/or dealing charges. | [Side] |
| Reinstate on System Failure | If a system failure interrupts trading or order routing, attempt to reinstate this order, subject to time in force limitations. Note that depending on the type and severity of the failure, this might not be possible. | [ExecInst] |
| Reinstate on Trading Halt | If trading in this instrument is halted, reinstate this order when/if trading resumes, subject to time in force limitations. | [ExecInst] |
| Request to Intermediary | Used in a model where an intermediary, i.e. clearing house is involved in communicating allocation details and actions between | [AllocType] |

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| | two parties | |
| Respondent | A "respondent" may be one of the following: <ul style="list-style-type: none"> • a broker/dealer • an inter-dealer broker (or broker's broker) • an electronic service • bid or offer prices provided by one or more market makers • bid or offer prices provided by an inter-dealer broker • matching system with limit orders entered by customers (dealers or institutions) • an issuer | Quoting and other messages Volume 7 |
| Riskless Principal | "Riskless" principal transactions are generally described as trades in which, after receiving an order to buy (or sell) from a customer, the broker-dealer purchases (or sells) the security from (or to) another person in a contemporaneous offsetting transaction. Above from the SEC web-site http://www.sec.gov/rules/final/34-44291.htm See Exchange Act Rule 10b-10(a)(2)(ii)(A) [17 CFR 240. 10b-10(a)(2)(ii)(A)]; Exchange Act Rel. No. 33743 (Mar. 9, 1994) at n.11. | [OrderCapacity] |
| Sell Plus | A round-lot market order to sell "plus" is an order to sell a stated amount of a stock provided that its price is: <ul style="list-style-type: none"> - not lower than the last sale if the last sale was a "plus" or "zero plus" tick and - not lower than the last sale minus the minimum fractional change in the stock if the last sale was a "minus" or "zero minus" tick. A limit-price order to sell "plus" also states the lowest price at which it can be executed. | [OrdType] |
| Sell Short | An order to sell a security that the seller does not own; a sale effected by delivering a security borrowed by, or for the account of, the seller. Can only be executed on a "plus" or "zero plus" tick. | [OrdType] |
| Sell Short Exempt | Short sale exempt from short-sale rules. | [OrdType] |
| Semi-annual Yield | The yield of a bond whose coupon payments are reinvested semi-annually. | [YieldType] |
| Settlement Location | Identifies Settlement Depository or, if local settlement, the ISO Country Code. | [PartyRole] |
| Sponsoring Firm | A member of the exchange that is sponsoring an Entering Entity to send orders to the exchange. The Sponsoring Member Firm permits sponsorees (i.e. Entering Entities) to trade thereby allowing them to enter orders directly to the exchange via automated means. (e.g. NYSE allowing direct access via Anonymous DOT service). | [PartyRole] |
| Spread | A "spread" price is one of four things all denominated in basis points: <ol style="list-style-type: none"> 1) For an outright security trade, the "spread" price is the difference in yield between the object security and its benchmark - implied or explicit. | [PriceType] |

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|-------------------------------------|--|---------------------------|
| | <p>2) For a swap (or switch) of two issued securities the "spread" price is the difference in yield between the security being sold and the one being bought.</p> <p>3) For a roll of a futures contract with a contract in the same commodity but having a different contract settlement month the "spread" price is the price difference between the contract being sold and the one being bought.</p> <p>4) For a floating-rate Financing transaction the "spread" is the difference in yield extended above or below the yield of the stated benchmark.</p> <p>All four types are expressed in basis points (the price or yield difference times 100) and may be negative.</p> | |
| Stop | A stop order to buy which becomes a market order when the security trades at - or above - the stop price after the order is represented in the Trading Crowd. A stop order to sell which becomes a market order when the security trades at - or below - the stop price after the order is represented in the Trading Crowd. | [OrdType] |
| Stop Limit | A stop order to buy which becomes a limit order at the limit price when the security trades at - or above - the stop price after the order is represented in the Trading Crowd. A stop order to sell which becomes a limit order at the limit price when the security trades at - or below - the stop price after the order is represented in the Trading Crowd. | [OrdType] |
| Stopped | A trade is guaranteed for the order, usually at a stated price or better, but has not yet occurred. For example, a specialist on an exchange may "stop" an order while searching for a better price. | [OrdStatus] |
| Streetside Trade Capture Reporting | Reporting of completed trades for clearance and settlement or compliance purposes. Reports may be originated by Exchanges or by clearing firms and sent to clearing firms directly or via a clearing corporation or central counterparty such as DTCC in the US. | A "Section" in "Volume 5" |
| Simple Yield | The yield of a bond assuming no reinvestment of coupon payments. (Act/360 day count) | [YieldType] |
| Strict Limit (No Price Improvement) | A limit order that must be traded at the exact limit price specified without any price improvement. Requires OrdType=Limit. | [ExecInst] |
| Subscribe | For CIV: A "buy" order for CIV units which must be forwarded to the fund manager (or their transfer agent) rather than being matched / crossed with a "sell" order, e.g. by an intermediary funds supermarket, broker/dealer etc. This would be used in markets where the originator requires specific tax treatment and/or dealing charges. | [Side] |
| Suspended | The order is not eligible for trading. This usually happens as a result of a verbal or otherwise out-of-band request to suspend the order, or because the order was submitted, or modified via a Cancel/Replace Request, with ExecInst=Suspended. | [OrdStatus] |

