

# Encoding FIX using Google Protocol Buffers

## Technical Specification

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**Version 1.0 – Draft Standard – April 18, 2019**

**THIS DOCUMENT IS A DRAFT STANDARD FOR A PROPOSED FIX TECHNICAL STANDARD. A DRAFT STANDARD HAS BEEN APPROVED BY THE GLOBAL TECHNICAL COMMITTEE AS THE FINAL STEP IN CREATING A NEW FIX TECHNICAL STANDARD. POTENTIAL ADOPTERS ARE STRONGLY ENCOURAGED TO BEGIN WORKING WITH THE DRAFT STANDARD AND TO PROVIDE FEEDBACK TO THE GLOBAL TECHNICAL COMMITTEE AND THE WORKING GROUP THAT SUBMITTED THE PROPOSAL. THE FEEDBACK TO THE DRAFT STANDARD WILL DETERMINE WHEN TWO INTEROPERABLE IMPLEMENTATIONS HAVE BEEN ESTABLISHED AND THE DRAFT STANDARD CAN BE PROMOTED TO BECOME A NEW FIX TECHNICAL STANDARD.**

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## 1 Introduction

Google Protocol Buffers is a language-neutral, platform-neutral, extensible mechanism for serializing structured data. It was originally developed by Google to deal with an index server request/response protocol and has become their standard data interchange format. It was made available to the Open Source community in 2008. GBP allows programmers to define simple data structures in a specialized definition language and generate source code containing classes representing those structures. These classes come complete with optimized code to parse and serialize data in a compact format and they allow easy access to data fields via “get” and “set” methods.

This technical specification contains provisions for the mapping of the content of the FIX Unified Repository to the Google Protocol Buffers (GPB) language according to the GPB definition language (or “.proto”-file syntax). These provisions are for the purpose of enabling the exchange of FIX messages between two endpoints using the binary encoding defined by GPB.

The mapping procedure specified in this technical specification can be applied either to the original FIX Unified Repository or to any other XML document that contains a <fix> element with the same syntax as the one in the FIX Unified Repository. For example, a user of FIX could take a subset of the Repository, apply one or more scenarios to some messages, add encoding attributes to a few fields, and finally apply the mapping procedure to the resulting XML document, thus producing a GPB schema (or “.proto” file).

This technical specification is intended to be used in an algorithmic fashion. Clause 4 contains general provisions and drives the whole mapping procedure. Clause 5 (mapping of FIX datatypes) and clause 6 (mapping of FIX messages) are invoked by subclause 4.1.3. Clause 7 (mapping of a FIX component) is invoked by subclause 6.2.2 and by itself (recursively).

## 2 References

1. Google Protocol Buffers Development Guide and API Reference, <https://developers.google.com/protocol-buffers>
2. FIX Unified Repository, <http://www.fixtradingcommunity.org/pg/file/fplpo/read/30263/fix-repository-2010-edition>

### 3 Definitions

<p>GPB scalar type</p>	<p>A fundamental type provided by GPB. These include:</p> <ul style="list-style-type: none"> <li>• double</li> <li>• float</li> <li>• uint32 – a 32-bit unsigned integer with variable-length encoding</li> <li>• uint64 – a 64-bit unsigned integer with variable-length encoding</li> <li>• sint32 – a 32-bit signed inter with variable-length encoding</li> <li>• sint64 – a 64-bit signed integer with variable-length encoding</li> <li>• fixed32 – a 32-bit unsigned integer always using four bytes</li> <li>• fixed64 – a 64-bit unsigned integer always using eight bytes</li> <li>• sfixed32 – a 32-bit signed integer always using four bytes</li> <li>• sfixed64 – a 64-bit signed integer always using eight bytes</li> <li>• bool</li> <li>• string</li> <li>• bytes – any arbitrary sequence of bytes</li> </ul>
<p>source &lt;fix&gt; element</p>	<p>An XML element named &lt;fix&gt; (usually, but not necessarily, located in the FIX Unified Repository) that is used as the source of the mapping to GPB.</p>
<p>enum integer literal</p>	<p>The integer constant assigned to a GPB enum value (or enum field identifier). For example, the following enum defines 3 enum values with integer literals of 0, 1 and 2, respectively.</p> <pre>enum Corpus {   UNIVERSAL = 0;   WEB = 1;   IMAGES = 2; }</pre>
<p>enum integer constant</p>	<p>Synonym for enum integer literal.</p>
<p>enum field identifier</p>	<p>The text used to identify a GPB enum field. For example, the following enum definition contains 3 enum fields identified by “UNIVERSAL”, “WEB” and “IMAGES”.</p> <pre>enum Corpus {   UNIVERSAL = 0;   WEB = 1;   IMAGES = 2; }</pre>

## 4 General provisions

### 4.1 Generation of the Google Protocol Buffers schema

**4.1.1** The mapping process specified in this technical specification takes as input a `<fix>` element (called the *source `<fix>` element*), whose syntax and semantics are identical to those of the `<fix>` element of the FIX Unified Repository v. 5.0 SP2. The mapping process generates a Google Protocol Buffers schema, consisting of a set of GPB message and enumeration types.

**4.1.2** The *source `<fix>` element* can be any of the following:

- a) a `<fix>` element that is part of a FIX Unified Repository instance;
- b) a `<fix>` element derived from (a) by excluding part of its content (e.g., keeping only the messages belonging to one or more specified FIX sections and/or FIX categories);
- c) a `<fix>` element derived from (a) or (b) by applying one or more specified scenarios to it;
- d) any `<fix>` element whose syntax and semantics are identical to those of the `<fix>` element of the FIX Unified Repository v. 5.0 SP2.

**4.1.3** GPB message types in the GPB schema shall be generated from the *source `<fix>` element* as specified in clauses 5 and 6.

#### EXAMPLE

The following set of GPB message types could be generated by the mapping process.

```
message HopGrp { // generated from a <component> element
  optional string hop_comp_id = 1          [(fix.tag)=628];
  optional fixed64 hop_sending_time = 2;   [(fix.tag)=629];
  optional fixed64 hop_ref_id = 3;         [(fix.tag)=630];
}

message StandardHeader { // generated from a <component> element
  optional string sender_comp_id = 1       [(fix.tag)=49];
  optional string target_comp_id = 2       [(fix.tag)=56];
  optional string on_behalf_of_comp_id = 3 [(fix.tag)=115];
  optional string deliver_to_comp_id = 4   [(fix.tag)=128];
  optional fixed64 sending_time = 5        [(fix.tag)=52];
  optional bool poss_resend = 5            [(fix.tag)=97];
  repeated HopGrp hop_grp = 6             [(fix.tag)=627];
}

enum IoiTransTypeEnum { // generated from a <field> with <enum>s
  IOI_TRANS_TYPE_UNSPECIFIED = 0;
  IOI_TRANS_TYPE_CANCEL = 0;           [(fix.enum_value)="C"];
  IOI_TRANS_TYPE_NEW = 1               [(fix.enum_value)="N"];
  IOI_TRANS_TYPE_REPLACE = 2           [(fix.enum_value)="R"];
}

message Ioi { // generated from a <message> element
```



```

option (fix.mag_type)="6";
optional StandardHeader standard_header = 1;
optional string ioi_id = 2                [(fix.tag)=23];
optional IoiTransTypeEnum ioi_trans_type = 3    [(fix.tag)=28];
optional Instrument instrument = 4;
optional SideEnum side = 5                [(fix.tag)=54];
optional IoiQty ioi_qty = 6                [(fix.tag)=27];
optional Decimal64 price = 7              [(fix.tag)=44];
optional bool ioi_natural_flag = 9         [(fix.tag)=130];
}
    
```

## 4.2 GPB encoding attributes

To assist in the mapping, the repository can be annotated with encoding attributes. These attributes may be used as the basis to determine the most favorable encoding when there are several options, or they may be considered when formulating mapping rules. For example, if the GPB scaler types, `sfixed32` and `sfixed64`, both satisfy a mapping from a FIX integral type, then the values of `<encodingInfo>` attributes `@minValue`, `@maxValue` and `@numBits` will be taken into consideration in determining which integer type to select.

**4.2.1** Within the source `<fix>` element, encoding information is carried by a set of encoding attributes within `encoding information` elements. The `encoding information` elements that affect the mapping to GPB are the elements `<encodingInfo>`.

**4.2.2** The `<encodingInfo>` element may contain `encoding attributes` applicable to all standard FIX encodings. All the attributes of an `encoding information` element are optional. An `encoding information` element may be empty.

**4.2.3** Each `<datatype>`, `<field>`, `<fieldRef>`, `<component>`, `<componentRef>`, or `<message>` element in the source `<fix>` element may contain zero or more `encoding information` elements, but it never contains two `encoding information` elements with the same name.

**4.2.4** The encoding attributes are summarized in table 1.

**Table 1 –Encoding Attributes**

Name	Type	In Repository elements <sup>a</sup>	Applicable to FIX datatypes <sup>b</sup>	Description	Default value <sup>c</sup>	GPB-relevance <sup>d</sup>

<i>minValue</i>	integer	<datatype> <field> <fieldRef>	int Pattern	Minimum permitted value of the integer datatype.	negative infinity	If <i>minValue</i> ≥ 0, then an unsigned integer GPB datatype will be selected. Otherwise the <i>minValue</i> will be used to determine the size of the signed integer.
<i>maxValue</i>	integer	<datatype> <field> <fieldRef>	int Pattern	Maximum permitted value of the integer datatype.	positive infinity	Used to determine the size of the GPB integer data type.
<i>isUTF8</i>	boolean	<datatype> <field> <fieldRef>	data	Indicates whether the data consists of Unicode characters encoded in UTF-8.	false	The FIX datatype, "data", is mapped to an arbitrary sequence of the GPB datatype "bytes". GPB encoding is unaffected by this attribute.
<i>minLength</i>	integer	<datatype> <field> <fieldRef>	String Pattern	Minimum permitted length of the string datatype (minimum number of characters).	zero	Not enforced by GPB. GPB strings are of unbounded length.
<i>maxLength</i>	integer	<datatype>, <field>, <fieldRef>	String Pattern	Maximum permitted length of the string datatype (maximum number of characters).	positive infinity	Same as above.
<i>numBits</i>	integer	<datatype> <field> <fieldRef>	float	Maximum size in bits of the data element.	64	This attribute will provide an upper limit on the size of integers.

<i>isBinaryFloat</i>	boolean	<datatype> <field> <fieldRef>	Qty Price PriceOffset Amt Percentage float	Indicates whether to generate an IEEE-754 floating point.  Mutually exclusive of <i>isFixedPoint</i> . (They both cannot be true.)	false	If <i>isBinaryFloat</i> is true, will generate a double (the GPB IEEE-754 equivalent). If <i>isFixedPoint</i> is true, one of <i>sfixed32</i> , <i>sfixed64</i> , <i>fixed32</i> , or <i>fixed64</i> (depending on the range requirements given by <i>minValue</i> and <i>maxValue</i> ) will be generated to represent a mantissa.
<i>isFixedPoint</i>	boolean	<datatype> <field> <fieldRef>	Qty Price PriceOffset Amt Percentage float	Indicates whether the exponent is fixed (true) or variable (false).  Mutually exclusive of <i>isBinaryFloat</i> . (They both cannot be true.)	false	
<i>exponent</i>	integer	<datatype> <field> <fieldRef>	Qty Price PriceOffset Amt Percentage float	When <i>isFixedPoint</i> is true and a GPB integer scalar type, such as <i>fixed32</i> , is used to represent a decimal, this represents the implied position of the decimal of the integer representation  When <i>isFixedPoint</i> is false this encoding attribute should not be provided.  May be positive or negative.  Scaled value = mantissa x $10^{\text{exponent}}$	None – null value allowed	Use of hard-coded precision may raise forward compatibility issues if future precision or multiple precisions are needed.
<i>isNumeric</i>	boolean	<datatype> <field> <fieldRef>	String Pattern	Indicates whether a string field will always contain numeric characters.	false	Identifies an opportunity to optimize by mapping a String to an integer.

<i>gpbType</i>	String restricted to specific enum values	<datatype> <field> <fieldRef>	(All)	Generic mechanism to directly specify the type overriding all mapping rules. Valid values are any GPB scalar type.	None – null value allowed	Overriding type must be a GPB scalar type
<p><sup>a</sup> This column indicates the FIX Repository elements in which the encoding information element (&lt;GPB&gt; or &lt;encodingInfo&gt;) containing the encoding attribute may appear.</p> <p><sup>b</sup> This column indicates the FIX datatypes to which the encoding attribute applies. An encoding attribute is ignored when used with a FIX datatype to which it does not apply.</p> <p><sup>c</sup> The default value is used when an encoding attribute is applicable but is absent.</p> <p><sup>d</sup> This column indicates the GPB specific considerations of the encoding attribute.</p>						

### 4.3 Generation of GPB names

This subclause specifies rules for generation of the various names mapped from character strings in the Repository. The transformation of a name depends on the context in which it is used. These rules ensure that the generated GPB files conform to the GPB Style Guidelines as defined in Reference 2.1.

Acronyms require special handling to provide an aesthetically pleasing result. We call these acronyms the case-sensitive acronyms. When these acronyms are found within a character string that is to be mapped, they are first converted to camel-case. These acronyms and their mappings are listed in the following table:

**Table 2 - Case-sensitive acronym string mapping**

Source substr	Target substr	Source substr	Target substr	Source substr	Target substr
ISDA	Isda	NERC	Nerc	XML	Xml
FpML	Fpml	CDS	Cds	ISO	Iso
CUSIP	Cusip	IOI	loi	CP	Cp
ISITC	Isitc	MD	Md	NT	Nt
ISIN	Isin	EFP	Efp	FX	Fx
RIC	Ric	GT	Gt	UTC	Utc
USD	Usd	RFQ	Rfq	TZ	Tz
US	Us	CFI	Cfi	PKCS	Pkcs
UK	Uk	ID	Id	CSD	Csd

The mapping of these acronyms is to be applied according to the order to a top-down, left-to-right precedence. E.g. “USD” must be mapped before “US”.

### 4.3.1 Datatype names

Source datatypes will map either directly to GPB scalar types, or to supporting GPB types designed to carry the same information as the source type. In both cases, datatype names are defined by the mapping rules, found in section 5.2, 5.3 and 7.5.6, and are not subject to a naming convention.

### 4.3.2 Field names

The target name of fields declared within GPB messages are derived from the “name” attribute of the source <field> element and are transformed by the following rules:

1. All instances of the case-sensitive acronyms are converted to camel case according to the mapping provided by table 2.
2. Insert an underscore character ('\_') between any two consecutive characters X and Y such that X is in lower case and Y is in upper case.
3. Convert all characters to lower-case.

The following table lists some examples.

Source field name	Target field name	Applied rule
Account	account	3
AdvRefID	adv_ref_id	1,2,3
IOIID	ioi_id	1,2,3
IOITransType	ioi_trans_type	1,2,3
LegIOIQty	leg_ioi_qty	1, 2,3
MDEntryPx	md_entry_px	1,2,3
GTBookingInst	gt_booking_inst	1,2,3
CFICode	cfi_code	1,2,3
LegCFICode	leg_cfi_code	1,2,3

### 4.3.3 Enumeration type and enumeration value names

<field> elements with <enum> element children will result in a comparable enumeration type definition in GPB. The name of the target GPB enumeration type follows the camel-case convention and will be derived from the “name” attribute of the source <field> element with the following transformation rules:

1. Maintain the first character as upper case.
2. Append the string value “Enum” to the name.

The target enumeration value names are derived from the “symbolicName” attribute of the <enum> element and the “name” attribute of the source <field> element. According to the following rules:

1. All instances of the case-sensitive acronyms are converted to camel case according to the mapping provided by table 2.
2. Prepend the value of the “name” attribute of the source <field> element followed by an underscore character, leaving its original case intact, to the “symbolicName” attribute.
3. Insert an underscore character (‘\_’) between any two consecutive characters X and Y such that X is in lower case and Y is in upper case.
4. Convert all characters to upper case.

If a default enumeration value is desired, its name is derived from the “name” attribute of the source <field> element by converting it to upper case and appending the string “\_UNSPECIFIED”.

For example, the following FIX field definition

```
<field id="21" name="HandlInst" type="char" textId="FIELD_21"
added="FIX.2.7"
      abbrName="HandlInst"
      notReqXML="0">
  <enum value="1" symbolicName="AutomatedExecutionNoIntervention"
        sort="1"
        added="FIX.2.7"
        textId="ENUM_21_1"/>
  <enum value="2" symbolicName="AutomatedExecutionInterventionOK"
        sort="2"
        added="FIX.2.7"
        textId="ENUM_21_2"/>
  <enum value="3" symbolicName="ManualOrder"
        sort="3"
        added="FIX.2.7"
        textId="ENUM_21_3"/>
</field>
```

will result in the following GPB enum definition within a GPB message containing a HandlInst field

```
enum HandlInstEnum {
  HANDL_INST_UNSPECIFIED = 0;
  HANDL_INST_AUTOMATED_EXECUTION_NO_INTERVENTION = 1;
  HANDL_INST_AUTOMATED_EXECUTION_INTERVENTION_OK = 2;
  HANDL_INST_MANUAL_ORDER = 3;
}
```

#### 4.3.4 Component names

All <component> elements will result in a comparable message definition in GPB. When mapping a <component> to a GPB message, transform the <component> “name” attribute as follows:

- All instances of the case-sensitive acronyms are converted to camel case according to the mapping provided by table 2.
- The hyphen character (-) shall be removed resulting in the concatenation of the string appearing before the hyphen and the string appearing after it.

### 4.3.5 Message names

All <message> elements will result in a comparable message definition in GPB. As with component names, when mapping a <message> to a GPB message, transform the <message> “name” attribute as follows:

- All instances of the case-sensitive acronyms are converted to camel case according to the mapping provided by table 2.
- The hyphen character (-) shall be removed resulting in the concatenation of the string appearing before the hyphen and the string appearing after it.

### 4.3.6 Package names

All GPB message definitions must be generated within a GPB package. The package specifier is listed within a “.proto” file and is taken directly from the “category” attribute of a <component> element.

### 4.3.7 File names

All GPB messages and enum definitions that belong to the same GPB package are defined in the same “.proto” file. The name of the file is derived from (1) the “category” attribute of the <component> elements which generated the messages and enums, and (2) an optional ID number to associate the .proto definition with a customized FIX repository, as follows:

- Convert all characters to lower-case.
- Optionally, append the string “.<N>” where <N> refers to the version number identifying a customized FIX repository.
- Append the string “.proto”.

For example, the file used to store all components of the category “SingleGeneralOrderHandling”, for a version of the for the initial version of the proto will be named “singlegeneralorderhandling.1.proto”.

## 4.4 Field and enumeration value ordering

When generating a GPB message type, the fields must be ordered according to specific attributes of the source elements as follows:

- 1) First by *whenAdded* attribute of the element. This attribute indicates the FIX version to which this field was added to the component. The lexicographical order of FIX versions is based on the respective release dates: FIX.2.7, followed by FIX.3.0, FIX.4.0, FIX.4.1, FIX.4.2, FIX.4.3, FIX.4.4, FIX.5.0/ FIXT.1.1 (released together), FIX.5.0.SP1, and FIX.5.0.SP2.
- 2) Then by *whenAddedEP* attribute with lower-numbered extension packs listed before higher-numbered ones.
- 3) Then alphabetically by *name*.

The ordering is enforced through the assignment of field numbers (for message fields) and integer-literals (for enum values). The field number of the first field is to be assigned the value of 1. Field numbers of subsequent fields are incremented by 1. The integer-literal assigned to the first enumeration is 1 with integer-literal assignments for subsequent enumerations incremented by 1. (If the default enumeration value was generated, which is used to indicate no value has been set, then it shall be assigned the integer-literal 0.)

## 5 Mapping of FIX datatypes

### 5.1 Datatypes implicitly defined via <field> elements

5.1.1 Within the source <fix> element, the effective datatype of a field is the FIX datatype determined from a <field> element, its attributes, and its child elements, as described in 3.

**Table 3 – Determination of the effective datatype of a FIX field from a <field> element**

Case	Multiple-valued type <sup>a</sup>	<enum> child elements <sup>b</sup>	enum DataType attribute <sup>c</sup>	Different encoding attributes <sup>d</sup>	union DataType attribute <sup>e</sup>	Effective datatype of the FIX field
1	No	no	no	no	no	the FIX datatype indicated in the <code>type</code> attribute of the a <field> element
2	No	no	no	yes	no	the FIX datatype indicated in the <code>type</code> attribute, modified by the <i>effective GPB encoding attributes</i> of the <field> element
3	No	yes	no	no	no	the FIX datatype indicated in the <code>type</code> attribute, restricted by the enumeration specified in the <enum> child elements of this <field> element
4	No	no	yes	no	no	the FIX datatype indicated in the <code>type</code> attribute, restricted by the enumeration specified in the <enum> child elements of the <field> element referenced by the <code>enumDataType</code> attribute
5	Yes	no	no	no	no	the FIX datatype (either <code>MultipleCharValue</code> or <code>MultipleStringValue</code> ) with no restrictions on the items of the space-separated list
6	Yes	yes	no	no	no	the FIX datatype (either <code>MultipleCharValue</code> or <code>MultipleStringValue</code> ) where each item of the space-separated list is required to belong to the enumeration specified in the <enum> child elements of this <field> element
7	yes	no	yes	no	no	the FIX datatype (either <code>MultipleCharValue</code> or <code>MultipleStringValue</code> ) where each item of the space-separated list is required to belong to the enumeration specified in the <enum> child elements of the <field> element referenced by the <code>enumDataType</code> attribute
8	no	no	no	no	yes	a union between the type determined in case 1 above and the FIX datatype indicated in the <code>unionDataType</code> attribute



9	no	no	no	yes	yes	a union between the type determined in case 2 above and the FIX datatype indicated in the <code>unionDataType</code> attribute
10	no	yes	no	no	yes	a union between the type determined in case 3 above and the FIX datatype indicated in the <code>unionDataType</code> attribute
11	no	no	yes	no	yes	a union between the type determined in case 4 above and the FIX datatype indicated in the <code>unionDataType</code> attribute

NOTE – Other combinations of column values do not occur

<sup>a</sup> This column indicates whether the `type` attribute of the `<field>` element is a multiple-valued datatype (either `MultipleCharValue` or `MultipleStringValue`)

<sup>b</sup> This column indicates whether the `<field>` element has one or more `<enum>` child elements

<sup>c</sup> This column indicates whether the `<field>` element has an `enumDataType` attribute

<sup>d</sup> This column indicates whether the *effective GPB encoding attributes* of the `<field>` element differ from the *effective GPB encoding attributes* of the `<datatype>` element referenced by the `type` attribute

<sup>e</sup> This column indicates whether the `<field>` element has a `unionDataType` attribute

In all cases of table 3 except case 1, the effective datatype of a field differs from the datatype indicated in the `type` attribute and needs to be mapped separately. The following subclauses specify how to map such implicitly defined datatypes.