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| Tax Equivalent Yield | The after tax yield grossed up by the maximum federal tax rate of 39.6%. For comparison to taxable yields. | [YieldType] |
| TED Price | The price spread between the active 3 month treasury bill futures contract and the 3 month Eurodollar futures contract. Used as an indicator of investor confidence in the U.S. markets. | [PriceType] |
| TED Yield | The difference in basis points between the yield-to-maturity of the bond / note and the yield-to-maturity of a Hypothetical Euromarket bond with identical coupon and maturity. | [PriceType] |
| Time In | According to US futures markets (CFTC): Timestamp of when order was received on the trading floor (booth). | [TrdRegTimest ampType] |
| Time Out | According to US futures markets (CFTC): Timestamp when the trade was received from the pit. | [TrdRegTimest ampType] |
| Trade Along | Clients who specify "Trade Along" give brokers permission to handle and place their order in the market even if the broker already has its own proprietary orders for the same security placed in the market. | [ExecInst] |
| Trailing Stop Peg | A pegged order representing a stop order with a stop price pegged to trail a specified distance behind the last sale price. The price of a trailing stop to buy can never increase, and the price of a trailing stop to sell can never decrease. | [ExecInst] |
| True Gross Yield | Yield calculated using the price including accrued interest, where coupon dates are moved from holidays and weekends to the next trading day. | [YieldType] |
| True Yield | The yield calculated with coupon dates moved from a weekend or holiday to the next valid settlement date. | [YieldType] |
| Try to Stop | Used in specialist-driven markets to direct the specialist to try and stop the order. | [ExecInst] |
| Underlying Contra Firm | The broker or other firm which is the contra side of the trade for the underlying security. | [PartyRole] |
| URI (Uniform Resource Identifier) | W3C standard defined as "the generic set of all names/addresses that are short strings that refer to resources". Note that "URL" (Uniform Resource Locator), commonly referred to by web browsers, is a subset of the URI standard. The W3C standards body considers URL an "informal term (no longer used in technical specifications)". | See Appendix 6-B |
| With or Without | An odd lot order filled on an effective round lot transaction, or on an effective bid or offer, whichever occurs first after the specialist receives the order. (e.g. NYSE order type) | [OrdType] |
| Yield At Issue | Municipals. The yield of the bond offered on the issue date. | [YieldType] |
| Yield Change Since Close | The change in the yield since the previous day's closing yield. | [YieldType] |
| Yield To Average Maturity | The yield achieved by substituting a bond's average maturity for the issue's final maturity date. | [YieldType] |