**5.1.2** For each `<field>` element in the `<fields>` element of the *source <fix> element*, in order, that has one or more `<enum>` child elements and either

- a) it has a `type` other than `MultipleCharValue` or `MultipleStringValue` (cases 3 and 10 of table 3); or
- b) it is referenced by the `enumDataType` attribute of a `<field>` element having a `type` other than `MultipleCharValue` or `MultipleStringValue` (cases 4 and 11 of table 3); or
- c) it has a `type` of `MultipleCharValue` or `MultipleStringValue` (case 6 of table 3); or
- d) it is referenced by the `enumDataType` attribute of a `<field>` element having a `type` of `MultipleCharValue` or `MultipleStringValue` (case 7 of table 3),

a GPB enumerated type shall be generated as specified in subclauses 5.1.2.1 to 5.1.2.4.

**5.1.2.1** The name in the GPB enumerated type shall be generated from the name of the FIX field with the “Enum” suffix appended in accordance with subclause 4.3 (Generation of Names).

**5.1.2.2** The type expression in the GPB enum type shall be an enumerated type expression containing one enumerator for each `<enum>` child element of the `<field>` element, and optionally, an additional enumerator used to indicate that no value has been provided. This additional enumerator identifier shall be derived from the

name plus the string “UNSPECIFIED”). The remaining enumerator identifiers shall be generated from the values of the FIX field and the `symbolicName` attribute of the corresponding `<enum>` element also in accordance with subclause 4.3.

**5.1.2.3** The integer literals assigned to the enumeration which indicates no value has been provided shall be 0. The integer literals assigned to the remaining enumerators of the GPB enum type shall be generated from the position of each of the `<enum>` child elements of the `<field>` element according to the sort order specified by clause 4.4, starting from 1 and incrementing by 1.

**5.1.2.4** The custom enum options for each enumeration type expression shall be generated according to table 10 found in section 8.5 entitled, “Generating values for custom enum options”.

NOTE – For a field having the FIX datatype `Currency`, if a list of `<enum>` child elements specifying a limited set of currency codes is added to the `<field>` element, the type of the field will be mapped to a GPB enumerated type. The default mapping of the `Currency` datatype (a string) will not be used for this field. The same considerations apply to other FIX datatypes that rely on an externally defined codelist, such as `Exchange`, `Country`, or `Language`.

#### EXAMPLE 1

The following `<field>` element:

```
<field ... name="AdvSide" type="char" ... abbrName="AdvSide"
notReqXML="0">
  <enum value="B" symbolicName="Buy" ... />
  <enum value="S" symbolicName="Sell" ... />
  <enum value="T" symbolicName="Trade" ... />
  <enum value="X" symbolicName="Cross" ... />
</field>
```

will generate the following GPB enum:

```
enum AdvSideEnum {
  ADV_SIDE_UNSPECIFIED = 0;
  ADV_SIDE_BUY = 1;
  ADV_SIDE_SELL = 2;
  ADV_SIDE_TRADE = 3;
  ADV_SIDE_CROSS = 4;
}
```

#### EXAMPLE 2

The following `<field>` element:

```
<field ... id="276" name="QuoteCondition" type="MultipleStringValue"
...>
  <enum value="A" symbolicName="Open" ... />
  <enum value="B" symbolicName="Closed" ... />
  <enum value="C" symbolicName="ExchangeBest" ... />
```

```
<enum value="D" symbolicName="ConsolidatedBest" .../>
</field>
```

will generate the following GPB enum:

```
enum QuoteConditionEnum {
    QUOTE_CONDITION_UNSPECIFIED = 0;
    QUOTE_CONDITION_OPEN = 1;
    QUOTE_CONDITION_CLOSED = 2;
    QUOTE_CONDITION_EXCHANGE_BEST = 3;
    QUOTE_CONDITION_CONSOLIDATED_BEST = 4;
}
```

If we were to map a MDIncGrp component to, which contains a QuoteCondition field, the following may be generated:

```
Message MDIncGrp {
    // ...
    repeated QuoteConditionEnum quote_condition = 1;
    // ...
}
```

## 5.2 Determination of the target GPB type expression corresponding to a <field> element

The *target GPB expression* corresponding to a <field> element shall be determined according the following procedure:

Define the “*source FIX datatype*” as the FIX datatype described by the <datatype> element referenced by the type attribute of the <field> element. Retrieve the GPB type expression from table 6 giving consideration to the values of relevant encoding attributes that are mentioned.

**Table 6 – Datatype mapping rules**

FIX datatype	GPB type expression		Comments
int	sfixed32	When $-2^{31} \leq \text{minValue} < 0$ and $\text{maxValue} < 2^{31}$	If the encoding attributes <i>minValue</i> or <i>maxValue</i> are not provided, then their default values of negative infinity and positive infinity are assumed. In this case the GPB type expression would default to sfixed64.
	sfixed64	When $\text{minValue} < -2^{31}$ or $\text{maxValue} \geq 2^{31}$	
	fixed32	When $\text{minValue} \geq 0$ and $\text{maxValue} < 2^{32}$	

	fixed64	When <i>minValue</i> >= 0 and <i>maxValue</i> >= 2 <sup>32</sup>	
Length	fixed32		
TagNum	fixed32		
SeqNum	fixed32		
NumInGroup	N/A		NumInGroup fields are ignored.
DayOfMonth	fixed32		
Qty Price PriceOffset Amt Percentage float	sfixed32	When <i>isFixedPoint</i> =true. (Type depends on the range requirements given by <i>minValue</i> and <i>maxValue</i> ).	When an implicit decimal position is desired the use of the custom field option, “exponent”, may be used. Its value should be taken from the encoding attribute, <i>exponent</i> .
	sfixed64		
	double	When <i>isBinaryFloat</i> =true	
	Decimal32	When <i>isBinaryFloat</i> =false and <i>numBits</i> <=32 or the values of <i>minValue</i> and <i>maxValue</i> allow for the use of a signed 32-bit integer.	Decimal32 and Decimal64 contain two fields: an integer field (sfixed32 or sfixed64) to hold a mantissa value and an integer field (sfixed32) to hold an exponent value.
	Decimal64	When <i>isBinaryFloat</i> =false and ( <i>numBits</i> >32 or the values of <i>minValue</i> and <i>maxValue</i> require the use of a 64-bit integer).	
char	bytes		The GPB bytes type is an arbitrary sequence of bytes. For char mapping, the sequence will consist of just one byte.
Boolean	bool		
String	string	When <i>isNumeric</i> =false. Otherwise process this field as if it were an int.	If the sending entity knows that a String field will contain numeric characters exclusively then follow the mapping rule for an int.

MultipleCharValue	N/A	Always a repeated enumerated type. There is no direct mapping to a GPB scalar type. See section 5.4.
MultipleStringValue	N/A	Always a repeated enumerated type. There is no direct mapping to a GPB scalar type. See section 5.4.
Country	string	
Currency	string	
Exchange	string	
UTCDateOnly LocalMktDate	sfixed32	Number of days since the UNIX epoch. A negative value indicates a date before the UNIX epoch.
UTCTimeOnly	TimeOnly	Time of day represented in UTC. TimeOnly is defined in section 5.5, “Supporting Message Classes”.
UTCTimestamp	Timestamp	The time since the UNIX epoch January 1, 1970 00:00:00 +0000 (UTC). TimeStamp is defined in section 5.5, “Supporting Message Classes”.
TZTimeOnly	TZTimeOnly	Time of day represented in local time. TZTimeOnly is defined in section 5.5, “Supporting Message Classes”.
TZTimestamp	TZTimestamp	The time since the UNIX epoch January 1, 1970 00:00:00 +0000 represented in local time. TZTimestamp is defined in section 5.5, “Supporting Message Classes”.
LocalMktTime	LocalMarketTime	The time local to a particular market center. Used where offset to UTC varies throughout

		the year and the defining market center is identified in a corresponding field.
Data	string	
Pattern	string	
Tenor	Tenor	A supporting GPB message. See section 5.5.1.
MonthYear	sfixed32	The number of months since and including the UNIX epoch. A negative value indicates the number of months before the epoch. For example, a value of 37 indicates January 1973.
Reserved100Plus	fixed32	
Reserved1000Plus	fixed32	
Reserved4000Plus	fixed32	
XMLData	string	
Language	string	
XID	string	
XIDRef	string	

### 5.3 Determination of the target GPB type expression corresponding to a <fieldRef> element

The *target GPB expression* corresponding to a <field> element shall be determined according the following procedure:

Define the “*source FIX datatype*” as the FIX datatype described by the <datatype> element referenced by the type attribute of the <field> element that is referenced by the name attribute of the <fieldRef> element.

Retrieve the GPB type expression from table 6 giving consideration to the values of relevant encoding attributes that are mentioned.

### 5.4 Special handling of MultipleCharValue and MultipleStringValue FIX datatypes

Fields that are MultipleCharValue or MultipleStringValue are mapped to GPB repeated fields of enumerated characters or strings, where inclusion of each element of the repeating group indicates selection of its associated optional value. MultipleCharValue maps to a repeated sequence of chars. MultipleStringValue maps to a repeated sequence of strings.

Usage of the GPB option [PACKED=true] can be used whenever the repeated field is a scalar type, such as an enum. This will result in a more efficient encoding.

**EXAMPLE**

The field ExecInst is a MultipleCharValue type where the choice of values is selected from a pool of enumerated values, it can include the [PACKED=true] option. The expression can be written as:

```
repeated ExecInstEnum exec_inst = 21 [packed = true];
```

where the enumerated values are defined in the following GPB enum:

```
enum ExecInstEnum {
  EXEC_INST_UNSPECIFIED = 0;
  EXEC_INST_STAY_ON_OFFER_SIDE = 1;
  EXEC_INST_NOT_HELD = 2;
  EXEC_INST_WORK = 3;
  EXEC_INST_GO_ALONG = 4;
  EXEC_INST_OVER_THE_DAY = 5;
  EXEC_INST_HELD = 6;
  // ...
}
```

## 5.5 Supporting Message Classes

### 5.5.1 Decimal32 and Decimal64

Fix fields of type Price, PriceOffset, Qty, Amt and Percentage require generation of a supporting GPB type. GPB messages Decimal32 and Decimal64 each contain two fields: a mantissa value and an exponent value. These fields should be treated as being required since their default values are 0.

On the first invocation of this subclause one of the following GPB message classes shall be generated:

```
message Decimal32 {
  optional sfixed32 mantissa = 1;
  optional sfixed32 exponent = 2;
}

message Decimal64 {
  optional sfixed64 mantissa = 1;
  optional sfixed32 exponent = 2;
}
```

The inspection of encoding attributes *minValue* and *maxValue* can determine the size requirements for the field and thus provide a criterion for selecting the 32-bit version of the message versus the 64-bit version.

### 5.5.2 Timestamp and TimeOnly

Fix fields of type UTCTimestamp require generation of a supporting GPB type.

On the first invocation of this subclause the following GPB message class shall be generated:

```

message Timestamp {
    optional int64 seconds = 1;
    optional int32 nanos = 2;
}

```

Note that, in `Timestamp`, the ‘seconds’ field represents signed seconds of time since the UNIX epoch, Jan 1, 1970 00:00:00 UTC, and the ‘nanos’ field represents non-negative fractions of a second at nanosecond resolution. Negative ‘seconds’ values with fractions must still have non-negative ‘nanos’ values that count forward in time.

Additionally, FIX fields of type `UTCTimeOnly` require generation of a supporting GPB type.

On the first invocation of this subclause the following GPB message class shall be generated:

```

message TimeOnly {
    optional int64 seconds = 1;
    optional int32 nanos = 2;
}

```

Note that, in `TimeOnly`, the ‘seconds’ field represents seconds of time since the previous midnight in UTC, 00:00:00 UTC. The ‘nanos’ field represents an additional positive nanosecond offset. Times less than one second from midnight are represented with a 0 ‘seconds’ field and a positive ‘nanos’ field.

### 5.5.3 TZ Timestamp, TZ Timeonly and LocalMarketTime

Fix fields of type `TZTimestamp` require generation of a supporting GPB type.

On the first invocation of this subclause the following GPB message class shall be generated:

```

message TZTimestamp {
    optional int64 seconds = 1; // number of seconds since Unix epoch
    optional int32 nanos = 2; // positive nanosecond offset to seconds
    optional sint32 hour_offset = 3; // signed hourly offset to UTC
    optional sint32 minute_offset = 4; // signed minute offset to UTC
}

```

Above fields provide a binary representation of the elements of the FIX `TZTimestamp` datatype, `YYYYMMDD-HH:MM:SS.sss[Z | [+ | - hh[:mm]]]`.

Fix fields of type `TZTimestamp` require generation of a supporting GPB type.

On the first invocation of this subclause the following GPB message class shall be generated:

```

message TZTimeOnly {
    optional int64 seconds = 1; // number of seconds since midnight
    optional int32 nanos = 2; // positive nanosecond offset to seconds
    optional sint32 hour_offset = 3; // signed hourly offset to UTC
    optional sint32 minute_offset = 4; // signed minute offset to UTC
}

```



Above fields provide a binary representation of the elements of the FIX TZTimeOnly, datatype, HH:MM:SS.sss[Z | [+ | - hh[:mm]]]

Note that to represent a negative timezone offset containing both hours and minutes, both the hourOffset and minuteOffset fields must be set to negative values.

Also note that both LocalTimestamp and LocalTimeOnly utilize the int32/64 & sint32/64 varint scalar types rather than the fixed scalar types. This allows for consistency with the timestamp object definitions of Protocol Buffers version 3.

Fix fields of type LocalMktTime require generation of a supporting GPB type.

On the first invocation of this subclause the following GPB message class shall be generated:

```
message LocalMarketTime {
  optional int32 hours = 1; // hour in local time zone
  optional int32 minutes = 2; // minutes in local time zone
  optional int64 seconds = 3; // seconds in local time zone
  optional int32 nanos = 4; // positive nanosecond offset to seconds
}
```

Above fields provide a binary representation of the elements of the FIX LocalMktTime datatype which was introduced in FIX 5.0 SP2 EP161. Though it is not included in the FIX datatype definition, nanoseconds have been included to provide additional granularity.

#### 5.5.4 Tenor

FIX fields of type Tenor require the generation of a supporting GPB type. A Tenor holds four optional fields where it is expected that one and only one of the fields will be populated.

On the first invocation of this subclause the following GPB type assignment shall be generated:

```
message Tenor {
  oneof tenor_union {
    uint32 days = 1;
    uint32 weeks = 2;
    uint32 months = 3;
    uint32 years = 4;
  }
}
```

An example of a message defined with a field whose Union datatype is Tenor can be found in Section 6.2.2.

## 6 Mapping of FIX messages

**6.1** The `<messages>` element in the *source* `<fix>` *element* contains a list of `<message>` elements each describing one FIX message. A message consists of a sequence of fields and/or components, each either required or optional.

**6.2** For each `<message>` element in the `<messages>` element of the *source* `<fix>` *element*, in order, a GPB message shall be generated as specified in subclauses 6.2.1 to 6.2.2.

**6.2.1** The name in the GPB message shall be generated from the name of the FIX message in accordance with subclause 4.3.

**6.2.2** The body of the GPB message type shall be determined as specified in subclause 7.5.

### EXAMPLE

The `NewOrderSingle` message of the FIX Repository v.5.0 SP2 will generate the following GPB message type:

```
message NewOrderSingle {
  optional string account = 1;
  optional string cl_ord_id = 2;
  optional string currency = 3;
  optional string ex_destination = 4;
  repeated ExecInstEnum exec_inst = 5 [packed=true];
  optional HandlInstEnum handl_inst = 6;
  optional string ioi_id = 7;
  optional Decimal64 max_floor = 8;
  optional Decimal64 min_qty = 9;
  optional OrdTypeEnum ord_type = 10;
  optional Decimal64 price = 11;
  optional ProcessCodeEnum process_code = 12;
  optional sfixed32 settl_date = 13;
  oneof settl_type_union {
    SettlTypeEnum settl_type = 14;
    Tenor settl_type_tenor = 15;
  }
  optional SideEnum side = 16;
  optional Session.StandardHeader standard_header = 17;
  optional Session.StandardTrailer standard_trailer = 18;
  optional Decimal64 stop_px = 19;
  optional string text = 20;
  optional TimeInForceEnum time_in_force = 21;
  optional Common.Instrument instrument = 22;
  //
  // ...
  //
}
```

## 7 Mapping of a FIX component

**7.1** This clause applies as explicitly invoked by other clauses of this technical specification to generate a GPB message corresponding to a FIX component.

**7.2** The `<components>` element in the *source* `<fix>` element contains a list of `<component>` elements each describing one FIX component. A component consists of:

- (i) a sequence of fields and/or child components, each either required or optional; or
- (ii) a repeating group, which in turn contains a sequence of fields and/or child components, each either required or optional.

**7.3** GPB messages resulting from a FIX mapping described in this document consist of a message name, message options, field expressions, and oneof expressions.

A field expression consists of a field rule, a type expression, a field name, a field number, a list of standard or custom field options, and a field comment. Field comments must appear at the end of the line of the last line of the field expression in order to exploit intellisense features of some Integrated Development Environments (IDE).

A oneof expression consists of the keyword “oneof” followed by the oneof name followed by several fields encapsulated in a block using open/close brackets. Oneof fields are like regular fields except all the fields in a oneof share memory, and at most one field can be set at the same time. A oneof expression is used when a component member is a field with a *unionDataType* attribute.

**7.4** GPB messages may be declared within a specific GPB package. GPB packages are declared the “package” specifier in a “.proto” file. Only one package may be specified in any given “.proto” file. Names of the “.proto” files are given according to the package within and must follow the naming convention specified in subclause 4.3.7.

**7.5** On the first invocation of this clause for a given `<component>` element, a GPB message shall be generated as specified in subclauses 7.5.1 to 7.5.4.

**7.5.1** The target package where the GPB message is generated is determined from the value of the “category” attribute of the `<component>` element. The declaration of the GPB message must go in the appropriate “.proto” file.

**7.5.2** The name of the GPB message shall be generated from the name of the FIX component in accordance with subclause 4.3.5.

**7.5.3** The fields of the GPB message shall be generated from the members of the FIX component where one field is generated for each `<fieldRef>` and `<componentRef>` child element of the `<component>` element, in the order specified by subclause 4.4, with the exceptions specified in subclause 7.5.4.

**7.5.4** No fields shall be generated for the following FIX fields:

- any FIX field of type `NumInGroup`;
- any FIX field of type `Length` that has a non-empty `associatedDataTag` attribute;
- the `BeginString` field (FIX field id = 8);
- the `BodyLength` field (FIX field id = 9);
- the `Checksum` field (FIX field id = 10).

**7.5.5** For any `<fieldRef>` child element of the `<component>` element that refers to a `<field>` element that has a `unionDataType` attribute (cases 8, 10, and 11 of table 3), a GPB oneof field shall be generated as follows:

- The name in the oneof field shall be generated from the name of the `<fieldRef>` element with the `"_union"` suffix appended, in accordance with subclause 4.3.
- The contents of the oneof field shall consist of two fields. The first being generated from the `<fieldRef>` element as specified in subclauses 7.5.6 through 7.5.14 with the exception that no field rule is generated.
- The field name of the second field within the oneof shall be set to the field name of the first field concatenated with the type expression determined by the `unionDataType` attribute.
- The type expression shall be determined by the `unionDataType` as specified in table 5.

**Table 5 – Determination of the type expression of the second field within a oneof**

Union Type	Type expression of the second alternative
Reserved100Plus	<i>fixed32</i>
Reserved1000Plus	<i>fixed32</i>
Reserved4000Plus	<i>fixed32</i>
Qty	<i>Decimal64</i>
Tenor	<i>Tenor</i>

**EXAMPLE**

```
message OrderCancelRequest {
  optional string account = 1;
  optional AccountTypeEnum account_type = 2;
  oneof acct_id_union {
    AcctIDSourceEnum acct_id = 3;
    fixed32 acct_id_source_reserved100plus = 4;
  }
  optional string cl_ord_id = 5;
  // ...
}
```

Note that oneof fields share the same scope as other fields of a message. This requires uniqueness among all the field numbers. So, the order in which fields are generated, as specified by subclause 4.4, must be maintained even when a field is encapsulated within a oneof expression.

**7.5.6** The name of each field shall be generated from the name attribute of the <fieldRef> or <componentRef> element in accordance with subclause 4.3.2.

**7.5.7** The field rule and type expression of each field corresponding to a <fieldRef> element shall be determined as specified in table 7.

**Table 7 – Determination of the type expression of a component of the field specification**

Case of table 3	Field rule	Type expression of the field
1	optional	The type expression determined from the type attribute of the <fieldRef> element as specified in subclause 5.2.
3	optional	For non-Boolean field types, a reference to the name of the GPB enum generated from the referenced <field> element as specified in subclause 5.1.2. For Boolean field types, the type expression determined from the type attribute of the <fieldRef>
4	optional	A reference to the name of the GPB enum generated from the <field> element whose id is indicated in the enumDataType attribute of the referenced <field> element as specified in subclause 5.1.2.
5	repeated	The type expression “bytes” if the type attribute of <fieldRef> is MultipleCharValue, otherwise for a MultipleStringValue the type expression is “string”.
6	repeated	A reference to the name of the GPB enum generated from the referenced <field> element as specified in subclause 5.1.3.
7	repeated	A reference to the name of the GPB enum generated from the <field> element whose id is indicated in the enumDataType attribute of the referenced <field> element as specified in subclause 5.1.3.

**7.5.8** The type expression of each field corresponding to a <componentRef> element shall be the name of the GPB message generated by invoking this clause 7 for the referenced <component> element.

**7.5.9** The field rule of each field corresponding to a <componentRef> element, not consisting of a repeating group, shall be “optional”.

**7.5.10** The field rule of each field corresponding to a <componentRef> element, where the component consists of a repeating group, shall be “repeated”.

**7.5.11** The custom options of each field corresponding to a <fieldRef> element shall be determined as specified in table 11 which is found in section 9.

**7.5.12** The custom options of each field corresponding to a `<componentRef>` element shall be determined as specified in table 11 which is found in section 9.

**7.5.13** In cases where the member of the FIX `<component>` is a `<fieldRef>` element, the field comment shall be generated as specified by clause 10.1.

**7.5.14** In cases where the member of the FIX `<component>` is a `<componentRef>` element, the comment field shall be as specified by clause 10.2.

## 8 Message Encoding Header for use with GPB Encodings

**8.1** When a GPB messages generated from a FIX message is encoded, the encoded message does not carry any indication of the message type.

**8.2** The lack of such an indication in an encoded message is a characteristic of GPB. In general, when a GPB schema (one or more .proto files) defines multiple top-level message types, it is assumed that the top-level type used in a particular instance of a message will be conveyed either in a message of a higher-level protocol containing the GPB-encoded message, or in a short header preceding the GPB-encoded message.

**8.3** A message encoding header for use with GPB encodings of FIX messages is a data structure defined as follows:

Field	Size (bits)	Description
<i>Proto ID</i>	16	A number that identifies GPB schema
<i>Proto Version Number</i>	16	The version number of the GPB schema
<i>GPB Message Type</i>	32	A number or 4-character ASCII identifier used to identify the top-level GPB type to which the present message conforms

where all fields, when representing numeric values, are unsigned integers in big-endian order.

**8.4** The fields *Proto ID* and *Proto Version*, taken together, identify a particular GPB schema containing the top-level GPB type definition to which the current message conforms.

**8.5** The field *GPB Message Type* identifies a particular top-level GPB type definition present in the schema identified by *Proto ID* and *Proto Version Number*.

**8.6** The mapping between *GPB Message Type* values and top-level GPB types within a schema is not standardized. The following two methods are recommended, under the assumption that the only top-level GPB have been derived from FIX messages (see **6.2**):

- a) the message type field may be the ASCII code of the FIX message, as defined in the FIX repository, for example “AE” for TradeCaptureReport;
- b) otherwise, the message type may reflect the integer enumerated values of the **MsgTypeEnum** enumeration, derived from the <field> element named “MsgType”.

## 9 Annotation with Repository meta-data and encoding attributes

The GPB mapping makes use of additional metadata in the form of GPB Options. Options are annotations used to add information about the message schema over and above the standard schema constructs offered by the proto schema file. This metadata can be used to decorate fields, messages, packages, enumerated types and enumerated values. Conceptually, GPB Custom Options are similar to Java’s decorators or .NET’s attributes.

### 9.1 Standard Options

Protocol Buffers provide a set of predefined options that can be used in any proto file. See reference [1] for more information on predefined options.

### 9.2 Custom Options

Attributes derived from the FIX repository and encoding attributes are used to broaden the proto schema with metadata in the form of custom options. This metadata helps define message usage and tie the GPB proto files back to the FIX repository.

The table below describes each custom option and its usage.

**Table 9 – Custom Options**

Option	Applied To	Defined In	Description
time_unit	A time or date/time field	meta.proto	Defines the unit of time of the applied scalar field. e.g. TIME_UNIT_DAYS, TIME_UNIT_MILLISECONDS.  Applicable only if the standard mapping rules have been explicitly overridden so that a time field is mapped to a numeric GPB scalar field rather than the Timestamp message class.
epoch	A date or date/time field	meta.proto	The starting reference point used to calculate the date or date/time offset.  Applicable only if the standard mapping rules have been explicitly overridden so that a time field is mapped to a numeric GPB scalar field rather than the Timestamp message class.
exponent	A fixed-point scalar field	meta.proto	Defines the exponent value (base 10). Applicable only for fixed-point decimals to provide an implicit perscision.
min_value, max_value	GPB scalar field	meta.proto	The minimum and maximum expected value of the field.
min_length, max_length	GPB string field	meta.proto	The minimum and maximum length of a string. When minLength= maxLength, indicates that the string is fixed length.



msg_type	Top-level GPB message	fix.proto	Indicates the FIX message type the GPB message has been generated from. Eg. "AE" for a Trade Capture Report.
tag	Any GPB field generated from a <fieldRef> element	fix.proto	Indicates the FIX tag the field was generated from.
type	Any GPB field	fix.proto	Indicates the FIX Repository data type of the field
field_added	Any GPB field	fix.proto	Indicates the version of FIX in which the field was first added to the component or message
field_added_ep	Any GPB field	fix.proto	Indicates the extension pack (if any) in which the field was first added to the component or message
field_deprecated	Any GPB field	fix.proto	If a field has been deprecated for a given component or message, this field option indicates in which version of FIX it was first deprecated.
enum_value	GPB enumerated value	fix.proto	Indicates the corresponding enumerated value in the FIX repository.
enum_added	GPB enumerated value	fix.proto	Indicates the version of FIX when the enumerated value was added to the component or message.
enum_added_ep	GPB enumerated value	fix.proto	Indicates the extension pack (if any) of FIX when the enumerated value was added to the component or message.

### 9.3 Required Types to support Custom Options

The following types are required to support the generation of custom field and enumeration options.

#### 9.3.1 TimeUnit

The following GPB enum called "TimeUnit" shall be generated within the "meta" package.

```
enum TimeUnit {
    TIME_UNIT_UNSPECIFIED=0;
    TIME_UNIT_DAYS = 1;
    TIME_UNIT_SECONDS = 2;
    TIME_UNIT_MILLISECONDS = 3;
```

```

TIME_UNIT_MICROSECONDS = 4;
TIME_UNIT_NANOSECONDS = 5;
TIME_UNIT_PICOSECONDS = 6;
}

```

The generation of this enum is in addition to and independent from “TimeUnitEnum” which may be generated from the FIX field named “TimeUnit” (tag 997).

### 9.3.2 Epoch

The following GPB enum called “Epoch” shall be generated within the “meta” package.

```

enum Epoch {
    EPOCH_UNSPECIFIED = 0;
    EPOCH_MIDNIGHT = 1;           // Midnight of any given date
    EPOCH_UNIX = 2;              // Midnight of Jan-01 1970
    EPOCH_1900 = 3;              // Midnight of Jan-01 1900
    EPOCH_2000 = 4;              // Midnight of Jan-01 2000
}

```

### 9.3.3 Datatype

A GPB enum called “Datatype” shall be generated within the “fix” package with enum expressions generated according to the following procedure:

For each child <datatype> element of the <datatypes> element generate a GPB enumeration expression where the enum name is derived from the “name” attribute of <datatype> according to the following naming convention:

1. All instances of the case-sensitive acronyms are converted to camel case according to the mapping provided by table 2.
2. Insert an underscore character (‘\_’) between any two consecutive characters X and Y such that X is in lower case and Y is in upper case.
3. Convert all characters to upper case.

Enum values are generated according to the sorting rules of clause 4.4.

For example, the following enum may be generated:

```

enum Datatype {
    DATATYPE_UNSPECIFIED = 0;
    DATATYPE_CHAR = 1           [(fix.enum_added)=VERSION_FIX_2_7];
    DATATYPE_DATA = 2          [(fix.enum_added)=VERSION_FIX_2_7];
    DATATYPE_FLOAT = 3         [(fix.enum_added)=VERSION_FIX_2_7];
    DATATYPE_INT = 4           [(fix.enum_added)=VERSION_FIX_2_7];
}

```

```

DATATYPE_DAY_OF_MONTH = 5      [(fix.enum_added)=VERSION_FIX_4_1];
DATATYPE_MONTH_YEAR = 6       [(fix.enum_added)=VERSION_FIX_4_1];
DATATYPE_AMT = 7              [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_BOOLEAN = 8          [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_CURRENCY = 9         [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_EXCHANGE = 10        [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_LOCAL_MKT_DATE = 11   [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_MULTIPLE_STRING_VALUE = 12 [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_PRICE = 13           [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_PRICE_OFFSET = 14    [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_QTY = 15             [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_STRING = 16          [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_UTC_TIME_ONLY = 17    [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_UTC_TIMESTAMP = 18    [(fix.enum_added)=VERSION_FIX_4_2];
DATATYPE_LENGTH = 19          [(fix.enum_added)=VERSION_FIX_4_3];
DATATYPE_NUM_IN_GROUP = 20     [(fix.enum_added)=VERSION_FIX_4_3];
DATATYPE_PERCENTAGE = 21      [(fix.enum_added)=VERSION_FIX_4_3];
DATATYPE_SEQ_NUM = 22         [(fix.enum_added)=VERSION_FIX_4_3];
DATATYPE_TAG_NUM = 23         [(fix.enum_added)=VERSION_FIX_4_3];
DATATYPE_COUNTRY = 24         [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_MULTIPLE_CHAR_VALUE = 25 [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_PATTERN = 26         [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_RESERVED1000PLUS = 27 [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_RESERVED100PLUS = 28  [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_RESERVED4000PLUS = 29 [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_TZ_TIME_ONLY = 30     [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_TZ_TIMESTAMP = 31     [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_TENOR = 32           [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_UTC_DATE_ONLY = 33    [(fix.enum_added)=VERSION_FIX_4_4];
DATATYPE_XML_DATA = 34        [(fix.enum_added)=VERSION_FIX_5_0];
DATATYPE_LANGUAGE = 35        [(fix.enum_added)=VERSION_FIX_5_0_SP_1,
(fix.enum_added_ep)=90];
}

```

### 9.3.4 Version

Several custom field options refer to specific FIX versions. For example, the custom field option “added” (see clause 8.2) indicates the FIX version in which a field was added to a particular message or component. The following GPB enum called “Version” shall be generated within the “fix” package.

```

enum Version {
  VERSION_UNSPECIFIED = 0;
  VERSION_FIX_2_7 = 1;
  VERSION_FIX_3_0 = 2;
  VERSION_FIX_4_0 = 3;
  VERSION_FIX_4_1 = 4;
  VERSION_FIX_4_2 = 5;
  VERSION_FIX_4_3 = 6;
  VERSION_FIX_4_4 = 7;
}

```

```

VERSION_FIX_5_0 = 8;
VERSION_FIXT_1_1 = 9;
VERSION_FIX_5_0_SP_1 = 10;
VERSION_FIX_5_0_SP_2 = 11;
}

```

Note that the FIX repository provides a simple type, `Version_t`, which is string-based and restricted to specific patterns. However, there is no association between the range of `Version_t` and their release dates. This association is required by the sorting criteria described in clause 4.4. It is for this reason that `Version` is statically generated and not mapped from the repository.

**9.3.4.1** In the FIX repository, attributes of type `Version_t` appear as strings and contain “.” characters instead of “\_” characters. To map an attribute that is of type `Version_t` to the GPB enum `Version`, the period characters (.) of the attribute value are replaced by underscore characters (\_).

For example, the field `OrderQty` is defined in the Unified FIX Repository as:

```
<field id="38" name="OrderQty" type="int" textId="Field38" added="FIX.2.7"/>
```

So, an `OrderQty` field appearing as the 11<sup>th</sup> field of a GPB message would be declared as such:

```
optional Decimal64 order_qty = 11 [(fix.field_added)=FIX_2_7];
```

## 9.4 Custom Option Declarations

Custom options listed in table 9 are defined by adding the following declarations within the meta package (file name “`meta.proto`”) and the fix package (filename “`fix.proto`”) as shown below.

`meta.proto`:

```

import "google/protobuf/descriptor.proto";
package meta;
extend google.protobuf.FieldOptions {
    optional TimeUnit time_unit = 51001;
    optional Epoch epoch = 51002;
    optional sfixed32 exponent = 51003;
    optional fixed32 min_length = 51004;
    optional fixed32 max_length = 51005;
    optional sfixed64 min_value = 51006;
    optional sfixed64 max_value = 51007;
}

```

`fix.proto`:

```

import "google/protobuf/descriptor.proto";
package fix;

```

```

extend google.protobuf.FileOptions {
    optional string category = 53002;
}
extend google.protobuf.MessageOptions {
    optional string msg_type = 55001;
}
extend google.protobuf.FieldOptions {
    optional fixed32 tag = 56003;
    optional Datatype type = 56004;
    optional Version field_added = 56005;
    optional sfixed32 field_added_ep = 56006;
    optional Version field_deprecated = 56007;
}
extend google.protobuf.EnumValueOptions {
    optional string enum_value = 72004;
    optional Version enum_added = 72005;
    optional sfixed32 enum_added_ep = 72006;
    optional Version enum_deprecated = 72007;
}
    
```

### 9.5 Generating values for custom enumeration options

The custom enum options for each enumeration value shall be generated according to table 10.

**Table 10 - Determination of custom enum value options**

Custom option	Type	Value
enum_value	string	The value attribute of the <enum> element.
enum_added	Version	The enumAdded attribute of the <enum> element mapped to a value of the Version enumeration type as specified in subclause 8.3.4.1.
enum_added_ep	sfixed32	The fieldAddedEP attribute of the <enum> element mapped to a value of the Version enumeration type as specified in subclause 8.3.4.1.
enum_deprecated	Version	The deprecated attribute of the <enum> element mapped to a value of the Version enumeration type as specified in subclause 8.3.4.1.

### 9.6 Generating values for custom field options

The custom field options for each field of a message shall be generated according to table 11. Note that some custom field options are not applicable for some corresponding repository elements.

**Table 11 - Determination of custom field options**

Custom option	Type	Applicable element	Value
---------------	------	--------------------	-------

tag	fixed32	<fieldRef>	The tag number of the associated FIX field.
type	Datatype	<fieldRef>	The type of the associated FIX field. Must be one of the enumerated defined in the GPB enum Datatype according to clause 5.4.2.
exponent	sfixed32	<fieldRef>	For <fieldRef> elements with type attributes of Qty, Amt, Percentage, Price or PriceOffset, if isFixedPoint=true and the encoding attribute <i>exponent</i> is provided, then this custom option is set to the value of <i>exponent</i> .
field_added	Version	<fieldRef> <component>	The fieldAdded attribute of the <fieldRef> element mapped to a value of the Version enumeration type as specified in subclause 8.3.4.1.
field_added_ep	sfixed32	<fieldRef> <component>	The fieldAddedEP attribute of the <fieldRef> element.
field_deprecated	Version	<fieldRef> <component>	The deprecated attribute of the <fieldRef> element mapped to a value of the Version enumeration type as specified in subclause 8.3.4.1.

### 9.7 Generating values for custom message options

The custom enum options for each enumeration value shall be generated according to table 12.

**Table 12 - Determination of custom message options**

Custom option	Type	Value
msg_type	string	The msgType attribute of the <message> element.

## 10 Field Descriptions

The FIX repository includes description of fields and components. These descriptions can be carried over to the GPB messages generated from the repository in the form a field-level comments. GPB uses C/C++ style `//` syntax. Each field comment must appear at the end of the line of the last line of the field expression in order to exploit intellisense features of some Integrated Development Environments (IDE).

### 10.1 Generating Descriptions for `<fieldRef>` elements

In cases where the field expression has been generated from a `<fieldRef>` element, the field comment shall be generated from the first `<para>` element of the `<text>` element of the `<phrases>` element where the `textId` attribute of the `<phrase>` element is equal to the concatenation of the `Id` attribute of the `<fieldRef>` element and `"FIELD_"`. If there are more than one `<para>` elements, then the comment shall be appended with the string `"[cont...]"`.

For example, given the following `<fieldRef>` and `<phrase>` elements

```
<fieldRef id="100" name="ExDestination" required="0" added="FIX.2.7" textId="MSG_14_REF_100"/>
<phrase textId="FIELD_100">
  <text>
    <para>Execution destination as defined by institution when order id entered.</para>
    <para>Valid values:</para>
    <para>See "Appendix 6-C"</para>
  </text>
</phrase>
```

the following field comment will be generated.

```
// Execution destination as defined by institution when order id entered. [cont...]
```

### 10.2 Generating Descriptions for `<componentRef>` elements

In cases where is the field expression has been generated from a `<componentRef>` element, the field comment shall be generated from the first `<para>` element of the `<text>` element of the `<phrases>` element where the `textId` attribute of the `<phrase>` element is equal to the `textId` attribute of the `<componentRef>` element. If there are more than one `<para>` elements, then the comment shall be appended with the string `"[cont...]"`.

For example, given the following `<componentRef>` and `<phrase>` elements

```
<componentRef id="1012" name="Parties" required="0" added="FIX.4.3" textId="MSG_14_REF_Parties"/>
<phrase textId="MSG_14_REF_Parties">
  <text>
    <para>Insert here the set of "Parties" (firm identification) fields defined in "Common Components of Application Messages"</para>
  </text>
</phrase>
```

the following field comment will be generated.

// Insert here the set of "Parties" (firm identification) fields defined in "Common Components of Application Messages"



## Appendix A Full Listing of IOI

The following listing shows the GPB enums and messages that are generated from the FIX 5.0 SP2 *source* <fix> *element* limited to IOI messages. It includes all components to which IOI messages are dependent. The IOI message is the final message of the listing.

```
//
//   FIX Unified Repository mapping to Google Protocol Buffers
//
//   Copyright (c) FIX Trading Community. All Rights Reserved.
//
//   Category: meta
//
//   File: meta.proto
//
syntax = "proto2";
import "google/protobuf/descriptor.proto";

option java_package = "org.fixprotocol.components";
option java_outer_classname = "Meta";

package meta;

extend google.protobuf.FieldOptions {
  optional TimeUnitEnum time_unit = 51001;
  optional Epoch epoch = 51002;
  optional sfixed32 exponent = 51003;
  optional fixed32 min_len = 51004;
  optional fixed32 max_len = 51005;
  optional sfixed64 min_value = 51006;
  optional sfixed64 max_value = 51007;
}

enum TimeUnitEnum {
  TIME_UNIT_UNSPECIFIED = 0;
  TIME_UNIT_DAYS = 1;
  TIME_UNIT_SECONDS = 2;
  TIME_UNIT_MILLISECONDS = 3;
  TIME_UNIT_MICROSECONDS = 4;
  TIME_UNIT_NANOSECONDS = 5;
  TIME_UNIT_PICOSECONDS = 6;
}

enum Epoch {
  EPOCH_UNSPECIFIED = 0;
  EPOCH_MIDNIGHT = 1;
  EPOCH_UNIX = 2;
  EPOCH_1900 = 3;
  EPOCH_2000 = 4;
}

//
//   FIX Unified Repository mapping to Google Protocol Buffers
//
//   Copyright (c) FIX Trading Community. All Rights Reserved.
//
//   Category: fix
```

```

//
//   File: fix.proto
//
syntax = "proto2";
import "google/protobuf/descriptor.proto";

option java_package = "org.fixprotocol.components";
option java_outer_classname = "Fix";

package fix;

extend google.protobuf.FileOptions {
    optional string category = 53002;
}

extend google.protobuf.MessageOptions {
    optional string msg_type_value = 55001;
}

extend google.protobuf.FieldOptions {
    optional fixed32 tag = 56003;
    optional DatatypeEnum type = 56004;
    optional VersionEnum field_added = 56005;
    optional sfixed32 field_added_ep = 56006;
    optional VersionEnum field_deprecated = 56007;
    optional fixed32 group_tag = 56008;
}

extend google.protobuf.EnumValueOptions {
    optional string enum_value = 72004;
    optional VersionEnum enum_added = 72005;
    optional sfixed32 enum_added_ep = 72006;
    optional VersionEnum enum_deprecated = 72007;
}

enum VersionEnum {
    VERSION_UNSPECIFIED = 0;
    VERSION_FIX_2_7 = 1;
    VERSION_FIX_3_0 = 2;
    VERSION_FIX_4_0 = 3;
    VERSION_FIX_4_1 = 4;
    VERSION_FIX_4_2 = 5;
    VERSION_FIX_4_3 = 6;
    VERSION_FIX_4_4 = 7;
    VERSION_FIX_5_0 = 8;
    VERSION_FIXT_1_1 = 9;
    VERSION_FIX_5_0SP1 = 10;
    VERSION_FIX_5_0SP2 = 11;
}

enum DatatypeEnum {
    DATATYPE_UNSPECIFIED = 0;
    DATATYPE_CHAR = 1                [(enum_added)=VERSION_FIX_2_7];
    DATATYPE_DATA = 2                [(enum_added)=VERSION_FIX_2_7];
    DATATYPE_FLOAT = 3               [(enum_added)=VERSION_FIX_2_7];
    DATATYPE_INT = 4                 [(enum_added)=VERSION_FIX_2_7];
    DATATYPE_DAY_OF_MONTH = 5        [(enum_added)=VERSION_FIX_4_1];
    DATATYPE_MONTH_YEAR = 6          [(enum_added)=VERSION_FIX_4_1];
    DATATYPE_AMT = 7                  [(enum_added)=VERSION_FIX_4_2];
    DATATYPE_BOOLEAN = 8             [(enum_added)=VERSION_FIX_4_2];
    DATATYPE_CURRENCY = 9            [(enum_added)=VERSION_FIX_4_2];
    DATATYPE_EXCHANGE = 10           [(enum_added)=VERSION_FIX_4_2];
    DATATYPE_LOCAL_MKT_DATE = 11     [(enum_added)=VERSION_FIX_4_2];
}