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| | | |
|---------------------------------|--|-------------|
| Yield To Next Call | The yield of a bond to the next possible call date. | [YieldType] |
| Yield To Longest Average Life | The yield assuming only mandatory sinks are taken. This results in a lower paydown of debt; the yield is then calculated to the final payment date. | [YieldType] |
| Yield To Maturity | The yield of a bond to its maturity date. | [YieldType] |
| Yield To Next Put | The yield to the date at which the bond holder can next put the bond to the issuer. | [YieldType] |
| Yield To Next Refund | Sinking Fund Bonds. Yield assuming all bonds are redeemed at the next refund date at the redemption price. | [YieldType] |
| Yield To Shortest Average Life | The yield assuming that all sinks (mandatory and voluntary) are taken at par. This results in a faster paydown of debt; the yield is then calculated to the final payment date. | [YieldType] |
| Yield To Tender Date | The yield on a Municipal bond to its mandatory tender date. | [YieldType] |
| Yield To Worst | The lowest yield to all possible redemption date scenarios. | [YieldType] |
| Yield Value of 1/32 | The amount that the yield will change for a 1/32 nd change in price. | [YieldType] |
| Yield with Inflation Assumption | Based on price, the return an investor would require on a normal bond that would make the real return equal to that of the inflation-indexed bond, assuming a constant inflation rate. | [YieldType] |

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Appendix 1-A
Abbreviations used within FIXML

| | |
|------------------------|------------------------------|
| <u>Acrl</u> | <u>Accrual</u> |
| <u>Acct</u> | <u>Account</u> |
| <u>Ack</u> | <u>Acknowledgement</u> |
| <u>Acrd</u> | <u>Accrued</u> |
| <u>Actn</u> | <u>Action</u> |
| <u>Adj</u> | <u>Adjust</u> |
| <u>Adjmt</u> | <u>Adjustment</u> |
| <u>Adv</u> | <u>Advertisement</u> |
| <u>Alloc</u> | <u>Allocation</u> |
| <u>Amt</u> | <u>Amount</u> |
| <u>AOS</u> | <u>AllowableOneSidedness</u> |
| <u>Asgn</u> | <u>Assignment</u> |
| <u>Avg</u> | <u>Average</u> |
| <u>Bhf</u> | <u>Behalf</u> |
| <u>Bkng</u> | <u>Booking</u> |
| <u>Bnchmk</u> | <u>Benchmark</u> |
| <u>Brkr</u> | <u>Broker</u> |
| <u>Brkrs</u> | <u>Brokers</u> |
| <u>Biz</u> | <u>Business</u> |
| <u>Calc</u> | <u>Calculation</u> |
| <u>Capt</u> | <u>Capture</u> |
| <u>Ccy</u> | <u>Currency</u> |
| <u>Cl</u> | <u>Client</u> |
| <u>Cls</u> | <u>Close</u> |
| <u>Cmn</u> | <u>Common</u> |
| <u>Cnfm</u> | <u>Confirmation</u> |
| | <u>Confirm</u> |
| <u>Cntra</u> | <u>Contra</u> |
| <u>Coll</u> | <u>Collateral</u> |
| <u>Comm</u> | <u>Commission</u> |
| <u>Comp</u> | <u>Company</u> |

| | |
|-----------------------|----------------------------|
| <u>Corp</u> | <u>Corporate</u> |
| <u>Cpcty</u> | <u>Capacity</u> |
| <u>Cpn</u> | <u>Coupon</u> |
| <u>Crss</u> | <u>Cross</u> |
| <u>Crv</u> | <u>Curve</u> |
| <u>Csh</u> | <u>Cash</u> |
| <u>Ctry</u> | <u>Country</u> |
| <u>Cum</u> | <u>Cumulative</u> |
| <u>Cxl</u> | <u>Cancel</u> |
| <u>Data</u> | <u>Data</u> |
| <u>Db</u> | <u>Database</u> |
| <u>Del</u> | <u>Delete</u> |
| <u>Desc</u> | <u>Description</u> |
| <u>Dest</u> | <u>Destination</u> |
| <u>Dev</u> | <u>Device</u> |
| <u>Disc</u> | <u>Discount</u> |
| <u>DK</u> | <u>Don't Know</u> |
| <u>Dlvr</u> | <u>Deliver</u> |
| <u>Dsctn</u> | <u>Discretion</u> |
| <u>Dsctnry</u> | <u>Discretionary</u> |
| <u>Dt</u> | <u>Date</u> |
| <u>Dup</u> | <u>Duplicate</u> |
| <u>Efctv</u> | <u>Effective</u> |
| <u>EFP</u> | <u>ExchangeForPhysical</u> |
| <u>Enc</u> | <u>Encoded</u> |
| <u>Err</u> | <u>Error</u> |
| <u>Exct</u> | <u>Execute</u> |
| <u>Exch</u> | <u>Exchange</u> |
| <u>Exctn</u> | <u>Execution</u> |
| <u>Exr</u> | <u>Exercise</u> |
| <u>Fctr</u> | <u>Factor</u> |