```

```

DATATYPE_MULTIPLE_STRING_VALUE = 12 [(enum_added)=VERSION_FIX_4_2];
DATATYPE_PRICE = 13 [(enum_added)=VERSION_FIX_4_2];
DATATYPE_PRICE_OFFSET = 14 [(enum_added)=VERSION_FIX_4_2];
DATATYPE_QTY = 15 [(enum_added)=VERSION_FIX_4_2];
DATATYPE_STRING = 16 [(enum_added)=VERSION_FIX_4_2];
DATATYPE_UTC_TIMESTAMP = 17 [(enum_added)=VERSION_FIX_4_2];
DATATYPE_UTC_TIME_ONLY = 18 [(enum_added)=VERSION_FIX_4_2];
DATATYPE_LENGTH = 19 [(enum_added)=VERSION_FIX_4_3];
DATATYPE_NUM_IN_GROUP = 20 [(enum_added)=VERSION_FIX_4_3];
DATATYPE_PERCENTAGE = 21 [(enum_added)=VERSION_FIX_4_3];
DATATYPE_SEQ_NUM = 22 [(enum_added)=VERSION_FIX_4_3];
DATATYPE_TAG_NUM = 23 [(enum_added)=VERSION_FIX_4_3];
DATATYPE_COUNTRY = 24 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_MULTIPLE_CHAR_VALUE = 25 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_PATTERN = 26 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_RESERVED1000PLUS = 27 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_RESERVED100PLUS = 28 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_RESERVED4000PLUS = 29 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_TENOR = 30 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_TZ_TIMESTAMP = 31 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_TZ_TIME_ONLY = 32 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_UTC_DATE_ONLY = 33 [(enum_added)=VERSION_FIX_4_4];
DATATYPE_XML_DATA = 34 [(enum_added)=VERSION_FIX_5_0];
DATATYPE_LANGUAGE = 35 [(enum_added)=VERSION_FIX_5_0SP1];
}

message Tenor {
  oneof tenor_union {
    uint32 days = 1;
    uint32 weeks = 2;
    uint32 months = 3;
    uint32 years = 4;
  }
}

message Decimal32 {
  optional sfixed32 mantissa = 1;
  optional sfixed32 exponent = 2;
}

message Decimal64 {
  optional sfixed64 mantissa = 1;
  optional sfixed32 exponent = 2;
}

message Timestamp {
  optional int64 seconds = 1;
  optional int32 nanos = 2;
}

message TimeOnly {
  optional int64 seconds = 1;
  optional int32 nanos = 2;
}

message TZTimestamp {
  optional int64 seconds = 1;
  optional int32 nanos = 2;
  optional sint32 hour_offset = 3;
  optional sint32 minute_offset = 4;
}

message TZTimeOnly {

```

```

    optional int64 seconds = 1;
    optional int32 nanos = 2;
    optional sint32 hour_offset = 3;
    optional sint32 minute_offset = 4;
}
message LocalMarketTime {
    optional int32 hours = 1;
    optional int32 minutes = 2;
    optional int64 seconds = 3;
    optional int32 nanos = 4;
}

//
//   FIX Unified Repository mapping to Google Protocol Buffers
//
//   Copyright (c) FIX Trading Community. All Rights Reserved.
//
//   Category: Session
//
//   File: session.proto
//
syntax = "proto2";
import "meta.proto";
import "fix.proto";

option java_package = "org.fixprotocol.components";
option java_outer_classname = "Session";

package Session;

enum MsgTypeEnum {
    MSG_TYPE_ADJUSTED_POSITION_REPORT = 0          [(fix.enum_value)="BL"];
    MSG_TYPE_ADVERTISEMENT = 1                    [(fix.enum_value)="7"];
    MSG_TYPE_ALLOCATION_INSTRUCTION = 2            [(fix.enum_value)="J"];
    MSG_TYPE_ALLOCATION_INSTRUCTION_ACK = 3        [(fix.enum_value)="P"];
    MSG_TYPE_ALLOCATION_INSTRUCTION_ALERT = 4      [(fix.enum_value)="BM"];
    MSG_TYPE_ALLOCATION_REPORT = 5                 [(fix.enum_value)="AS"];
    MSG_TYPE_ALLOCATION_REPORT_ACK = 6             [(fix.enum_value)="AT"];
    MSG_TYPE_APPLICATION_MESSAGE_REPORT = 7       [(fix.enum_value)="BY"];
    MSG_TYPE_APPLICATION_MESSAGE_REQUEST = 8      [(fix.enum_value)="BW"];
    MSG_TYPE_APPLICATION_MESSAGE_REQUEST_ACK = 9  [(fix.enum_value)="BX"];
    MSG_TYPE_ASSIGNMENT_REPORT = 10               [(fix.enum_value)="AW"];
    MSG_TYPE_BID_REQUEST = 11                    [(fix.enum_value)="k"];
    MSG_TYPE_BID_RESPONSE = 12                   [(fix.enum_value)="l"];
    MSG_TYPE_BUSINESS_MESSAGE_REJECT = 13        [(fix.enum_value)="j"];
    MSG_TYPE_COLLATERAL_ASSIGNMENT = 14          [(fix.enum_value)="AY"];
    MSG_TYPE_COLLATERAL_INQUIRY = 15             [(fix.enum_value)="BB"];
    MSG_TYPE_COLLATERAL_INQUIRY_ACK = 16         [(fix.enum_value)="BG"];
    MSG_TYPE_COLLATERAL_REPORT = 17              [(fix.enum_value)="BA"];
    MSG_TYPE_COLLATERAL_REQUEST = 18             [(fix.enum_value)="AX"];
    MSG_TYPE_COLLATERAL_RESPONSE = 19           [(fix.enum_value)="AZ"];
    MSG_TYPE_CONFIRMATION = 20                   [(fix.enum_value)="AK"];
    MSG_TYPE_CONFIRMATION_ACK = 21               [(fix.enum_value)="AU"];
    MSG_TYPE_CONFIRMATION_REQUEST = 22          [(fix.enum_value)="BH"];
    MSG_TYPE_CONTRARY_INTENTION_REPORT = 23      [(fix.enum_value)="BO"];
    MSG_TYPE_CROSS_ORDER_CANCEL_REPLACE_REQUEST = 24 [(fix.enum_value)="t"];
    MSG_TYPE_CROSS_ORDER_CANCEL_REQUEST = 25     [(fix.enum_value)="u"];
    MSG_TYPE_DERIVATIVE_SECURITY_LIST = 26       [(fix.enum_value)="AA"];
    MSG_TYPE_DERIVATIVE_SECURITY_LIST_REQUEST = 27 [(fix.enum_value)="z"];
    MSG_TYPE_DERIVATIVE_SECURITY_LIST_UPDATE_REPORT = 28 [(fix.enum_value)="BR"];
    MSG_TYPE_DONT_KNOW_TRADE = 29                [(fix.enum_value)="Q"];
    MSG_TYPE_EMAIL = 30                          [(fix.enum_value)="C"];
    MSG_TYPE_EXECUTION_ACKNOWLEDGEMENT = 31      [(fix.enum_value)="BN"];

```

```

MSG_TYPE_EXECUTION_REPORT = 32      [(fix.enum_value)="8"];
MSG_TYPE_HEARTBEAT = 33             [(fix.enum_value)="0"];
MSG_TYPE_IOI = 34                   [(fix.enum_value)="6"];
MSG_TYPE_LIST_CANCEL_REQUEST = 35   [(fix.enum_value)="K"];
MSG_TYPE_LIST_EXECUTE = 36          [(fix.enum_value)="L"];
MSG_TYPE_LIST_STATUS = 37           [(fix.enum_value)="N"];
MSG_TYPE_LIST_STATUS_REQUEST = 38   [(fix.enum_value)="M"];
MSG_TYPE_LIST_STRIKE_PRICE = 39     [(fix.enum_value)="m"];
MSG_TYPE_LOGON = 40                  [(fix.enum_value)="A"];
MSG_TYPE_LOGOUT = 41                 [(fix.enum_value)="5"];
MSG_TYPE_MARKET_DATA_INCREMENTAL_REFRESH = 42 [(fix.enum_value)="X"];
MSG_TYPE_MARKET_DATA_REQUEST = 43   [(fix.enum_value)="V"];
MSG_TYPE_MARKET_DATA_REQUEST_REJECT = 44 [(fix.enum_value)="Y"];
MSG_TYPE_MARKET_DATA_SNAPSHOT_FULL_REFRESH = 45 [(fix.enum_value)="W"];
MSG_TYPE_MARKET_DEFINITION = 46     [(fix.enum_value)="BU"];
MSG_TYPE_MARKET_DEFINITION_REQUEST = 47 [(fix.enum_value)="BT"];
MSG_TYPE_MARKET_DEFINITION_UPDATE_REPORT = 48 [(fix.enum_value)="BV"];
MSG_TYPE_MASS_QUOTE = 49             [(fix.enum_value)="i"];
MSG_TYPE_MASS_QUOTE_ACKNOWLEDGEMENT = 50 [(fix.enum_value)="b"];
MSG_TYPE_MULTILEG_ORDER_CANCEL_REPLACE = 51 [(fix.enum_value)="AC"];
MSG_TYPE_NETWORK_COUNTERPARTY_SYSTEM_STATUS_REQUEST = 52
[(fix.enum_value)="BC"];
MSG_TYPE_NETWORK_COUNTERPARTY_SYSTEM_STATUS_RESPONSE = 53
[(fix.enum_value)="BD"];
MSG_TYPE_NEWS = 54                   [(fix.enum_value)="B"];
MSG_TYPE_NEW_ORDER_CROSS = 55        [(fix.enum_value)="s"];
MSG_TYPE_NEW_ORDER_LIST = 56         [(fix.enum_value)="E"];
MSG_TYPE_NEW_ORDER_MULTILEG = 57     [(fix.enum_value)="AB"];
MSG_TYPE_NEW_ORDER_SINGLE = 58       [(fix.enum_value)="D"];
MSG_TYPE_ORDER_CANCEL_REJECT = 59    [(fix.enum_value)="9"];
MSG_TYPE_ORDER_CANCEL_REPLACE_REQUEST = 60 [(fix.enum_value)="G"];
MSG_TYPE_ORDER_CANCEL_REQUEST = 61   [(fix.enum_value)="F"];
MSG_TYPE_ORDER_MASS_ACTION_REPORT = 62 [(fix.enum_value)="BZ"];
MSG_TYPE_ORDER_MASS_ACTION_REQUEST = 63 [(fix.enum_value)="CA"];
MSG_TYPE_ORDER_MASS_CANCEL_REPORT = 64 [(fix.enum_value)="r"];
MSG_TYPE_ORDER_MASS_CANCEL_REQUEST = 65 [(fix.enum_value)="q"];
MSG_TYPE_ORDER_MASS_STATUS_REQUEST = 66 [(fix.enum_value)="AF"];
MSG_TYPE_ORDER_STATUS_REQUEST = 67   [(fix.enum_value)="H"];
MSG_TYPE_POSITION_MAINTENANCE_REPORT = 68 [(fix.enum_value)="AM"];
MSG_TYPE_POSITION_MAINTENANCE_REQUEST = 69 [(fix.enum_value)="AL"];
MSG_TYPE_POSITION_REPORT = 70        [(fix.enum_value)="AP"];
MSG_TYPE_QUOTE = 71                  [(fix.enum_value)="S"];
MSG_TYPE_QUOTE_CANCEL = 72           [(fix.enum_value)="Z"];
MSG_TYPE_QUOTE_REQUEST = 73          [(fix.enum_value)="R"];
MSG_TYPE_QUOTE_REQUEST_REJECT = 74   [(fix.enum_value)="AG"];
MSG_TYPE_QUOTE_RESPONSE = 75         [(fix.enum_value)="AJ"];
MSG_TYPE_QUOTE_STATUS_REPORT = 76    [(fix.enum_value)="AI"];
MSG_TYPE_QUOTE_STATUS_REQUEST = 77   [(fix.enum_value)="a"];
MSG_TYPE_REGISTRATION_INSTRUCTIONS = 78 [(fix.enum_value)="o"];
MSG_TYPE_REGISTRATION_INSTRUCTIONS_RESPONSE = 79 [(fix.enum_value)="p"];
MSG_TYPE_REJECT = 80                  [(fix.enum_value)="3"];
MSG_TYPE_REQUEST_FOR_POSITIONS = 81 [(fix.enum_value)="AN"];
MSG_TYPE_REQUEST_FOR_POSITIONS_ACK = 82 [(fix.enum_value)="AO"];
MSG_TYPE_RESEND_REQUEST = 83          [(fix.enum_value)="2"];
MSG_TYPE_RFQ_REQUEST = 84             [(fix.enum_value)="AH"];
MSG_TYPE_SECURITY_DEFINITION = 85     [(fix.enum_value)="d"];
MSG_TYPE_SECURITY_DEFINITION_REQUEST = 86 [(fix.enum_value)="c"];
MSG_TYPE_SECURITY_DEFINITION_UPDATE_REPORT = 87 [(fix.enum_value)="BP"];
MSG_TYPE_SECURITY_LIST = 88           [(fix.enum_value)="y"];
MSG_TYPE_SECURITY_LIST_REQUEST = 89 [(fix.enum_value)="x"];
MSG_TYPE_SECURITY_LIST_UPDATE_REPORT = 90 [(fix.enum_value)="BK"];
MSG_TYPE_SECURITY_STATUS = 91         [(fix.enum_value)="f"];
MSG_TYPE_SECURITY_STATUS_REQUEST = 92 [(fix.enum_value)="e"];

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MSG_TYPE_SECURITY_TYPES = 93      [(fix.enum_value)="w"];
MSG_TYPE_SECURITY_TYPE_REQUEST = 94 [(fix.enum_value)="v"];
MSG_TYPE_SEQUENCE_RESET = 95      [(fix.enum_value)="4"];
MSG_TYPE_SETTLEMENT_INSTRUCTIONS = 96      [(fix.enum_value)="T"];
MSG_TYPE_SETTLEMENT_INSTRUCTION_REQUEST = 97      [(fix.enum_value)="AV"];
MSG_TYPE_SETTLEMENT_OBLIGATION_REPORT = 98      [(fix.enum_value)="BQ"];
MSG_TYPE_STREAM_ASSIGNMENT_REPORT = 99      [(fix.enum_value)="CD"];
MSG_TYPE_STREAM_ASSIGNMENT_REPORT_ACK = 100      [(fix.enum_value)="CE"];
MSG_TYPE_STREAM_ASSIGNMENT_REQUEST = 101      [(fix.enum_value)="CC"];
MSG_TYPE_TEST_REQUEST = 102      [(fix.enum_value)="1"];
MSG_TYPE_TRADE_CAPTURE_REPORT = 103 [(fix.enum_value)="AE"];
MSG_TYPE_TRADE_CAPTURE_REPORT_ACK = 104      [(fix.enum_value)="AR"];
MSG_TYPE_TRADE_CAPTURE_REPORT_REQUEST = 105      [(fix.enum_value)="AD"];
MSG_TYPE_TRADE_CAPTURE_REPORT_REQUEST_ACK = 106      [(fix.enum_value)="AQ"];
MSG_TYPE_TRADING_SESSION_LIST = 107 [(fix.enum_value)="BJ"];
MSG_TYPE_TRADING_SESSION_LIST_REQUEST = 108      [(fix.enum_value)="BI"];
MSG_TYPE_TRADING_SESSION_LIST_UPDATE_REPORT = 109      [(fix.enum_value)="BS"];
MSG_TYPE_TRADING_SESSION_STATUS = 110      [(fix.enum_value)="h"];
MSG_TYPE_TRADING_SESSION_STATUS_REQUEST = 111      [(fix.enum_value)="g"];
MSG_TYPE_UNSPECIFIED = 112;
MSG_TYPE_USER_NOTIFICATION = 113      [(fix.enum_value)="CB"];
MSG_TYPE_USER_REQUEST = 114      [(fix.enum_value)="BE"];
MSG_TYPE_USER_RESPONSE = 115      [(fix.enum_value)="BF"];
MSG_TYPE_XMLNON_FIX = 116      [(fix.enum_value)="n"];
}

enum ApplVerIDEnum {
  APPL_VER_ID_UNSPECIFIED = 0;
  APPL_VER_ID_FIX27 = 1      [(fix.enum_value)="0", (fix.enum_added)=VERSION_FIX_4_4];
  APPL_VER_ID_FIX30 = 2      [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_4];
  APPL_VER_ID_FIX40 = 3      [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_4];
  APPL_VER_ID_FIX41 = 4      [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_4];
  APPL_VER_ID_FIX42 = 5      [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_4];
  APPL_VER_ID_FIX43 = 6      [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_4];
  APPL_VER_ID_FIX44 = 7      [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_4];
  APPL_VER_ID_FIX50 = 8      [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_4];
  APPL_VER_ID_FIX50SP1 = 9      [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_5_0];
  APPL_VER_ID_FIX50SP2 = 10      [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=97];
}

message StandardHeader {
  optional string begin_string = 1      [(fix.tag)=8, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_0];
  optional sfixed64 body_length = 2      [(fix.tag)=9, (fix.type)=DATATYPE_LENGTH,
(fix.field_added)=VERSION_FIX_4_0];
  optional string deliver_to_comp_id = 3      [(fix.tag)=128,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_0];
  optional string deliver_to_sub_id = 4      [(fix.tag)=129,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_0];
  optional sfixed64 msg_seq_num = 5      [(fix.tag)=34, (fix.type)=DATATYPE_SEQ_NUM,
(fix.field_added)=VERSION_FIX_4_0];
  optional MessageTypeEnum msg_type = 6      [(fix.tag)=35, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_0];
  optional string on_behalf_of_comp_id = 7      [(fix.tag)=115,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_0];
  optional string on_behalf_of_sub_id = 8      [(fix.tag)=116,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_0];
  optional fix.Timestamp orig_sending_time = 9      [(fix.tag)=122,
(fix.type)=DATATYPE_UTC_TIMESTAMP, (fix.field_added)=VERSION_FIX_4_0];
  optional bool poss_dup_flag = 10      [(fix.tag)=43, (fix.type)=DATATYPE_BOOLEAN,
(fix.field_added)=VERSION_FIX_4_0];
}

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    optional bool poss_resend = 11      [(fix.tag)=97, (fix.type)=DATATYPE_BOOLEAN,
(fix.field_added)=VERSION_FIX_4_0];
    optional string secure_data = 12    [(fix.tag)=91, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_0];
    optional sfixed64 secure_data_len = 13      [(fix.tag)=90,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_4_0];
    optional string sender_comp_id = 14 [(fix.tag)=49, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_0];
    optional string sender_sub_id = 15 [(fix.tag)=50, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_0];
    optional fix.Timestamp sending_time = 16    [(fix.tag)=52,
(fix.type)=DATATYPE_UTC_TIMESTAMP, (fix.field_added)=VERSION_FIX_4_0];
    optional string target_comp_id = 17 [(fix.tag)=56, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_0];
    optional string target_sub_id = 18 [(fix.tag)=57, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_0];
    optional string deliver_to_location_id = 19 [(fix.tag)=145,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_1];
    optional string on_behalf_of_location_id = 20 [(fix.tag)=144,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_1];
    optional string sender_location_id = 21      [(fix.tag)=142,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_1];
    optional string target_location_id = 22      [(fix.tag)=143,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_1];
    optional sfixed64 last_msg_seq_num_processed = 23 [(fix.tag)=369,
(fix.type)=DATATYPE_SEQ_NUM, (fix.field_added)=VERSION_FIX_4_2];
    optional string message_encoding = 24      [(fix.tag)=347,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_2];
    optional string xml_data = 25      [(fix.tag)=213, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_2];
    optional sfixed64 xml_data_len = 26 [(fix.tag)=212, (fix.type)=DATATYPE_LENGTH,
(fix.field_added)=VERSION_FIX_4_2];
    optional ApplVerIDEnum appl_ver_id = 27      [(fix.tag)=1128,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string cstm_appl_ver_id = 28      [(fix.tag)=1129,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    repeated HopGrp hop_grp = 29      [(fix.field_added)=VERSION_FIX_4_4];
    optional sfixed64 appl_ext_id = 30 [(fix.tag)=1156, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_5_0];
}

message HopGrp {
    optional string hop_comp_id = 1      [(fix.tag)=628, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
    optional sfixed64 hop_ref_id = 2      [(fix.tag)=630, (fix.type)=DATATYPE_SEQ_NUM,
(fix.field_added)=VERSION_FIX_4_4];
    optional fix.Timestamp hop_sending_time = 3 [(fix.tag)=629,
(fix.type)=DATATYPE_UTC_TIMESTAMP, (fix.field_added)=VERSION_FIX_4_4];
}

message StandardTrailer {
    optional string check_sum = 1      [(fix.tag)=10, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_0];
    optional string signature = 2      [(fix.tag)=89, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_0];
    optional sfixed64 signature_length = 3 [(fix.tag)=93,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_4_0];
}

//
//   FIX Unified Repository mapping to Google Protocol Buffers
//
//   Copyright (c) FIX Trading Community. All Rights Reserved.

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```

//
//   Category: Common
//
//   File: common.proto
//
syntax = "proto2";
import "meta.proto";
import "fix.proto";

option java_package = "org.fixprotocol.components";
option java_outer_classname = "Common";

package Common;

enum SymbolSfxEnum {
    SYMBOL_SFX_UNSPECIFIED = 0;
    SYMBOL_SFX_EUCP_WITH_LUMP_SUM_INTEREST = 1 [(fix.enum_value)="CD",
(fix.enum_added)=VERSION_FIX_4_4];
    SYMBOL_SFX_WHEN_ISSUED = 2 [(fix.enum_value)="WI", (fix.enum_added)=VERSION_FIX_4_4];
}

enum SecurityIDSourceEnum {
    SECURITY_ID_SOURCE_UNSPECIFIED = 0;
    SECURITY_ID_SOURCE_CUSIP = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_2_7];
    SECURITY_ID_SOURCE_QUIK = 2 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_2_7];
    SECURITY_ID_SOURCE_SEDOL = 3 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_2_7];
    SECURITY_ID_SOURCE_ISIN_NUMBER = 4 [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_3_0];
    SECURITY_ID_SOURCE_RIC_CODE = 5 [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_3_0];
    SECURITY_ID_SOURCE_ISO_COUNTRY_CODE = 6 [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_ID_SOURCE_ISO_CURRENCY_CODE = 7 [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_ID_SOURCE_CONSOLIDATED_TAPE_ASSOCIATION = 8 [(fix.enum_value)="9",
(fix.enum_added)=VERSION_FIX_4_2];
    SECURITY_ID_SOURCE_EXCHANGE_SYMBOL = 9 [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_2];
    SECURITY_ID_SOURCE_BELGIAN = 10 [(fix.enum_value)="F", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_ID_SOURCE_BLOOMBERG_SYMBOL = 11 [(fix.enum_value)="A",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_ID_SOURCE_COMMON = 12 [(fix.enum_value)="G", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_ID_SOURCE_DUTCH = 13 [(fix.enum_value)="C", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_ID_SOURCE_SICOVAM = 14 [(fix.enum_value)="E", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_ID_SOURCE_VALOREN = 15 [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_ID_SOURCE_WERTPAPIER = 16 [(fix.enum_value)="B", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_ID_SOURCE_CLEARING_HOUSE = 17 [(fix.enum_value)="H",
(fix.enum_added)=VERSION_FIX_4_4];
    SECURITY_ID_SOURCE_ISDA_FPML_SPECIFICATION = 18 [(fix.enum_value)="I",
(fix.enum_added)=VERSION_FIX_4_4];
    SECURITY_ID_SOURCE_OPTION_PRICE_REPORTING_AUTHORITY = 19
[(fix.enum_value)="J", (fix.enum_added)=VERSION_FIX_4_4];
    SECURITY_ID_SOURCE_LETTER_OF_CREDIT = 20 [(fix.enum_value)="L",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    SECURITY_ID_SOURCE_ISDA_FPML_URL = 21 [(fix.enum_value)="K",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=15];
    SECURITY_ID_SOURCE_MARKETPLACE_ASSIGNED_IDENTIFIER = 22 [(fix.enum_value)="M",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=58];
}

enum ProductEnum {
    PRODUCT_UNSPECIFIED = 0;
    PRODUCT_AGENCY = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_3];
    PRODUCT_COMMODITY = 2 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_3];
    PRODUCT_CORPORATE = 3 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_3];
}

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PRODUCT_CURRENCY = 4          [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_3];
PRODUCT_EQUITY = 5           [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_3];
PRODUCT_GOVERNMENT = 6      [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_3];
PRODUCT_INDEX = 7           [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_3];
PRODUCT_LOAN = 8            [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_3];
PRODUCT_MONEYMARKET = 9     [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_3];
PRODUCT_MORTGAGE = 10       [(fix.enum_value)="10", (fix.enum_added)=VERSION_FIX_4_3];
PRODUCT_MUNICIPAL = 11     [(fix.enum_value)="11", (fix.enum_added)=VERSION_FIX_4_3];
PRODUCT_OTHER = 12         [(fix.enum_value)="12", (fix.enum_added)=VERSION_FIX_4_3];
PRODUCT_FINANCING = 13     [(fix.enum_value)="13", (fix.enum_added)=VERSION_FIX_4_4];
}

enum SecurityTypeEnum {
    SECURITY_TYPE_UNSPECIFIED = 0;
    SECURITY_TYPE_BANKERS_ACCEPTANCE = 1          [(fix.enum_value)="BA",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_CERTIFICATE_OF_DEPOSIT = 2      [(fix.enum_value)="CD",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_COLLATERALIZED_MORTGAGE_OBLIGATION = 3 [(fix.enum_value)="CMO",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_COMMERCIAL_PAPER = 4 [(fix.enum_value)="CP", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_COMMON_STOCK = 5 [(fix.enum_value)="CS", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_CORPORATE_BOND = 6 [(fix.enum_value)="CORP", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_CORPORATE_PRIVATE_PLACEMENT = 7 [(fix.enum_value)="CPP",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_FOREIGN_EXCHANGE_CONTRACT = 8 [(fix.enum_value)="FOR",
(fix.enum_added)=VERSION_FIX_4_1, (fix.enum_deprecated)=VERSION_FIX_5_0SP1];
    SECURITY_TYPE_FUTURE = 9 [(fix.enum_value)="FUT", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_MISCELLANEOUS_PASS_THROUGH = 10 [(fix.enum_value)="MPT",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_MORTGAGE_INTEREST_ONLY = 11 [(fix.enum_value)="MIO",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_MORTGAGE_PRINCIPAL_ONLY = 12 [(fix.enum_value)="MPO",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_MORTGAGE_PRIVATE_PLACEMENT = 13 [(fix.enum_value)="MPP",
(fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_MUTUAL_FUND = 14 [(fix.enum_value)="MF", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_NO_SECURITY_TYPE = 15 [(fix.enum_value)="NONE", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_OPTION = 16 [(fix.enum_value)="OPT", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_PREFERRED_STOCK = 17 [(fix.enum_value)="PS", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_TIME_DEPOSIT = 18 [(fix.enum_value)="TD", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_US_TREASURY_BILL_OLD = 19 [(fix.enum_value)="USTB",
(fix.enum_added)=VERSION_FIX_4_1, (fix.enum_deprecated)=VERSION_FIX_4_4];
    SECURITY_TYPE_WARRANT = 20 [(fix.enum_value)="WAR", (fix.enum_added)=VERSION_FIX_4_1];
    SECURITY_TYPE_CONVERTIBLE_BOND = 21 [(fix.enum_value)="CB", (fix.enum_added)=VERSION_FIX_4_2];
    SECURITY_TYPE_IOETTEMORTGAGE = 22 [(fix.enum_value)="IET", (fix.enum_added)=VERSION_FIX_4_2];
    SECURITY_TYPE_WILDCARD = 23 [(fix.enum_value)="?", (fix.enum_added)=VERSION_FIX_4_2];
    SECURITY_TYPE_AMENDED = 24 [(fix.enum_value)="AMENDED",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_ASSET_BACKED_SECURITIES = 25 [(fix.enum_value)="ABS",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_BANK_NOTES = 26 [(fix.enum_value)="BN", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_BILL_OF_EXCHANGES = 27 [(fix.enum_value)="BOX",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_BRADY_BOND = 28 [(fix.enum_value)="BRADY", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_BRIDGE_LOAN = 29 [(fix.enum_value)="BRIDGE",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_CALL_LOANS = 30 [(fix.enum_value)="CL", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_CERTIFICATE_OF_OBLIGATION = 31 [(fix.enum_value)="COFO",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_CERTIFICATE_OF_PARTICIPATION = 32 [(fix.enum_value)="COFP",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_CORP = 33 [(fix.enum_value)="CMBS", (fix.enum_added)=VERSION_FIX_4_3];
}

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    SECURITY_TYPE_DEBTOR_IN_POSSESSION = 34          [(fix.enum_value)="DINP",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_DEFAULTED = 35                    [(fix.enum_value)="DEFLTED",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_DEPOSIT_NOTES = 36                [(fix.enum_value)="DN", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_DUAL_CURRENCY = 37                [(fix.enum_value)="DUAL", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_EXTENDED_COMM_NOTE = 38           [(fix.enum_value)="XCN",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_FEDERAL_AGENCY_COUPON = 39        [(fix.enum_value)="FAC",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_FEDERAL_AGENCY_DISCOUNT_NOTE = 40 [(fix.enum_value)="FADN",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_GENERAL_OBLIGATION_BONDS = 41     [(fix.enum_value)="GO",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_INDEXED_LINKED = 42               [(fix.enum_value)="XLINKD",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_INTEREST_STRIP_FROM_ANY_BOND_OR_NOTE = 43 [(fix.enum_value)="TINT",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_LETTER_OF_CREDIT = 44             [(fix.enum_value)="LOFC", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_LIQUIDITY_NOTE = 45               [(fix.enum_value)="LQN", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_MANDATORY_TENDER = 46            [(fix.enum_value)="MT", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_MATURED = 47                      [(fix.enum_value)="MATURED",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_MEDIUM_TERM_NOTES = 48            [(fix.enum_value)="MTN",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_MORTGAGE_BACKED_SECURITIES = 49   [(fix.enum_value)="MBS",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_MULTILEG_INSTRUMENT = 50          [(fix.enum_value)="MLEG",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_OTHER_ANTICIPATION_NOTES = 51     [(fix.enum_value)="AN",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_OVERNIGHT = 52                    [(fix.enum_value)="ONITE", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_PLAZOS_FIJOS = 53                 [(fix.enum_value)="PZFJ", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_PRINCIPAL_STRIP_FROM_ANON_CALLABLE_BOND_OR_NOTE = 54
[(fix.enum_value)="TPRN", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_PRINCIPAL_STRIP_OF_ACALLABLE_BOND_OR_NOTE = 55
[(fix.enum_value)="TCAL", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_PRIVATE_EXPORT_FUNDING = 56       [(fix.enum_value)="PEF",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_PROMISSORY_NOTE = 57              [(fix.enum_value)="PN", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_REPLACED = 58                     [(fix.enum_value)="REPLACD",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_RETIRED = 59                      [(fix.enum_value)="RETIRED",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_REVENUE_ANTICIPATION_NOTE = 60    [(fix.enum_value)="RAN",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_REVENUE_BONDS = 61                [(fix.enum_value)="REV", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_REVOLVER = 62                     [(fix.enum_value)="RVLVTRM",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_REVOLVER_LOAN = 63                [(fix.enum_value)="RVLV", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_SHORT_TERM_LOAN_NOTE = 64         [(fix.enum_value)="STN",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_SPECIAL_ASSESSMENT = 65           [(fix.enum_value)="SPCLA",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_SPECIAL_OBLIGATION = 66           [(fix.enum_value)="SPCLO",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_SPECIAL_TAX = 67                  [(fix.enum_value)="SPCLT", (fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_STRUCTURED_NOTES = 68             [(fix.enum_value)="STRUCT",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_SWING_LINE_FACILITY = 69          [(fix.enum_value)="SWING",
(fix.enum_added)=VERSION_FIX_4_3];
    SECURITY_TYPE_TAX_ALLOCATION = 70                [(fix.enum_value)="TAXA", (fix.enum_added)=VERSION_FIX_4_3];

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SECURITY_TYPE_TAX_ANTICIPATION_NOTE = 71 [(fix.enum_value)="TAN",
(fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_TAX_EXEMPT_COMMERCIAL_PAPER = 72 [(fix.enum_value)="TECP",
(fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_TAX_REVENUE_ANTICIPATION_NOTE = 73 [(fix.enum_value)="TRAN",
(fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_TERM_LOAN = 74 [(fix.enum_value)="TERM", (fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_TO_BE_ANNOUNCED = 75 [(fix.enum_value)="TBA", (fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_TREASURY_INFLATION_PROTECTED_SECURITIES = 76
[(fix.enum_value)="TIPS", (fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_US_TREASURY_BOND = 77 [(fix.enum_value)="TBOND", (fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_US_TREASURY_NOTE_OLD = 78 [(fix.enum_value)="UST",
(fix.enum_added)=VERSION_FIX_4_3, (fix.enum_deprecated)=VERSION_FIX_4_4];
SECURITY_TYPE_VARIABLE_RATE_DEMAND_NOTE = 79 [(fix.enum_value)="VRDN",
(fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_WITHDRAWN = 80 [(fix.enum_value)="WITHDRN",
(fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_YANKEE_CORPORATE_BOND = 81 [(fix.enum_value)="YANK",
(fix.enum_added)=VERSION_FIX_4_3];
SECURITY_TYPE_BUY_SELLBACK = 82 [(fix.enum_value)="BUYSELL",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_EURO_CERTIFICATE_OF_DEPOSIT = 83 [(fix.enum_value)="EUCD",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_EURO_COMMERCIAL_PAPER = 84 [(fix.enum_value)="EUCP",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_EURO_CORPORATE_BOND = 85 [(fix.enum_value)="EUCORP",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_EURO_SOVEREIGNS = 86 [(fix.enum_value)="EUSOV", (fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_EURO_SUPRANATIONAL_COUPONS = 87 [(fix.enum_value)="EUSUPRA",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_FORWARD = 88 [(fix.enum_value)="FORWARD",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_PFANDBRIEF = 89 [(fix.enum_value)="PFAND", (fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_REPURCHASE = 90 [(fix.enum_value)="REPO", (fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_SECURITIES_LOAN = 91 [(fix.enum_value)="SECLOAN",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_SECURITIES_PLEDGE = 92 [(fix.enum_value)="SECPLEDGE",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_USD_SUPRANATIONAL_COUPONS = 93 [(fix.enum_value)="SUPRA",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_US_TREASURY_BILL = 94 [(fix.enum_value)="TBILL", (fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_US_TREASURY_NOTE = 95 [(fix.enum_value)="TNOTE", (fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_YANKEE_CERTIFICATE_OF_DEPOSIT = 96 [(fix.enum_value)="YCD",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_TYPE_OPTIONS_ON_FUTURES = 97 [(fix.enum_value)="OOF",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
SECURITY_TYPE_OPTIONS_ON_PHYSICAL = 98 [(fix.enum_value)="OOP",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
SECURITY_TYPE_CASH = 99 [(fix.enum_value)="CASH", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=28];
SECURITY_TYPE_OPTIONS_ON_COMBO = 100 [(fix.enum_value)="OOC",
(fix.enum_added)=VERSION_FIX_5_0];
SECURITY_TYPE_INTEREST_RATE_SWAP = 101 [(fix.enum_value)="IRS",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=54];
SECURITY_TYPE_BANK_DEPOSITORY_NOTE = 102 [(fix.enum_value)="BDN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
SECURITY_TYPE_CANADIAN_MONEY_MARKETS = 103 [(fix.enum_value)="CAMM",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
SECURITY_TYPE_CANADIAN_MORTGAGE_BONDS = 104 [(fix.enum_value)="CMB",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
SECURITY_TYPE_CANADIAN_PROVINCIAL_BONDS = 105 [(fix.enum_value)="PROV",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];

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    SECURITY_TYPE_CANADIAN_TREASURY_BILLS = 106          [(fix.enum_value)="CTB",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    SECURITY_TYPE_CANADIAN_TREASURY_NOTES = 107         [(fix.enum_value)="CAN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    SECURITY_TYPE_CREDIT_DEFAULT_SWAP = 108            [(fix.enum_value)="CDS",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    SECURITY_TYPE_EURO_CORPORATE_FLOATING_RATE_NOTES = 109 [(fix.enum_value)="EUFRN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    SECURITY_TYPE_SECURED_LIQUIDITY_NOTE = 110         [(fix.enum_value)="SLQN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    SECURITY_TYPE_TAXABLE_MUNICIPAL_CP = 111          [(fix.enum_value)="TMCP",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    SECURITY_TYPE_TERM_LIQUIDITY_NOTE = 112           [(fix.enum_value)="TLQN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    SECURITY_TYPE_TREASURY_BILL = 113                [(fix.enum_value)="TB", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=68];
    SECURITY_TYPE_US_CORPORATE_FLOATING_RATE_NOTES = 114 [(fix.enum_value)="FRN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    SECURITY_TYPE_FX_FORWARD = 115                   [(fix.enum_value)="FXFWD",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
    SECURITY_TYPE_FX_SPOT = 116                      [(fix.enum_value)="FXSPOT",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
    SECURITY_TYPE_FX_SWAP = 117                     [(fix.enum_value)="FXSWAP",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
    SECURITY_TYPE_NON_DELIVERABLE_FORWARD = 118      [(fix.enum_value)="FXNDF",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
}

enum SecurityStatusEnum {
    SECURITY_STATUS_UNSPECIFIED = 0;
    SECURITY_STATUS_ACTIVE = 1                      [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_4];
    SECURITY_STATUS_INACTIVE = 2                   [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_4];
}

enum RestructuringTypeEnum {
    RESTRUCTURING_TYPE_UNSPECIFIED = 0;
    RESTRUCTURING_TYPE_FULL_RESTRUCTURING = 1      [(fix.enum_value)="FR",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
    RESTRUCTURING_TYPE_MODIFIED_MOD_RESTRUCTURING = 2 [(fix.enum_value)="MM",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
    RESTRUCTURING_TYPE_MODIFIED_RESTRUCTURING = 3 [(fix.enum_value)="MR",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
    RESTRUCTURING_TYPE_NO_RESTRUCTURING_SPECIFIED = 4 [(fix.enum_value)="XR",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
}

enum SeniorityEnum {
    SENIORITY_UNSPECIFIED = 0;
    SENIORITY_SENIOR = 1                          [(fix.enum_value)="SR", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=83];
    SENIORITY_SENIOR_SECURED = 2                  [(fix.enum_value)="SD", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=83];
    SENIORITY_SUBORDINATED = 3                   [(fix.enum_value)="SB", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=83];
}

enum StrikePriceDeterminationMethodEnum {
    STRIKE_PRICE_DETERMINATION_METHOD_UNSPECIFIED = 0;
    STRIKE_PRICE_DETERMINATION_METHOD_FIXED_STRIKE = 1 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    STRIKE_PRICE_DETERMINATION_METHOD_STRIKE_SET_AT_EXPIRATION = 2
[(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
}

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    STRIKE_PRICE_DETERMINATION_METHOD_STRIKE_SET_TO_AVERAGE_ACROSS_LIFE = 3
[(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    STRIKE_PRICE_DETERMINATION_METHOD_STRIKE_SET_TO_OPTIMAL_VALUE = 4
[(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
}

enum StrikePriceBoundaryMethodEnum {
    STRIKE_PRICE_BOUNDARY_METHOD_UNSPECIFIED = 0;
    STRIKE_PRICE_BOUNDARY_METHOD_EQUAL = 1 [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    STRIKE_PRICE_BOUNDARY_METHOD_GREATER_THAN = 2 [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    STRIKE_PRICE_BOUNDARY_METHOD_GREATER_THAN_OR_EQUAL = 3 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    STRIKE_PRICE_BOUNDARY_METHOD_LESS_THAN = 4 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    STRIKE_PRICE_BOUNDARY_METHOD_LESS_THAN_OR_EQUAL = 5 [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
}

enum UnderlyingPriceDeterminationMethodEnum {
    UNDERLYING_PRICE_DETERMINATION_METHOD_UNSPECIFIED = 0;
    UNDERLYING_PRICE_DETERMINATION_METHOD_AVERAGE_VALUE = 1 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    UNDERLYING_PRICE_DETERMINATION_METHOD_OPTIMAL_VALUE = 2 [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    UNDERLYING_PRICE_DETERMINATION_METHOD_REGULAR = 3 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    UNDERLYING_PRICE_DETERMINATION_METHOD_SPECIAL_REFERENCE = 4
[(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
}

enum ContractMultiplierUnitEnum {
    CONTRACT_MULTIPLIER_UNIT_UNSPECIFIED = 0;
    CONTRACT_MULTIPLIER_UNIT_DAYS = 1 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=80];
    CONTRACT_MULTIPLIER_UNIT_HOURS = 2 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=80];
    CONTRACT_MULTIPLIER_UNIT_SHARES = 3 [(fix.enum_value)="0", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=80];
}

enum FlowScheduleTypeEnum {
    FLOW_SCHEDULE_TYPE_UNSPECIFIED = 0;
    FLOW_SCHEDULE_TYPE_NERC_CALENDAR_ALL_DAYS_IN_MONTH = 1 [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    FLOW_SCHEDULE_TYPE_NERC_EASTERN_OFF_PEAK = 2 [(fix.enum_value)="0",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    FLOW_SCHEDULE_TYPE_NERC_EASTERN_PEAK = 3 [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    FLOW_SCHEDULE_TYPE_NERC_WESTERN_OFF_PEAK = 4 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    FLOW_SCHEDULE_TYPE_NERC_WESTERN_PEAK = 5 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
}

enum UnitOfMeasureEnum {
    UNIT_OF_MEASURE_UNSPECIFIED = 0;
    UNIT_OF_MEASURE_BARRELS = 1 [(fix.enum_value)="Bbl", (fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_BILLION_CUBIC_FEET = 2 [(fix.enum_value)="Bcf",
(fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_BUSHEL = 3 [(fix.enum_value)="Bu", (fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_GALLONS = 4 [(fix.enum_value)="Gal", (fix.enum_added)=VERSION_FIX_4_4];
}

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    UNIT_OF_MEASURE_MEGAWATT_HOURS = 5 [(fix.enum_value)="MWh", (fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_METRIC_TONS = 6 [(fix.enum_value)="t", (fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_MILLION_BARRELS = 7 [(fix.enum_value)="MMbbl", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_deprecated)=VERSION_FIX_5_0SP1];
    UNIT_OF_MEASURE_ONE_MILLION_BTU = 8 [(fix.enum_value)="MMBtu", (fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_POUNDS = 9 [(fix.enum_value)="lbs", (fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_TONS = 10 [(fix.enum_value)="tn", (fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_TROY_OUNCES = 11 [(fix.enum_value)="oz_tr", (fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_USDOLLARS = 12 [(fix.enum_value)="USD", (fix.enum_added)=VERSION_FIX_4_4];
    UNIT_OF_MEASURE_ALLOWANCES = 13 [(fix.enum_value)="Alw", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=89];
}

enum PriceUnitOfMeasureEnum {
    PRICE_UNIT_OF_MEASURE_UNSPECIFIED = 0;
    PRICE_UNIT_OF_MEASURE_BARRELS = 1 [(fix.enum_value)="Bbl", (fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_BILLION_CUBIC_FEET = 2 [(fix.enum_value)="Bcf",
(fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_BUSHELS = 3 [(fix.enum_value)="Bu", (fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_GALLONS = 4 [(fix.enum_value)="Gal", (fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_MEGAWATT_HOURS = 5 [(fix.enum_value)="MWh",
(fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_METRIC_TONS = 6 [(fix.enum_value)="t",
(fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_MILLION_BARRELS = 7 [(fix.enum_value)="MMbbl",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_deprecated)=VERSION_FIX_5_0SP1];
    PRICE_UNIT_OF_MEASURE_ONE_MILLION_BTU = 8 [(fix.enum_value)="MMBtu",
(fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_POUNDS = 9 [(fix.enum_value)="lbs", (fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_TONS = 10 [(fix.enum_value)="tn", (fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_TROY_OUNCES = 11 [(fix.enum_value)="oz_tr",
(fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_USDOLLARS = 12 [(fix.enum_value)="USD",
(fix.enum_added)=VERSION_FIX_4_4];
    PRICE_UNIT_OF_MEASURE_ALLOWANCES = 13 [(fix.enum_value)="Alw",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=89];
}

enum SettlMethodEnum {
    SETTL_METHOD_UNSPECIFIED = 0;
    SETTL_METHOD_CASH_SETTLEMENT_REQUIRED = 1 [(fix.enum_value)="C",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
    SETTL_METHOD_PHYSICAL_SETTLEMENT_REQUIRED = 2 [(fix.enum_value)="P",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
}

enum ExerciseStyleEnum {
    EXERCISE_STYLE_UNSPECIFIED = 0;
    EXERCISE_STYLE_AMERICAN = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    EXERCISE_STYLE_BERMUDA = 2 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    EXERCISE_STYLE_EUROPEAN = 3 [(fix.enum_value)="0", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
}

enum OptPayoutTypeEnum {
    OPT_PAYOUT_TYPE_UNSPECIFIED = 0;
    OPT_PAYOUT_TYPE_BINARY = 1 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=92];
    OPT_PAYOUT_TYPE_CAPPED = 2 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=92];
}

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    OPT_PAYOUT_TYPE_VANILLA = 3          [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=92];
}

enum PriceQuoteMethodEnum {
    PRICE_QUOTE_METHOD_UNSPECIFIED = 0;
    PRICE_QUOTE_METHOD_INDEX = 1        [(fix.enum_value)="INX", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    PRICE_QUOTE_METHOD_INTEREST_RATE_INDEX = 2          [(fix.enum_value)="INT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
    PRICE_QUOTE_METHOD_STANDARD = 3      [(fix.enum_value)="STD", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    PRICE_QUOTE_METHOD_PERCENT_OF_PAR = 4              [(fix.enum_value)="PCTPAR",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
}

enum ValuationMethodEnum {
    VALUATION_METHOD_UNSPECIFIED = 0;
    VALUATION_METHOD_FUTURES_STYLE_MARK_TO_MARKET = 1    [(fix.enum_value)="FUT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
    VALUATION_METHOD_FUTURES_STYLE_WITH_AN_ATTACHED_CASH_ADJUSTMENT = 2
[(fix.enum_value)="FUTDA", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
    VALUATION_METHOD_PREMIUM_STYLE = 3 [(fix.enum_value)="EQTY", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    VALUATION_METHOD_CDS_IN_DELIVERY_USE_RECOVERY_RATE_TO_CALCULATE = 4
[(fix.enum_value)="CSDSD", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
    VALUATION_METHOD_CDS_STYLE_COLLATERALIZATION = 5    [(fix.enum_value)="CDS",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
}

enum ListMethodEnum {
    LIST_METHOD_UNSPECIFIED = 0;
    LIST_METHOD_PRE_LISTED_ONLY = 1      [(fix.enum_value)="0", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    LIST_METHOD_USER_REQUESTED = 2      [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
}

enum PutOrCallEnum {
    PUT_OR_CALL_UNSPECIFIED = 0;
    PUT_OR_CALL_CALL = 1                 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_1];
    PUT_OR_CALL_PUT = 2                  [(fix.enum_value)="0", (fix.enum_added)=VERSION_FIX_4_1];
}

enum TimeUnitEnum {
    TIME_UNIT_UNSPECIFIED = 0;
    TIME_UNIT_DAY = 1                    [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_4];
    TIME_UNIT_HOUR = 2                   [(fix.enum_value)="H", (fix.enum_added)=VERSION_FIX_4_4];
    TIME_UNIT_MINUTE = 3                 [(fix.enum_value)="Min", (fix.enum_added)=VERSION_FIX_4_4];
    TIME_UNIT_MONTH = 4                  [(fix.enum_value)="Mo", (fix.enum_added)=VERSION_FIX_4_4];
    TIME_UNIT_SECOND = 5                 [(fix.enum_value)="S", (fix.enum_added)=VERSION_FIX_4_4];
    TIME_UNIT_WEEK = 6                  [(fix.enum_value)="Wk", (fix.enum_added)=VERSION_FIX_4_4];
    TIME_UNIT_YEAR = 7                   [(fix.enum_value)="Yr", (fix.enum_added)=VERSION_FIX_4_4];
}

enum CPProgramEnum {
    CP_PROGRAM_UNSPECIFIED = 0;
    CP_PROGRAM_OTHER = 1                 [(fix.enum_value)="99", (fix.enum_added)=VERSION_FIX_4_4];
    CP_PROGRAM_PROGRAM3A3 = 2            [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_4];
    CP_PROGRAM_PROGRAM42 = 3            [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_4];
}

enum SecurityAltIDSourceEnum {