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| | |
|-----------------|-------------------------------|
| <u>Fut</u> | <u>Future</u> |
| <u>Fwd</u> | <u>Forward</u> |
| <u>FX</u> | <u>Foreign Currency</u> |
| <u>Grp</u> | <u>Group</u> |
| <u>GTD</u> | <u>Good Till Date</u> |
| <u>Hndl</u> | <u>Handling</u> |
| <u>ID</u> | <u>Identifier</u> |
| <u>Implct</u> | <u>Implicit</u> |
| <u>Ind</u> | <u>Indicator</u> |
| <u>Info</u> | <u>Information</u> |
| <u>Inpt</u> | <u>Input</u> |
| <u>Inq</u> | <u>Inquiry</u> |
| <u>Instrctn</u> | <u>Instruction</u> |
| <u>Instn</u> | <u>Institution</u> |
| <u>Instrmt</u> | <u>Instrument</u> |
| <u>Int</u> | <u>Interest</u> |
| <u>IOI</u> | <u>Indication of Interest</u> |
| <u>Iss</u> | <u>Issue</u> |
| <u>Issr</u> | <u>Issuer</u> |
| <u>Lctn</u> | <u>Location</u> |
| <u>Loc</u> | <u>Locate</u> |
| <u>Lqdy</u> | <u>Liquidity</u> |
| <u>Mat</u> | <u>Maturity</u> |
| <u>Max</u> | <u>Maximum</u> |
| <u>Mgn</u> | <u>Margin</u> |
| <u>Min</u> | <u>Minimum</u> |
| <u>Mkt</u> | <u>Market</u> |
| <u>Mleg</u> | <u>Multileg</u> |
| <u>Mnt</u> | <u>Maintenance</u> |
| <u>Mny</u> | <u>Money</u> |
| <u>Mo</u> | <u>Month</u> |
| <u>Mod</u> | <u>Modification</u> |
| <u>Misc</u> | <u>Miscellaneous</u> |
| <u>Msg</u> | <u>Message</u> |

| | |
|---------------|--|
| <u>Mtch</u> | <u>Match</u> |
| <u>Ndx</u> | <u>Index</u> |
| <u>No</u> | <u>Number - NumInGroup fields</u> |
| <u>Nst</u> | <u>Nested</u> |
| <u>Ntwk</u> | <u>Network</u> |
| <u>Num</u> | <u>Number - multiple reports, counts</u> |
| <u>Ofr</u> | <u>Offer</u> |
| <u>Opt</u> | <u>Option</u> |
| <u>Ord</u> | <u>Order</u> |
| <u>Orig</u> | <u>Original</u> |
| <u>Oth</u> | <u>Other</u> |
| <u>Pct</u> | <u>Percent</u> |
| <u>Pctg</u> | <u>Percentage</u> |
| <u>Pmt</u> | <u>Payment</u> |
| <u>Pos</u> | <u>Position</u> |
| <u>Prod</u> | <u>Product</u> |
| <u>Pri</u> | <u>Priority</u> |
| <u>Prlm</u> | <u>Preliminary</u> |
| <u>Prtztn</u> | <u>Priotization</u> |
| <u>Prev</u> | <u>Previous</u> |
| <u>Psbl</u> | <u>Possible</u> |
| <u>Pty</u> | <u>Party</u> |
| <u>Pub</u> | <u>Publish</u> |
| <u>Px</u> | <u>Price</u> |
| <u>Qty</u> | <u>Quality</u> |
| <u>Qty</u> | <u>Quantity</u> |
| <u>Qual</u> | <u>Qualifier</u> |
| <u>Quot</u> | <u>Quote</u> |
| <u>Red</u> | <u>Redemption</u> |
| <u>Ref</u> | <u>Reference</u> |
| <u>Rej</u> | <u>Reject</u> |
| <u>Reltd</u> | <u>Related</u> |
| <u>Repo</u> | <u>Repurchase</u> |