```

```

SECURITY_ALT_ID_SOURCE_UNSPECIFIED = 0;
SECURITY_ALT_ID_SOURCE_CUSIP = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_2_7];
SECURITY_ALT_ID_SOURCE_QUIK = 2 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_2_7];
SECURITY_ALT_ID_SOURCE_SEDOL = 3 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_2_7];
SECURITY_ALT_ID_SOURCE_ISIN_NUMBER = 4 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_3_0];
SECURITY_ALT_ID_SOURCE_RIC_CODE = 5 [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_3_0];
SECURITY_ALT_ID_SOURCE_ISO_COUNTRY_CODE = 6 [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_1];
SECURITY_ALT_ID_SOURCE_ISO_CURRENCY_CODE = 7 [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_1];
SECURITY_ALT_ID_SOURCE_CONSOLIDATED_TAPE_ASSOCIATION = 8
[(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_2];
SECURITY_ALT_ID_SOURCE_EXCHANGE_SYMBOL = 9 [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_2];
SECURITY_ALT_ID_SOURCE_BELGIAN = 10 [(fix.enum_value)="F", (fix.enum_added)=VERSION_FIX_4_3];
SECURITY_ALT_ID_SOURCE_BLOOMBERG_SYMBOL = 11 [(fix.enum_value)="A",
(fix.enum_added)=VERSION_FIX_4_3];
SECURITY_ALT_ID_SOURCE_COMMON = 12 [(fix.enum_value)="G", (fix.enum_added)=VERSION_FIX_4_3];
SECURITY_ALT_ID_SOURCE_DUTCH = 13 [(fix.enum_value)="C", (fix.enum_added)=VERSION_FIX_4_3];
SECURITY_ALT_ID_SOURCE_SICOVAM = 14 [(fix.enum_value)="E", (fix.enum_added)=VERSION_FIX_4_3];
SECURITY_ALT_ID_SOURCE_VALOREN = 15 [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_3];
SECURITY_ALT_ID_SOURCE_WERTPAPIER = 16 [(fix.enum_value)="B",
(fix.enum_added)=VERSION_FIX_4_3];
SECURITY_ALT_ID_SOURCE_CLEARING_HOUSE = 17 [(fix.enum_value)="H",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_ALT_ID_SOURCE_ISDA_FPML_SPECIFICATION = 18 [(fix.enum_value)="I",
(fix.enum_added)=VERSION_FIX_4_4];
SECURITY_ALT_ID_SOURCE_OPTION_PRICE_REPORTING_AUTHORITY = 19
[(fix.enum_value)="J", (fix.enum_added)=VERSION_FIX_4_4];
SECURITY_ALT_ID_SOURCE_LETTER_OF_CREDIT = 20 [(fix.enum_value)="L",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
SECURITY_ALT_ID_SOURCE_ISDA_FPML_URL = 21 [(fix.enum_value)="K",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=15];
SECURITY_ALT_ID_SOURCE_MARKETPLACE_ASSIGNED_IDENTIFIER = 22
[(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=58];
}

```

```

enum EventTypeEnum {
EVENT_TYPE_UNSPECIFIED = 0;
EVENT_TYPE_CALL = 1 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_4];
EVENT_TYPE_OTHER = 2 [(fix.enum_value)="99", (fix.enum_added)=VERSION_FIX_4_4];
EVENT_TYPE_PUT = 3 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_4];
EVENT_TYPE_SINKING_FUND_CALL = 4 [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_4];
EVENT_TYPE_TENDER = 5 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_4];
EVENT_TYPE_ACTIVATION = 6 [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
EVENT_TYPE_INACTIVIATION = 7 [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
EVENT_TYPE_LAST_ELIGIBLE_TRADE_DATE = 8 [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=42];
EVENT_TYPE_FINAL_INVENTORY_DUE_DATE = 9 [(fix.enum_value)="16",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
EVENT_TYPE_FIRST_DELIVERY_DATE = 10 [(fix.enum_value)="13", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
EVENT_TYPE_FIRST_INTENT_DATE = 11 [(fix.enum_value)="17", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
EVENT_TYPE_INITIAL_INVENTORY_DUE_DATE = 12 [(fix.enum_value)="15",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
EVENT_TYPE_LAST_DELIVERY_DATE = 13 [(fix.enum_value)="14", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
EVENT_TYPE_LAST_INTENT_DATE = 14 [(fix.enum_value)="18", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
}

```



```

    EVENT_TYPE_POSITION_REMOVAL_DATE = 15 [(fix.enum_value)="19",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
    EVENT_TYPE_SWAP_END_DATE = 16 [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    EVENT_TYPE_SWAP_NEXT_ROLL_DATE = 17 [(fix.enum_value)="12", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    EVENT_TYPE_SWAP_NEXT_START_DATE = 18 [(fix.enum_value)="11",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
    EVENT_TYPE_SWAP_ROLL_DATE = 19 [(fix.enum_value)="10", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    EVENT_TYPE_SWAP_START_DATE = 20 [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
}

```

```

enum InstrumentPartyIDSourceEnum {
    INSTRUMENT_PARTY_ID_SOURCE_UNSPECIFIED = 0;
    INSTRUMENT_PARTY_ID_SOURCE_AUSTRALIAN_BUSINESS_NUMBER = 1
[(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_AUSTRALIAN_TAX_FILE_NUMBER = 2
[(fix.enum_value)="A", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_BIC = 3 [(fix.enum_value)="B", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_CHINESE_INVESTOR_ID = 4 [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_GENERAL_IDENTIFIER = 5 [(fix.enum_value)="C",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_ISO_COUNTRY_CODE = 6 [(fix.enum_value)="E",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_KOREAN_INVESTOR_ID = 7 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_MALAYSIAN_CENTRAL_DEPOSITORY = 8
[(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_PROPRIETARY = 9 [(fix.enum_value)="D",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_SETTLEMENT_ENTITY_LOCATION = 10
[(fix.enum_value)="F", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_TAIWANESE_FOREIGN_INVESTOR_ID = 11
[(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_TAIWANESE_TRADING_ACCT = 12 [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_UK_NATIONAL_INSURANCE_OR_PENSION_NUMBER = 13
[(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_US_EMPLOYER_OR_TAX_ID_NUMBER = 14
[(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_US_SOCIAL_SECURITY_NUMBER = 15
[(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ID_SOURCE_CSD_PARTICIPANT = 16 [(fix.enum_value)="H",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ID_SOURCE_ISITC_ACRONYM = 17 [(fix.enum_value)="I",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ID_SOURCE_MIC = 18 [(fix.enum_value)="G", (fix.enum_added)=VERSION_FIX_4_4];
}

```

```

enum InstrumentPartyRoleEnum {
    INSTRUMENT_PARTY_ROLE_UNSPECIFIED = 0;
    INSTRUMENT_PARTY_ROLE_BROKER_OF_CREDIT = 1 [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_CLEARING_FIRM = 2 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_CLIENT_ID = 3 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_CONTRA_CLEARING_FIRM = 4 [(fix.enum_value)="18",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_CONTRA_FIRM = 5 [(fix.enum_value)="17",
(fix.enum_added)=VERSION_FIX_4_3];
}

```

```

    INSTRUMENT_PARTY_ROLE_CORRESPONDANT_CLEARING_FIRM = 6 [(fix.enum_value)="15",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_ENTERING_FIRM = 7 [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_EXECUTING_FIRM = 8 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_EXECUTING_SYSTEM = 9 [(fix.enum_value)="16",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_EXECUTING_TRADER = 10 [(fix.enum_value)="12",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_FUND_MANAGER_CLIENT_ID = 11 [(fix.enum_value)="9",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_GIVEUP_CLEARING_FIRM = 12 [(fix.enum_value)="14",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_INTRODUCING_FIRM = 13 [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_INVESTOR_ID = 14 [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_LOCATE = 15 [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_ORDER_ORIGINATION_FIRM = 16 [(fix.enum_value)="13",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_ORDER_ORIGINATION_TRADER = 17 [(fix.enum_value)="11",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_SETTLEMENT_LOCATION = 18 [(fix.enum_value)="10",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_SPONSORING_FIRM = 19 [(fix.enum_value)="19",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_UNDERLYING_CONTRA_FIRM = 20 [(fix.enum_value)="20",
(fix.enum_added)=VERSION_FIX_4_3];
    INSTRUMENT_PARTY_ROLE_AGENT = 21 [(fix.enum_value)="30", (fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_BENEFICIARY = 22 [(fix.enum_value)="32",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_BUYER = 23 [(fix.enum_value)="27", (fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_CLEARING_ORGANIZATION = 24 [(fix.enum_value)="21",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_CONTRA_INVESTOR_ID = 25 [(fix.enum_value)="39",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_CONTRA_TRADER = 26 [(fix.enum_value)="37",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_CORRESPONDENT_BROKER = 27 [(fix.enum_value)="26",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_CORRESPONDENT_CLEARING_ORGANIZATION = 28
[(fix.enum_value)="25", (fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_CUSTODIAN = 29 [(fix.enum_value)="28",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_CUSTOMER_ACCOUNT = 30 [(fix.enum_value)="24",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_ENTERING_TRADER = 31 [(fix.enum_value)="36",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_EXCHANGE = 32 [(fix.enum_value)="22", (fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_INTERESTED_PARTY = 33 [(fix.enum_value)="33",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_INTERMEDIARY = 34 [(fix.enum_value)="29",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_LIQUIDITY_PROVIDER = 35 [(fix.enum_value)="35",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_POSITION_ACCOUNT = 36 [(fix.enum_value)="38",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_REGULATORY_BODY = 37 [(fix.enum_value)="34",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE_SUB_CUSTODIAN = 38 [(fix.enum_value)="31",
(fix.enum_added)=VERSION_FIX_4_4];

```

```

    INSTRUMENT_PARTY_ROLE_TRANSFER_TO_FIRM = 39          [(fix.enum_value)="40",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_ROLE INTRODUCING_BROKER = 40       [(fix.enum_value)="60",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=4];
    INSTRUMENT_PARTY_ROLE_CONTRA_EXCHANGE = 41          [(fix.enum_value)="42",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    INSTRUMENT_PARTY_ROLE_CONTRA_POSITION_ACCOUNT = 42  [(fix.enum_value)="41",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    INSTRUMENT_PARTY_ROLE_INTERNAL_CARRY_ACCOUNT = 43  [(fix.enum_value)="43",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    INSTRUMENT_PARTY_ROLE_ORDER_ENTRY_OPERATOR_ID = 44 [(fix.enum_value)="44",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    INSTRUMENT_PARTY_ROLE_SECONDARY_ACCOUNT_NUMBER = 45 [(fix.enum_value)="45",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    INSTRUMENT_PARTY_ROLE_ASSET_MANAGER = 46            [(fix.enum_value)="49",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_CLAIMING_ACCOUNT = 47         [(fix.enum_value)="48",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_FOREIGN_FIRM = 48             [(fix.enum_value)="46",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_LARGE_TRADER_REPORTABLE_ACCOUNT = 49
[(fix.enum_value)="52", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_PLEDGEE_ACCOUNT = 50          [(fix.enum_value)="51",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_PLEDGOR_ACCOUNT = 51          [(fix.enum_value)="50",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_SENDER_LOCATION = 52          [(fix.enum_value)="54",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_SESSION_ID = 53              [(fix.enum_value)="55",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_THIRD_PARTY_ALLOCATION_FIRM = 54 [(fix.enum_value)="47",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_TRADER_MNEMONIC = 55          [(fix.enum_value)="53",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    INSTRUMENT_PARTY_ROLE_ACCEPTABLE_COUNTERPARTY = 56 [(fix.enum_value)="56",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
    INSTRUMENT_PARTY_ROLE_ENTERING_UNIT = 57            [(fix.enum_value)="58",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
    INSTRUMENT_PARTY_ROLE_EXECUTING_UNIT = 58           [(fix.enum_value)="59",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
    INSTRUMENT_PARTY_ROLE_UNACCEPTABLE_COUNTERPARTY = 59 [(fix.enum_value)="57",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
    INSTRUMENT_PARTY_ROLE_COMPETENT_AUTHORITY LIQUIDITY = 60
[(fix.enum_value)="70", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_COMPETENT_AUTHORITY_TRANSACTION_VENUE = 61
[(fix.enum_value)="71", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_DESK_ID = 62 [(fix.enum_value)="76", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_EXECUTION_VENUE = 63          [(fix.enum_value)="73",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_HOME_COMPETENT_AUTHORITY = 64 [(fix.enum_value)="69",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_HOST_COMPETENT_AUTHORITY = 65 [(fix.enum_value)="68",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_INVESTMENT_FIRM = 66          [(fix.enum_value)="67",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_LOCATION_ID = 67              [(fix.enum_value)="75",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_MARKET_DATA_ENTRY_ORIGINATOR = 68 [(fix.enum_value)="74",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_MARKET_DATA_MARKET = 69      [(fix.enum_value)="77",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];

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```

    INSTRUMENT_PARTY_ROLE_MARKET_MAKER = 70                [(fix.enum_value)="66",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_MULTILATERAL_TRADING_FACILITY = 71
[(fix.enum_value)="64", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_QUOTE_ORIGINATOR = 72            [(fix.enum_value)="61",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_REGULATED_MARKET = 73           [(fix.enum_value)="65",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_REPORTING_INTERMEDIARY = 74     [(fix.enum_value)="72",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_REPORT_ORIGINATOR = 75         [(fix.enum_value)="62",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_SYSTEMATIC_INTERNALISER = 76   [(fix.enum_value)="63",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_ROLE_ALLOCATION_ENTITY = 77          [(fix.enum_value)="78",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=35];
    INSTRUMENT_PARTY_ROLE_BROKER_CLEARING_ID = 78        [(fix.enum_value)="81",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    INSTRUMENT_PARTY_ROLE_PRIME_BROKER = 79              [(fix.enum_value)="79",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    INSTRUMENT_PARTY_ROLE_STEP_OUT_FIRM = 80             [(fix.enum_value)="80",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    INSTRUMENT_PARTY_ROLE_CENTRAL_REGISTRATION_DEPOSITORY = 81
[(fix.enum_value)="82", (fix.enum_added)=VERSION_FIX_5_OSP1, (fix.enum_added_ep)=79];
    INSTRUMENT_PARTY_ROLE_ACCEPTABLE_SETTLING_COUNTERPARTY = 82
[(fix.enum_value)="84", (fix.enum_added)=VERSION_FIX_5_OSP1, (fix.enum_added_ep)=96];
    INSTRUMENT_PARTY_ROLE_CLEARING_ACCOUNT = 83          [(fix.enum_value)="83",
(fix.enum_added)=VERSION_FIX_5_OSP1, (fix.enum_added_ep)=96];
    INSTRUMENT_PARTY_ROLE_UNACCEPTABLE_SETTLING_COUNTERPARTY = 84
[(fix.enum_value)="85", (fix.enum_added)=VERSION_FIX_5_OSP1, (fix.enum_added_ep)=96];
}

```

```

enum InstrumentPartySubIDTypeEnum {
    INSTRUMENT_PARTY_SUB_ID_TYPE_UNSPECIFIED = 0;
    INSTRUMENT_PARTY_SUB_ID_TYPE_APPLICATION = 1          [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_BIC = 2                 [(fix.enum_value)="16",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_CASH_ACCOUNT_NAME = 3   [(fix.enum_value)="23",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_CASH_ACCOUNT_NUMBER = 4 [(fix.enum_value)="15",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_CONTACT_NAME = 5       [(fix.enum_value)="9",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_CSDPARTICIPANT_MEMBER_CODE = 6
[(fix.enum_value)="17", (fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_DEPARTMENT = 7         [(fix.enum_value)="24",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_EMAIL_ADDRESS = 8      [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_FAX_NUMBER = 9         [(fix.enum_value)="21",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_FIRM = 10              [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_FULL_LEGAL_NAME_OF_FIRM = 11
[(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_FUND_ACCOUNT_NAME = 12 [(fix.enum_value)="19",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_LOCATION_DESK = 13    [(fix.enum_value)="25",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_PERSON = 14           [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_4_4];
}

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    INSTRUMENT_PARTY_SUB_ID_TYPE_PHONE_NUMBER = 15          [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_POSITION_ACCOUNT_TYPE = 16 [(fix.enum_value)="26",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_POSTAL_ADDRESS = 17        [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_REGISTERED_ADDRESS = 18    [(fix.enum_value)="18",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_REGISTERED_ADDRESS_FOR_CONFIRMATION = 19
[(fix.enum_value)="12", (fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_REGISTRATION_NAME = 20     [(fix.enum_value)="14",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_REGISTRATION_NUMBER = 21  [(fix.enum_value)="11",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_REGULATORY_STATUS = 22    [(fix.enum_value)="13",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_SECURITIES_ACCOUNT_NAME = 23
[(fix.enum_value)="22", (fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_SECURITIES_ACCOUNT_NUMBER = 24
[(fix.enum_value)="10", (fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_SYSTEM = 25               [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_TELEX_NUMBER = 26         [(fix.enum_value)="20",
(fix.enum_added)=VERSION_FIX_4_4];
    INSTRUMENT_PARTY_SUB_ID_TYPE_SECURITY_LOCATE_ID = 27   [(fix.enum_value)="27",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=1];
    INSTRUMENT_PARTY_SUB_ID_TYPE_ELIGIBLE_COUNTERPARTY = 28 [(fix.enum_value)="29",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_SUB_ID_TYPE_EXECUTION_VENUE = 29     [(fix.enum_value)="32",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_SUB_ID_TYPE_LOCATION = 30            [(fix.enum_value)="31",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_SUB_ID_TYPE_MARKET_MAKER = 31        [(fix.enum_value)="28",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_SUB_ID_TYPE_PROFESSIONAL_CLIENT = 32 [(fix.enum_value)="30",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    INSTRUMENT_PARTY_SUB_ID_TYPE_CURRENCY_DELIVERY_IDENTIFIER = 33
[(fix.enum_value)="33", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=44];
}

enum ComplexEventTypeEnum {
    COMPLEX_EVENT_TYPE_UNSPECIFIED = 0;
    COMPLEX_EVENT_TYPE_CAPPED = 1          [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=92];
    COMPLEX_EVENT_TYPE_KNOCK_IN_UP = 2    [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=92];
    COMPLEX_EVENT_TYPE_KNOCK_OUT_DOWN = 3 [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    COMPLEX_EVENT_TYPE_KNOCK_OUT_UP = 4   [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=92];
    COMPLEX_EVENT_TYPE_KOCK_IN_DOWN = 5   [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=92];
    COMPLEX_EVENT_TYPE_RESET_BARRIER = 6 [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    COMPLEX_EVENT_TYPE_ROLLING_BARRIER = 7 [(fix.enum_value)="9",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
    COMPLEX_EVENT_TYPE_TRIGGER = 8        [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=92];
    COMPLEX_EVENT_TYPE_UNDERLYING = 9     [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=92];
}

enum ComplexEventPriceBoundaryMethodEnum {

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    COMPLEX_EVENT_PRICE_BOUNDARY_METHOD_UNSPECIFIED = 0;
    COMPLEX_EVENT_PRICE_BOUNDARY_METHOD_EQUAL_TO_COMPLEX_EVENT_PRICE = 1
  [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
  COMPLEX_EVENT_PRICE_BOUNDARY_METHOD_GREATER_THAN_COMPLEX_EVENT_PRICE = 2
  [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
  COMPLEX_EVENT_PRICE_BOUNDARY_METHOD_GREATER_THAN_OR_EQUAL_TO_COMPLEX_EVENT_PRICE = 3
  [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
  COMPLEX_EVENT_PRICE_BOUNDARY_METHOD_LESS_THAN_COMPLEX_EVENT_PRICE = 4
  [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
  COMPLEX_EVENT_PRICE_BOUNDARY_METHOD_LESS_THAN_OR_EQUAL_TO_COMPLEX_EVENT_PRICE = 5
  [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
}

enum ComplexEventPriceTimeTypeEnum {
  COMPLEX_EVENT_PRICE_TIME_TYPE_UNSPECIFIED = 0;
  COMPLEX_EVENT_PRICE_TIME_TYPE_EXPIRATION = 1 [(fix.enum_value)="1",
  (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
  COMPLEX_EVENT_PRICE_TIME_TYPE_IMMEDIATE = 2 [(fix.enum_value)="2",
  (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
  COMPLEX_EVENT_PRICE_TIME_TYPE_SPECIFIED_DATE = 3 [(fix.enum_value)="3",
  (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=92];
}

enum ComplexEventConditionEnum {
  COMPLEX_EVENT_CONDITION_UNSPECIFIED = 0;
  COMPLEX_EVENT_CONDITION_AND = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_5_0SP1,
  (fix.enum_added_ep)=92];
  COMPLEX_EVENT_CONDITION_OR = 2 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0SP1,
  (fix.enum_added_ep)=92];
}

enum PartyIDSourceEnum {
  PARTY_ID_SOURCE_UNSPECIFIED = 0;
  PARTY_ID_SOURCE_AUSTRALIAN_BUSINESS_NUMBER = 1 [(fix.enum_value)="9",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_AUSTRALIAN_TAX_FILE_NUMBER = 2 [(fix.enum_value)="A",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_BIC = 3 [(fix.enum_value)="B", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_CHINESE_INVESTOR_ID = 4 [(fix.enum_value)="5",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_GENERAL_IDENTIFIER = 5 [(fix.enum_value)="C",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_ISO_COUNTRY_CODE = 6 [(fix.enum_value)="E",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_KOREAN_INVESTOR_ID = 7 [(fix.enum_value)="1",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_MALAYSIAN_CENTRAL_DEPOSITORY = 8 [(fix.enum_value)="4",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_PROPRIETARY = 9 [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_SETTLEMENT_ENTITY_LOCATION = 10 [(fix.enum_value)="F",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_TAIWANESE_FOREIGN_INVESTOR_ID = 11 [(fix.enum_value)="2",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_TAIWANESE_TRADING_ACCT = 12 [(fix.enum_value)="3",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_UK_NATIONAL_INSURANCE_OR_PENSION_NUMBER = 13
  [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_US_EMPLOYER_OR_TAX_ID_NUMBER = 14 [(fix.enum_value)="8",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_US_SOCIAL_SECURITY_NUMBER = 15 [(fix.enum_value)="7",
  (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ID_SOURCE_CSDPARTICIPANT = 16 [(fix.enum_value)="H", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ID_SOURCE_ISITACRONYM = 17 [(fix.enum_value)="I", (fix.enum_added)=VERSION_FIX_4_4];
}

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PARTY_ID_SOURCE_MIC = 18          [(fix.enum_value)="G", (fix.enum_added)=VERSION_FIX_4_4];
}

enum PartyRoleEnum {
  PARTY_ROLE_UNSPECIFIED = 0;
  PARTY_ROLE_BROKER_OF_CREDIT = 1      [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_CLEARING_FIRM = 2         [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_CLIENT_ID = 3             [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_CONTRA_CLEARING_FIRM = 4  [(fix.enum_value)="18", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_CONTRA_FIRM = 5           [(fix.enum_value)="17", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_CORRESPONDANT_CLEARING_FIRM = 6 [(fix.enum_value)="15",
(fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_ENTERING_FIRM = 7         [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_EXECUTING_FIRM = 8        [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_EXECUTING_SYSTEM = 9     [(fix.enum_value)="16", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_EXECUTING_TRADER = 10    [(fix.enum_value)="12", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_FUND_MANAGER_CLIENT_ID = 11 [(fix.enum_value)="9",
(fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_GIVEUP_CLEARING_FIRM = 12 [(fix.enum_value)="14",
(fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_INTRODUCING_FIRM = 13     [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_INVESTOR_ID = 14          [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_LOCATE = 15               [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_ORDER_ORIGINATION_FIRM = 16 [(fix.enum_value)="13",
(fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_ORDER_ORIGINATION_TRADER = 17 [(fix.enum_value)="11",
(fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_SETTLEMENT_LOCATION = 18 [(fix.enum_value)="10", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_SPONSORING_FIRM = 19      [(fix.enum_value)="19", (fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_UNDERLYING_CONTRA_FIRM = 20 [(fix.enum_value)="20",
(fix.enum_added)=VERSION_FIX_4_3];
  PARTY_ROLE_AGENT = 21                [(fix.enum_value)="30", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_BENEFICIARY = 22          [(fix.enum_value)="32", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_BUYER = 23                [(fix.enum_value)="27", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_CLEARING_ORGANIZATION = 24 [(fix.enum_value)="21",
(fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_CONTRA_INVESTOR_ID = 25 [(fix.enum_value)="39", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_CONTRA_TRADER = 26        [(fix.enum_value)="37", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_CORRESPONDENT_BROKER = 27 [(fix.enum_value)="26",
(fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_CORRESPONDENT_CLEARING_ORGANIZATION = 28 [(fix.enum_value)="25",
(fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_CUSTODIAN = 29            [(fix.enum_value)="28", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_CUSTOMER_ACCOUNT = 30     [(fix.enum_value)="24", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_ENTERING_TRADER = 31      [(fix.enum_value)="36", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_EXCHANGE = 32             [(fix.enum_value)="22", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_INTERESTED_PARTY = 33     [(fix.enum_value)="33", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_INTERMEDIARY = 34         [(fix.enum_value)="29", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_LIQUIDITY_PROVIDER = 35 [(fix.enum_value)="35", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_POSITION_ACCOUNT = 36     [(fix.enum_value)="38", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_REGULATORY_BODY = 37     [(fix.enum_value)="34", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_SUB_CUSTODIAN = 38        [(fix.enum_value)="31", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_TRANSFER_TO_FIRM = 39     [(fix.enum_value)="40", (fix.enum_added)=VERSION_FIX_4_4];
  PARTY_ROLE_INTRODUCING_BROKER = 40 [(fix.enum_value)="60", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=4];
  PARTY_ROLE_CONTRA_EXCHANGE = 41      [(fix.enum_value)="42", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=5];
  PARTY_ROLE_CONTRA_POSITION_ACCOUNT = 42 [(fix.enum_value)="41",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
  PARTY_ROLE_INTERNAL_CARRY_ACCOUNT = 43 [(fix.enum_value)="43",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
  PARTY_ROLE_ORDER_ENTRY_OPERATOR_ID = 44 [(fix.enum_value)="44",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];

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PARTY_ROLE_SECONDARY_ACCOUNT_NUMBER = 45          [(fix.enum_value)="45",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
PARTY_ROLE_ASSET_MANAGER = 46                    [(fix.enum_value)="49", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
PARTY_ROLE_CLAIMING_ACCOUNT = 47                [(fix.enum_value)="48", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
PARTY_ROLE_FOREIGN_FIRM = 48                    [(fix.enum_value)="46", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
PARTY_ROLE_LARGE_TRADER_REPORTABLE_ACCOUNT = 49  [(fix.enum_value)="52",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
PARTY_ROLE_PLEDGEE_ACCOUNT = 50                [(fix.enum_value)="51", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
PARTY_ROLE_PLEDGOR_ACCOUNT = 51                [(fix.enum_value)="50", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
PARTY_ROLE_SENDER_LOCATION = 52                [(fix.enum_value)="54", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
PARTY_ROLE_SESSION_ID = 53                     [(fix.enum_value)="55", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
PARTY_ROLE_THIRD_PARTY_ALLOCATION_FIRM = 54       [(fix.enum_value)="47",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
PARTY_ROLE_TRADER_MNEMONIC = 55                [(fix.enum_value)="53", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=8];
PARTY_ROLE_ACCEPTABLE_COUNTERPARTY = 56         [(fix.enum_value)="56",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
PARTY_ROLE_ENTERING_UNIT = 57                  [(fix.enum_value)="58", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=22];
PARTY_ROLE_EXECUTING_UNIT = 58                 [(fix.enum_value)="59", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=22];
PARTY_ROLE_UNACCEPTABLE_COUNTERPARTY = 59       [(fix.enum_value)="57",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
PARTY_ROLE_COMPETENT_AUTHORITY_LIQUIDITY = 60   [(fix.enum_value)="70",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
PARTY_ROLE_COMPETENT_AUTHORITY_TRANSACTION_VENUE = 61 [(fix.enum_value)="71",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
PARTY_ROLE_DESK_ID = 62                        [(fix.enum_value)="76", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
PARTY_ROLE_EXECUTION_VENUE = 63                [(fix.enum_value)="73", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
PARTY_ROLE_HOME_COMPETENT_AUTHORITY = 64        [(fix.enum_value)="69",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
PARTY_ROLE_HOST_COMPETENT_AUTHORITY = 65        [(fix.enum_value)="68",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
PARTY_ROLE_INVESTMENT_FIRM = 66                [(fix.enum_value)="67", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
PARTY_ROLE_LOCATION_ID = 67                    [(fix.enum_value)="75", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
PARTY_ROLE_MARKET_DATA_ENTRY_ORIGINATOR = 68    [(fix.enum_value)="74",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
PARTY_ROLE_MARKET_DATA_MARKET = 69             [(fix.enum_value)="77", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
PARTY_ROLE_MARKET_MAKER = 70                   [(fix.enum_value)="66", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
PARTY_ROLE_MULTILATERAL_TRADING_FACILITY = 71   [(fix.enum_value)="64",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
PARTY_ROLE_QUOTE_ORIGINATOR = 72               [(fix.enum_value)="61", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
PARTY_ROLE_REGULATED_MARKET = 73               [(fix.enum_value)="65", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
PARTY_ROLE_REPORTING_INTERMEDIARY = 74         [(fix.enum_value)="72",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
PARTY_ROLE_REPORT_ORIGINATOR = 75              [(fix.enum_value)="62", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];

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    PARTY_ROLE_SYSTEMATIC_INTERNALISER = 76          [(fix.enum_value)="63",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    PARTY_ROLE_ALLOCATION_ENTITY = 77   [(fix.enum_value)="78", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=35];
    PARTY_ROLE_BROKER_CLEARING_ID = 78  [(fix.enum_value)="81", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=68];
    PARTY_ROLE_PRIME_BROKER = 79        [(fix.enum_value)="79", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=68];
    PARTY_ROLE_STEP_OUT_FIRM = 80       [(fix.enum_value)="80", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=68];
    PARTY_ROLE_CENTRAL_REGISTRATION_DEPOSITORY = 81  [(fix.enum_value)="82",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=79];
    PARTY_ROLE_ACCEPTABLE_SETTLING_COUNTERPARTY = 82 [(fix.enum_value)="84",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=96];
    PARTY_ROLE_CLEARING_ACCOUNT = 83    [(fix.enum_value)="83", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=96];
    PARTY_ROLE_UNACCEPTABLE_SETTLING_COUNTERPARTY = 84 [(fix.enum_value)="85",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=96];
}

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enum PartySubIDTypeEnum {
    PARTY_SUB_ID_TYPE_UNSPECIFIED = 0;
    PARTY_SUB_ID_TYPE_APPLICATION = 1  [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_BIC = 2          [(fix.enum_value)="16", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_CASH_ACCOUNT_NAME = 3 [(fix.enum_value)="23",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_CASH_ACCOUNT_NUMBER = 4 [(fix.enum_value)="15",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_CONTACT_NAME = 5 [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_CSDPARTICIPANT_MEMBER_CODE = 6 [(fix.enum_value)="17",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_DEPARTMENT = 7 [(fix.enum_value)="24", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_EMAIL_ADDRESS = 8 [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_FAX_NUMBER = 9 [(fix.enum_value)="21", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_FIRM = 10 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_FULL_LEGAL_NAME_OF_FIRM = 11 [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_FUND_ACCOUNT_NAME = 12 [(fix.enum_value)="19",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_LOCATION_DESK = 13 [(fix.enum_value)="25",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_PERSON = 14 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_PHONE_NUMBER = 15 [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_POSITION_ACCOUNT_TYPE = 16 [(fix.enum_value)="26",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_POSTAL_ADDRESS = 17 [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_REGISTERED_ADDRESS = 18 [(fix.enum_value)="18",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_REGISTERED_ADDRESS_FOR_CONFIRMATION = 19
[(fix.enum_value)="12", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_REGISTRATION_NAME = 20 [(fix.enum_value)="14",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_REGISTRATION_NUMBER = 21 [(fix.enum_value)="11",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_REGULATORY_STATUS = 22 [(fix.enum_value)="13",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_SECURITIES_ACCOUNT_NAME = 23 [(fix.enum_value)="22",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_SECURITIES_ACCOUNT_NUMBER = 24 [(fix.enum_value)="10",
(fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_SYSTEM = 25 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_4];
    PARTY_SUB_ID_TYPE_TELEX_NUMBER = 26 [(fix.enum_value)="20", (fix.enum_added)=VERSION_FIX_4_4];
}

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    PARTY_SUB_ID_TYPE_SECURITY_LOCATE_ID = 27                [(fix.enum_value)="27",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=1];
    PARTY_SUB_ID_TYPE_ELIGIBLE_COUNTERPARTY = 28            [(fix.enum_value)="29",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    PARTY_SUB_ID_TYPE_EXECUTION_VENUE = 29                  [(fix.enum_value)="32",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    PARTY_SUB_ID_TYPE_LOCATION = 30                         [(fix.enum_value)="31", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
    PARTY_SUB_ID_TYPE_MARKET_MAKER = 31 [(fix.enum_value)="28", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=26];
    PARTY_SUB_ID_TYPE_PROFESSIONAL_CLIENT = 32              [(fix.enum_value)="30",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    PARTY_SUB_ID_TYPE_CURRENCY_DELIVERY_IDENTIFIER = 33     [(fix.enum_value)="33",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=44];
}

enum TerminationTypeEnum {
    TERMINATION_TYPE_UNSPECIFIED = 0;
    TERMINATION_TYPE_FLEXIBLE = 1                [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_4];
    TERMINATION_TYPE_OPEN = 2                    [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_4];
    TERMINATION_TYPE_OVERNIGHT = 3              [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_4];
    TERMINATION_TYPE_TERM = 4                    [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_4];
}

enum DeliveryTypeEnum {
    DELIVERY_TYPE_UNSPECIFIED = 0;
    DELIVERY_TYPE_FREE = 1                       [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_4];
    DELIVERY_TYPE_HOLD_IN_CUSTODY = 2            [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_4];
    DELIVERY_TYPE_TRI_PARTY = 3                  [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_4];
    DELIVERY_TYPE_VERSUS_PAYMENT = 4            [(fix.enum_value)="0", (fix.enum_added)=VERSION_FIX_4_4];
}

enum UnderlyingSymbolsSfxEnum {
    UNDERLYING_SYMBOL_SFX_UNSPECIFIED = 0;
    UNDERLYING_SYMBOL_SFX_EUCP_WITH_LUMP_SUM_INTEREST = 1 [(fix.enum_value)="CD",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SYMBOL_SFX_WHEN_ISSUED = 2        [(fix.enum_value)="WI",
(fix.enum_added)=VERSION_FIX_4_4];
}

enum UnderlyingSecurityIDSourceEnum {
    UNDERLYING_SECURITY_ID_SOURCE_UNSPECIFIED = 0;
    UNDERLYING_SECURITY_ID_SOURCE_CUSIP = 1        [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_2_7];
    UNDERLYING_SECURITY_ID_SOURCE_QUIK = 2         [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_2_7];
    UNDERLYING_SECURITY_ID_SOURCE_SEDOL = 3        [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_2_7];
    UNDERLYING_SECURITY_ID_SOURCE_ISIN_NUMBER = 4 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_3_0];
    UNDERLYING_SECURITY_ID_SOURCE_RIC_CODE = 5     [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_3_0];
    UNDERLYING_SECURITY_ID_SOURCE_ISO_COUNTRY_CODE = 6 [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_ID_SOURCE_ISO_CURRENCY_CODE = 7 [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_ID_SOURCE_CONSOLIDATED_TAPE_ASSOCIATION = 8
[(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_2];
    UNDERLYING_SECURITY_ID_SOURCE_EXCHANGE_SYMBOL = 9 [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_2];
    UNDERLYING_SECURITY_ID_SOURCE_BELGIAN = 10     [(fix.enum_value)="F",
(fix.enum_added)=VERSION_FIX_4_3];
}

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    UNDERLYING_SECURITY_ID_SOURCE_BLOOMBERG_SYMBOL = 11      [(fix.enum_value)="A",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ID_SOURCE_COMMON = 12                [(fix.enum_value)="G",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ID_SOURCE_DUTCH = 13                [(fix.enum_value)="C",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ID_SOURCE_SICOVAM = 14              [(fix.enum_value)="E",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ID_SOURCE_VALOREN = 15              [(fix.enum_value)="D",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ID_SOURCE_WERTPAPIER = 16           [(fix.enum_value)="B",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ID_SOURCE_CLEARING_HOUSE = 17       [(fix.enum_value)="H",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_ID_SOURCE_ISDA_FPML_SPECIFICATION = 18
[(fix.enum_value)="I", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_ID_SOURCE_OPTION_PRICE_REPORTING_AUTHORITY = 19
[(fix.enum_value)="J", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_ID_SOURCE_LETTER_OF_CREDIT = 20     [(fix.enum_value)="L",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_SECURITY_ID_SOURCE_ISDA_FPML_URL = 21        [(fix.enum_value)="K",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=15];
    UNDERLYING_SECURITY_ID_SOURCE_MARKETPLACE_ASSIGNED_IDENTIFIER = 22
[(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=58];
}

enum UnderlyingProductEnum {
    UNDERLYING_PRODUCT_UNSPECIFIED = 0;