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| | |
|----------------|---------------------|
| <u>Req</u> | <u>Request</u> |
| <u>Rqst</u> | <u>Registration</u> |
| <u>Rgstry</u> | <u>Registry</u> |
| <u>Rnd</u> | <u>Round</u> |
| <u>Rpt</u> | <u>Report</u> |
| <u>Rpts</u> | <u>Reports</u> |
| <u>Rslt</u> | <u>Result</u> |
| <u>Rsn</u> | <u>Reason</u> |
| <u>Rsp</u> | <u>Response</u> |
| <u>Rstct</u> | <u>Restrict</u> |
| <u>Rstctn</u> | <u>Restriction</u> |
| <u>Rstctns</u> | <u>Restrictions</u> |
| <u>Rstmt</u> | <u>Restatement</u> |
| <u>Rt</u> | <u>Rate</u> |
| <u>Rtng</u> | <u>Rating</u> |
| <u>Scnd</u> | <u>Secondary</u> |
| <u>Sec</u> | <u>Security</u> |
| <u>Seq</u> | <u>Sequence</u> |
| <u>Sess</u> | <u>Session</u> |
| <u>Settl</u> | <u>Settlement</u> |
| <u>Sfx</u> | <u>Suffix</u> |
| <u>Shrt</u> | <u>Short</u> |
| <u>Snd</u> | <u>Sender</u> |
| <u>Sndg</u> | <u>Sending</u> |
| <u>Src</u> | <u>Source</u> |
| <u>St</u> | <u>State</u> |
| <u>Stand</u> | <u>Standing</u> |
| <u>Stat</u> | <u>Status</u> |
| <u>Stip</u> | <u>Stipulation</u> |
| <u>Strk</u> | <u>Strike</u> |
| <u>Sub</u> | <u>Subscription</u> |
| <u>Subsid</u> | <u>Subsidiary</u> |
| <u>Svc</u> | <u>Service</u> |
| <u>Sym</u> | <u>Symbol</u> |

| | |
|---------------|-----------------------|
| <u>Sys</u> | <u>System</u> |
| <u>Sz</u> | <u>Size</u> |
| <u>Tgt</u> | <u>Target</u> |
| <u>Tkt</u> | <u>Ticket</u> |
| <u>Tm</u> | <u>Time</u> |
| <u>Tot</u> | <u>Total</u> |
| <u>Typ</u> | <u>Type</u> |
| <u>Trd</u> | <u>Trade</u> |
| <u>TrdSes</u> | <u>TradingSession</u> |
| <u>Trkng</u> | <u>Tracking</u> |
| <u>Trm</u> | <u>Term</u> |
| <u>TS</u> | <u>Timestamp</u> |
| <u>Txn</u> | <u>Transaction</u> |
| <u>Und</u> | <u>Underlying</u> |
| <u>Valu</u> | <u>Value</u> |
| <u>Vol</u> | <u>Volume</u> |
| <u>Yld</u> | <u>Yield</u> |
| <u>Yr</u> | <u>Year</u> |

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```

<!ENTITY % ListExecuteCustom "">
<!ENTITY % ListExecuteContent
"ListID,ClientBidID?,BidID?,TransactTime,Text?,EncodedTextGroup?
%ListExecuteCustom;" >
<!ELEMENT ListExecute (%ListExecuteContent;)>
<!ATTLIST ListExecute FIXTag CDATA #FIXED '35'
    DataType CDATA #FIXED 'String'
    Value CDATA #FIXED 'L' >

```

To extend the content model of the ListExecute message, add the following to the internal subset of a FIXML message.

```

<!DOCTYPE fixml SYSTEM "fixmlmain.dtd" [
  <!ENTITY % ListExecuteCustom ", InternalTransNumber?">
  <!ELEMENT InternalTransNumber (#PCDATA)>
]>

```

After entity reference resolution the Indication content model will look like:

```

<!ELEMENT ListExecute
(ListID,ClientBidID?,BidID?,TransactTime,Text?,EncodedTextGroup?,
InternalTransNumber? )>

```

instead of

```

<!ELEMENT ListExecute
(ListID,ClientBidID?,BidID?,TransactTime,Text?,EncodedTextGroup? )>

```

FIXML elements have attributes, which contain referential information related to the FIX Field ID, Data type, and numeric constraints. **Validation of these attributes must happen at the application level.**

FIXTag - contains the FIX Protocol Field ID (Tag).

DataType - reflects data types (char, int, float, month-year, day-of-month, time, date) from the FIX specification.

Example:

```

<!ELEMENT ForexReq EMPTY>
<!ATTLIST ForexReq FIXTag CDATA #FIXED '121'
    DataType CDATA #FIXED 'Boolean'

```

Value (Y | N) #REQUIRED
SDValue (Yes | No) #IMPLIED >

8)FIX defines message types with the **MsgType** field (tag "35"). Since the existence of a particular element indicates the message type (ie <ExecutionReport>), **MsgType** is reflected as meta-data information. Each FIX message contains the attribute **FIXTag** with a fixed value equal to "35" and a **Value** attribute equal to the corresponding **MsgType** value.

```
<!ELEMENT QuoteReq (%QuoteReqContent; )>  
<!ATTLIST QuoteReq  
    FIXTag CDATA #FIXED "35"  
    DataType CDATA #FIXED "char"  
    Value CDATA #FIXED "R"  
>
```

9)FIXML allows for the XML parser to validate enumerations from the FIX Specification. These elements are defined with EMPTY content models and an attribute called Value. The acceptable values for FIXML attribute enumerations come from the FIX Specification. **An optional attribute list call SDValue (SelfDescribingValue) contains the human-readable equivalent of the FIX specification values.**

```
<!ELEMENT ProcessCode EMPTY>  
<!ATTLIST ProcessCode FIXTag CDATA #FIXED '81'  
    DataType CDATA #FIXED 'char'  
    Value (0 | 1 | 2 | 3 | 4 | 5 | 6 ) #REQUIRED  
    SDValue (Regular |  
            SoftDollar |  
            StepIn |  
            StepOut |  
            StepInSoft |  
            StepOutSoft |  
            PlanSponsor ) #IMPLIED >
```

The linkage between Value and SDValue cannot be validated.

10)When fields are conditionally required based on the value of other fields, the Tag=Value pair becomes an element. For example, ExecRefID is required when ExecTransType = Cancel. The attribute **Value** is added and contains the valid FIX Specification value.

```
<!ELEMENT ExecTransType (ExecNew | ExecCancel | ExecCorrect |
ExecStatus)>
```

```
<!ELEMENT ExecCancel (ExecRefID, LastQty, LastPx)>
  <!ATTLIST ExecCancel
    FIXTag CDATA #FIXED "20"
    Value CDATA #FIXED "1">
  >
```

20=1 (ExecTransType=Cancel)

becomes

```
<ExecTransType><ExecNew FIXTag="20" Value="1"> ... </ExecTransType>
```

Applies to:

ExecNew, ExecCancel, ExecCorrect, ExecStatus, AllocStatusAccept, AllocStatusReject, AllocPartialAccept, AllocStatusReceived, AdvNew, AdvCancel, AdvReplace, IOINew, IOICancel, IOIReplace

11)FIXML has elements that serve as containers and do not map directly to FIX tag=value pairs.

```
<!ELEMENT MiscFeeList (NoMiscFees? , MiscFeeGroup+)>
```

12)Special containers are used when enumeration values of a FIX field must be split into two elements to handle conditionally required elements.

```
<!ELEMENT OrderDuration (TimeInForce | GTDTimeInForce)>
```

```
<!ELEMENT TimeInForce EMPTY>
<!ATTLIST TimeInForce
  FIXTag CDATA #FIXED "59"
  DataType CDATA #FIXED "char"
  Value (0|1|2|3|4|5) #REQUIRED
  SDValue (Day|GoodTillCancel|AtTheOpening|ImmediateOrCancel|FillOrKill|
  GoodTillCrossing) #IMPLIED
  >
```

```
<!ELEMENT GTDTimeInForce (ExpireTime)>
<!ATTLIST GTDTimeInForce
```

FIXTag CDATA #FIXED "59"
DataType CDATA #FIXED "char"
Value CDATA #FIXED "6"
SDValue CDATA #FIXED "GoodTillDate" >