    UNDERLYING_PRODUCT_AGENCY = 1      [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_COMMODITY = 2    [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_CORPORATE = 3    [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_CURRENCY = 4    [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_EQUITY = 5      [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_GOVERNMENT = 6   [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_INDEX = 7       [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_LOAN = 8        [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_MONEYMARKET = 9  [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_MORTGAGE = 10    [(fix.enum_value)="10", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_MUNICIPAL = 11  [(fix.enum_value)="11", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_OTHER = 12      [(fix.enum_value)="12", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_PRODUCT_FINANCING = 13   [(fix.enum_value)="13", (fix.enum_added)=VERSION_FIX_4_4];
}

enum UnderlyingSecurityTypeEnum {
    UNDERLYING_SECURITY_TYPE_UNSPECIFIED = 0;
    UNDERLYING_SECURITY_TYPE_BANKERS_ACCEPTANCE = 1        [(fix.enum_value)="BA",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_CERTIFICATE_OF_DEPOSIT = 2    [(fix.enum_value)="CD",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_COLLATERALIZED_MORTGAGE_OBLIGATION = 3
[(fix.enum_value)="CMO", (fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_COMMERCIAL_PAPER = 4          [(fix.enum_value)="CP",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_COMMON_STOCK = 5              [(fix.enum_value)="CS",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_CORPORATE_BOND = 6            [(fix.enum_value)="CORP",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_CORPORATE_PRIVATE_PLACEMENT = 7
[(fix.enum_value)="CPP", (fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_FOREIGN_EXCHANGE_CONTRACT = 8 [(fix.enum_value)="FOR",
(fix.enum_added)=VERSION_FIX_4_1, (fix.enum_deprecated)=VERSION_FIX_5_0SP1];
    UNDERLYING_SECURITY_TYPE_FUTURE = 9 [(fix.enum_value)="FUT", (fix.enum_added)=VERSION_FIX_4_1];
}

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    UNDERLYING_SECURITY_TYPE_MISCELLANEOUS_PASS_THROUGH = 10
[(fix.enum_value)="MPT", (fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_MORTGAGE_INTEREST_ONLY = 11 [(fix.enum_value)="MIO",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_MORTGAGE_PRINCIPAL_ONLY = 12 [(fix.enum_value)="MPO",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_MORTGAGE_PRIVATE_PLACEMENT = 13
[(fix.enum_value)="MPP", (fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_MUTUAL_FUND = 14 [(fix.enum_value)="MF",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_NO_SECURITY_TYPE = 15 [(fix.enum_value)="NONE",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_OPTION = 16 [(fix.enum_value)="OPT",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_PREFERRED_STOCK = 17 [(fix.enum_value)="PS",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_TIME_DEPOSIT = 18 [(fix.enum_value)="TD",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_US_TREASURY_BILL_OLD = 19 [(fix.enum_value)="USTB",
(fix.enum_added)=VERSION_FIX_4_1, (fix.enum_deprecated)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_WARRANT = 20 [(fix.enum_value)="WAR",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_TYPE_CONVERTIBLE_BOND = 21 [(fix.enum_value)="CB",
(fix.enum_added)=VERSION_FIX_4_2];
    UNDERLYING_SECURITY_TYPE_IOETTEMORTGAGE = 22 [(fix.enum_value)="IET",
(fix.enum_added)=VERSION_FIX_4_2];
    UNDERLYING_SECURITY_TYPE_WILDCARD = 23 [(fix.enum_value)="?",
(fix.enum_added)=VERSION_FIX_4_2];
    UNDERLYING_SECURITY_TYPE_AMENDED = 24 [(fix.enum_value)="AMENDED",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_ASSET_BACKED_SECURITIES = 25 [(fix.enum_value)="ABS",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_BANK_NOTES = 26 [(fix.enum_value)="BN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_BILL_OF_EXCHANGES = 27 [(fix.enum_value)="BOX",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_BRADY_BOND = 28 [(fix.enum_value)="BRADY",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_BRIDGE_LOAN = 29 [(fix.enum_value)="BRIDGE",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_CALL_LOANS = 30 [(fix.enum_value)="CL",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_CERTIFICATE_OF_OBLIGATION = 31 [(fix.enum_value)="COFO",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_CERTIFICATE_OF_PARTICIPATION = 32
[(fix.enum_value)="COFP", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_CORP = 33 [(fix.enum_value)="CMBS", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_DEBTOR_IN_POSSESSION = 34 [(fix.enum_value)="DINP",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_DEFAULTED = 35 [(fix.enum_value)="DEFLTED",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_DEPOSIT_NOTES = 36 [(fix.enum_value)="DN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_DUAL_CURRENCY = 37 [(fix.enum_value)="DUAL",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_EXTENDED_COMM_NOTE = 38 [(fix.enum_value)="XCN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_FEDERAL_AGENCY_COUPON = 39 [(fix.enum_value)="FAC",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_FEDERAL_AGENCY_DISCOUNT_NOTE = 40
[(fix.enum_value)="FADN", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_GENERAL_OBLIGATION_BONDS = 41 [(fix.enum_value)="GO",
(fix.enum_added)=VERSION_FIX_4_3];

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    UNDERLYING_SECURITY_TYPE_INDEXED_LINKED = 42          [(fix.enum_value)="XLINKD",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_INTEREST_STRIP_FROM_ANY_BOND_OR_NOTE = 43
[(fix.enum_value)="TINT", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_LETTER_OF_CREDIT = 44       [(fix.enum_value)="LOFC",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_LIQUIDITY_NOTE = 45         [(fix.enum_value)="LQN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_MANDATORY_TENDER = 46       [(fix.enum_value)="MT",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_MATURED = 47                [(fix.enum_value)="MATURED",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_MEDIUM_TERM_NOTES = 48      [(fix.enum_value)="MTN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_MORTGAGE_BACKED_SECURITIES = 49
[(fix.enum_value)="MBS", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_MULTILEG_INSTRUMENT = 50    [(fix.enum_value)="MLEG",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_OTHER_ANTICIPATION_NOTES = 51 [(fix.enum_value)="AN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_OVERNIGHT = 52              [(fix.enum_value)="ONITE",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_PLAZOS_FIJOS = 53           [(fix.enum_value)="PZFJ",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_PRINCIPAL_STRIP_FROM_ANON_CALLABLE_BOND_OR_NOTE = 54
[(fix.enum_value)="TPRN", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_PRINCIPAL_STRIP_OF_ACALLABLE_BOND_OR_NOTE = 55
[(fix.enum_value)="TCAL", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_PRIVATE_EXPORT_FUNDING = 56 [(fix.enum_value)="PEF",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_PROMISSORY_NOTE = 57        [(fix.enum_value)="PN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_REPLACED = 58               [(fix.enum_value)="REPLACD",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_RETIRED = 59                [(fix.enum_value)="RETIRED",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_REVENUE_ANTICIPATION_NOTE = 60 [(fix.enum_value)="RAN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_REVENUE_BONDS = 61          [(fix.enum_value)="REV",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_REVOLVER = 62               [(fix.enum_value)="RVLVTRM",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_REVOLVER_LOAN = 63          [(fix.enum_value)="RVLV",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_SHORT_TERM_LOAN_NOTE = 64   [(fix.enum_value)="STN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_SPECIAL_ASSESSMENT = 65     [(fix.enum_value)="SPCLA",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_SPECIAL_OBLIGATION = 66     [(fix.enum_value)="SPCLO",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_SPECIAL_TAX = 67            [(fix.enum_value)="SPCLT",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_STRUCTURED_NOTES = 68       [(fix.enum_value)="STRUCT",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_SWING_LINE_FACILITY = 69    [(fix.enum_value)="SWING",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_TAX_ALLOCATION = 70          [(fix.enum_value)="TAXA",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_TAX_ANTICIPATION_NOTE = 71 [(fix.enum_value)="TAN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_TAX_EXEMPT_COMMERCIAL_PAPER = 72
[(fix.enum_value)="TECP", (fix.enum_added)=VERSION_FIX_4_3];

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    UNDERLYING_SECURITY_TYPE_TAX_REVENUE_ANTICIPATION_NOTE = 73
[(fix.enum_value)="TRAN", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_TERM_LOAN = 74 [(fix.enum_value)="TERM",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_TO_BE_ANNOUNCED = 75 [(fix.enum_value)="TBA",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_TREASURY_INFLATION_PROTECTED_SECURITIES = 76
[(fix.enum_value)="TIPS", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_US_TREASURY_BOND = 77 [(fix.enum_value)="TBOND",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_US_TREASURY_NOTE_OLD = 78 [(fix.enum_value)="UST",
(fix.enum_added)=VERSION_FIX_4_3, (fix.enum_deprecated)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_VARIABLE_RATE_DEMAND_NOTE = 79 [(fix.enum_value)="VRDN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_WITHDRAWN = 80 [(fix.enum_value)="WITHDRN",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_YANKEE_CORPORATE_BOND = 81 [(fix.enum_value)="YANK",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_TYPE_BUY_SELLBACK = 82 [(fix.enum_value)="BUYSELL",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_EURO_CERTIFICATE_OF_DEPOSIT = 83
[(fix.enum_value)="EUCD", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_EURO_COMMERCIAL_PAPER = 84 [(fix.enum_value)="EUCP",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_EURO_CORPORATE_BOND = 85 [(fix.enum_value)="EUCORP",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_EURO_SOVEREIGNS = 86 [(fix.enum_value)="EUSOV",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_EURO_SUPRANATIONAL_COUPONS = 87
[(fix.enum_value)="EUSUPRA", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_FORWARD = 88 [(fix.enum_value)="FORWARD",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_PFANDBRIEFER = 89 [(fix.enum_value)="PFAND",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_REPURCHASE = 90 [(fix.enum_value)="REPO",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_SECURITIES_LOAN = 91 [(fix.enum_value)="SECLOAN",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_SECURITIES_PLEDGE = 92 [(fix.enum_value)="SECPLEDGE",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_USD_SUPRANATIONAL_COUPONS = 93 [(fix.enum_value)="SUPRA",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_US_TREASURY_BILL = 94 [(fix.enum_value)="TBILL",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_US_TREASURY_NOTE = 95 [(fix.enum_value)="TNOTE",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_YANKEE_CERTIFICATE_OF_DEPOSIT = 96
[(fix.enum_value)="YCD", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_TYPE_OPTIONS_ON_FUTURES = 97 [(fix.enum_value)="OOF",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    UNDERLYING_SECURITY_TYPE_OPTIONS_ON_PHYSICAL = 98 [(fix.enum_value)="OOP",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    UNDERLYING_SECURITY_TYPE_CASH = 99 [(fix.enum_value)="CASH", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=28];
    UNDERLYING_SECURITY_TYPE_OPTIONS_ON_COMBO = 100 [(fix.enum_value)="OOC",
(fix.enum_added)=VERSION_FIX_5_0];
    UNDERLYING_SECURITY_TYPE_INTEREST_RATE_SWAP = 101 [(fix.enum_value)="IRS",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=54];
    UNDERLYING_SECURITY_TYPE_BANK_DEPOSITORY_NOTE = 102 [(fix.enum_value)="BDN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_CANADIAN_MONEY_MARKETS = 103 [(fix.enum_value)="CAMM",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];

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    UNDERLYING_SECURITY_TYPE_CANADIAN_MORTGAGE_BONDS = 104 [(fix.enum_value)="CMB",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_CANADIAN_PROVINCIAL_BONDS = 105
[(fix.enum_value)="PROV", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_CANADIAN_TREASURY_BILLS = 106 [(fix.enum_value)="CTB",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_CANADIAN_TREASURY_NOTES = 107 [(fix.enum_value)="CAN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_CREDIT_DEFAULT_SWAP = 108 [(fix.enum_value)="CDS",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_EURO_CORPORATE_FLOATING_RATE_NOTES = 109
[(fix.enum_value)="EUFRN", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_SECURED_LIQUIDITY_NOTE = 110 [(fix.enum_value)="SLQN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_TAXABLE_MUNICIPAL_CP = 111 [(fix.enum_value)="TMCP",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_TERM_LIQUIDITY_NOTE = 112 [(fix.enum_value)="TLQN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_TREASURY_BILL = 113 [(fix.enum_value)="TB",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_US_CORPORATE_FLOATING_RATE_NOTES = 114
[(fix.enum_value)="FRN", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_SECURITY_TYPE_FX_FORWARD = 115 [(fix.enum_value)="FXFWD",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
    UNDERLYING_SECURITY_TYPE_FX_SPOT = 116 [(fix.enum_value)="FXSPOT",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
    UNDERLYING_SECURITY_TYPE_FX_SWAP = 117 [(fix.enum_value)="FXSWAP",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
    UNDERLYING_SECURITY_TYPE_NON_DELIVERABLE_FORWARD = 118 [(fix.enum_value)="FXNDF",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
}

enum UnderlyingRestructuringTypeEnum {
    UNDERLYING_RESTRUCTURING_TYPE_UNSPECIFIED = 0;
    UNDERLYING_RESTRUCTURING_TYPE_FULL_RESTRUCTURING = 1 [(fix.enum_value)="FR",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
    UNDERLYING_RESTRUCTURING_TYPE_MODIFIED_MOD_RESTRUCTURING = 2
[(fix.enum_value)="MM", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
    UNDERLYING_RESTRUCTURING_TYPE_MODIFIED_RESTRUCTURING = 3
[(fix.enum_value)="MR", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
    UNDERLYING_RESTRUCTURING_TYPE_NO_RESTRUCTURING_SPECIFIED = 4
[(fix.enum_value)="XR", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
}

enum UnderlyingSeniorityEnum {
    UNDERLYING_SENIORITY_UNSPECIFIED = 0;
    UNDERLYING_SENIORITY_SENIOR = 1 [(fix.enum_value)="SR", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=83];
    UNDERLYING_SENIORITY_SENIOR_SECURED = 2 [(fix.enum_value)="SD",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
    UNDERLYING_SENIORITY_SUBORDINATED = 3 [(fix.enum_value)="SB",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=83];
}

enum UnderlyingContractMultiplierUnitEnum {
    UNDERLYING_CONTRACT_MULTIPLIER_UNIT_UNSPECIFIED = 0;
    UNDERLYING_CONTRACT_MULTIPLIER_UNIT_DAYS = 1 [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    UNDERLYING_CONTRACT_MULTIPLIER_UNIT_HOURS = 2 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    UNDERLYING_CONTRACT_MULTIPLIER_UNIT_SHARES = 3 [(fix.enum_value)="0",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
}

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enum UnderlyingFlowScheduleTypeEnum {
    UNDERLYING_FLOW_SCHEDULE_TYPE_UNSPECIFIED = 0;
    UNDERLYING_FLOW_SCHEDULE_TYPE_NERC_CALENDAR_ALL_DAYS_IN_MONTH = 1
[(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    UNDERLYING_FLOW_SCHEDULE_TYPE_NERC_EASTERN_OFF_PEAK = 2 [(fix.enum_value)="0",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    UNDERLYING_FLOW_SCHEDULE_TYPE_NERC_EASTERN_PEAK = 3 [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    UNDERLYING_FLOW_SCHEDULE_TYPE_NERC_WESTERN_OFF_PEAK = 4 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    UNDERLYING_FLOW_SCHEDULE_TYPE_NERC_WESTERN_PEAK = 5 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
}

enum UnderlyingUnitOfMeasureEnum {
    UNDERLYING_UNIT_OF_MEASURE_UNSPECIFIED = 0;
    UNDERLYING_UNIT_OF_MEASURE_BARRELS = 1 [(fix.enum_value)="Bbl",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_BILLION_CUBIC_FEET = 2 [(fix.enum_value)="Bcf",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_BUSHEL = 3 [(fix.enum_value)="Bu",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_GALLONS = 4 [(fix.enum_value)="Gal",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_MEGAWATT_HOURS = 5 [(fix.enum_value)="MWh",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_METRIC_TONS = 6 [(fix.enum_value)="t",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_MILLION_BARRELS = 7 [(fix.enum_value)="MMbbl",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_deprecated)=VERSION_FIX_5_0SP1];
    UNDERLYING_UNIT_OF_MEASURE_ONE_MILLION_BTU = 8 [(fix.enum_value)="MMBtu",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_POUNDS = 9 [(fix.enum_value)="lbs",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_TONS = 10 [(fix.enum_value)="tn",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_TROY_OUNCES = 11 [(fix.enum_value)="oz_tr",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_USDOLLARS = 12 [(fix.enum_value)="USD",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_UNIT_OF_MEASURE_ALLOWANCES = 13 [(fix.enum_value)="Alw",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=89];
}

enum UnderlyingPriceUnitOfMeasureEnum {
    UNDERLYING_PRICE_UNIT_OF_MEASURE_UNSPECIFIED = 0;
    UNDERLYING_PRICE_UNIT_OF_MEASURE_BARRELS = 1 [(fix.enum_value)="Bbl",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_BILLION_CUBIC_FEET = 2 [(fix.enum_value)="Bcf",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_BUSHEL = 3 [(fix.enum_value)="Bu",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_GALLONS = 4 [(fix.enum_value)="Gal",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_MEGAWATT_HOURS = 5 [(fix.enum_value)="MWh",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_METRIC_TONS = 6 [(fix.enum_value)="t",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_MILLION_BARRELS = 7 [(fix.enum_value)="MMbbl",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_deprecated)=VERSION_FIX_5_0SP1];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_ONE_MILLION_BTU = 8 [(fix.enum_value)="MMBtu",
(fix.enum_added)=VERSION_FIX_4_4];
}

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    UNDERLYING_PRICE_UNIT_OF_MEASURE_POUNDS = 9           [(fix.enum_value)="lbs",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_TONS = 10            [(fix.enum_value)="tn",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_TROY_OUNCES = 11    [(fix.enum_value)="oz_tr",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_USDOLLARS = 12      [(fix.enum_value)="USD",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_PRICE_UNIT_OF_MEASURE_ALLOWANCES = 13     [(fix.enum_value)="Alw",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=89];
}

enum UnderlyingTimeUnitEnum {
    UNDERLYING_TIME_UNIT_UNSPECIFIED = 0;
    UNDERLYING_TIME_UNIT_DAY = 1           [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_TIME_UNIT_HOUR = 2         [(fix.enum_value)="H", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_TIME_UNIT_MINUTE = 3        [(fix.enum_value)="Min", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_TIME_UNIT_MONTH = 4         [(fix.enum_value)="Mo", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_TIME_UNIT_SECOND = 5        [(fix.enum_value)="S", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_TIME_UNIT_WEEK = 6          [(fix.enum_value)="Wk", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_TIME_UNIT_YEAR = 7          [(fix.enum_value)="Yr", (fix.enum_added)=VERSION_FIX_4_4];
}

enum UnderlyingExerciseStyleEnum {
    UNDERLYING_EXERCISE_STYLE_UNSPECIFIED = 0;
    UNDERLYING_EXERCISE_STYLE_AMERICAN = 1           [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
    UNDERLYING_EXERCISE_STYLE_BERMUDA = 2           [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
    UNDERLYING_EXERCISE_STYLE_EUROPEAN = 3          [(fix.enum_value)="0",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=52];
}

enum UnderlyingSettlementTypeEnum {
    UNDERLYING_SETTLEMENT_TYPE_UNSPECIFIED = 0;
    UNDERLYING_SETTLEMENT_TYPE_TPLUS1 = 1           [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SETTLEMENT_TYPE_TPLUS3 = 2           [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SETTLEMENT_TYPE_TPLUS4 = 3           [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_4_4];
}

enum UnderlyingCashTypeEnum {
    UNDERLYING_CASH_TYPE_UNSPECIFIED = 0;
    UNDERLYING_CASH_TYPE_DIFF = 1                 [(fix.enum_value)="DIFF", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_CASH_TYPE_FIXED = 2                [(fix.enum_value)="FIXED", (fix.enum_added)=VERSION_FIX_4_4];
}

enum UnderlyingFXRateCalcEnum {
    UNDERLYING_FX_RATE_CALC_UNSPECIFIED = 0;
    UNDERLYING_FX_RATE_CALC_DIVIDE = 1            [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_FX_RATE_CALC_MULTIPLY = 2          [(fix.enum_value)="M",
(fix.enum_added)=VERSION_FIX_4_4];
}

enum UnderlyingSecurityAltIDSourceEnum {
    UNDERLYING_SECURITY_ALT_ID_SOURCE_UNSPECIFIED = 0;
    UNDERLYING_SECURITY_ALT_ID_SOURCE_CUSIP = 1     [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_2_7];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_QUIK = 2      [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_2_7];
}

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    UNDERLYING_SECURITY_ALT_ID_SOURCE_SEDOL = 3          [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_2_7];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_ISIN_NUMBER = 4    [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_3_0];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_RIC_CODE = 5      [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_3_0];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_ISO_COUNTRY_CODE = 6 [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_ISO_CURRENCY_CODE = 7 [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_1];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_CONSOLIDATED_TAPE_ASSOCIATION = 8
[(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_2];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_EXCHANGE_SYMBOL = 9 [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_2];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_BELGIAN = 10      [(fix.enum_value)="F",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_BLOOMBERG_SYMBOL = 11 [(fix.enum_value)="A",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_COMMON = 12      [(fix.enum_value)="G",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_DUTCH = 13       [(fix.enum_value)="C",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_SICOVAM = 14     [(fix.enum_value)="E",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_VALOREN = 15     [(fix.enum_value)="D",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_WERTPAPIER = 16  [(fix.enum_value)="B",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_CLEARING_HOUSE = 17 [(fix.enum_value)="H",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_ISDA_FPML_SPECIFICATION = 18
[(fix.enum_value)="I", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_OPTION_PRICE_REPORTING_AUTHORITY = 19
[(fix.enum_value)="J", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_LETTER_OF_CREDIT = 20 [(fix.enum_value)="L",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_ISDA_FPML_URL = 21 [(fix.enum_value)="K",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=15];
    UNDERLYING_SECURITY_ALT_ID_SOURCE_MARKETPLACE_ASSIGNED_IDENTIFIER = 22
[(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=58];
}

enum UnderlyingStipTypeEnum {
    UNDERLYING_STIP_TYPE_UNSPECIFIED = 0;
    UNDERLYING_STIP_TYPE_ABSOLUTE_PREPAYMENT_SPEED = 1 [(fix.enum_value)="ABS",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_CONSTANT_PREPAYMENT_PENALTY = 2 [(fix.enum_value)="CPP",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_CONSTANT_PREPAYMENT_RATE = 3 [(fix.enum_value)="CPR",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_CONSTANT_PREPAYMENT_YIELD = 4 [(fix.enum_value)="CPY",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_FINAL_CP_ROF_HOME_EQUITY_PREPAYMENT_CURVE = 5
[(fix.enum_value)="HEP", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_GEOGRAPHICS = 6 [(fix.enum_value)="GEOG",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_ISSUE_DATE = 7 [(fix.enum_value)="ISSUE", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_LOT_VARIANCE = 8 [(fix.enum_value)="LOTVAR",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_MATURITY_YEAR_AND_MONTH = 9 [(fix.enum_value)="MAT",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_MONTHLY_PREPAYMENT_RATE = 10 [(fix.enum_value)="MPR",
(fix.enum_added)=VERSION_FIX_4_3];
}

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    UNDERLYING_STIP_TYPE_NUMBER_OF_PIECES = 11          [(fix.enum_value)="PIECES",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_PERCENT_OF_BMAPREPAYMENT_CURVE = 12
[(fix.enum_value)="PSA", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_PERCENT_OF_MANUFACTURED_HOUSING_PREPAYMENT_CURVE = 13
[(fix.enum_value)="MHP", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_PERCENT_OF_PROSPECTUS_PREPAYMENT_CURVE = 14
[(fix.enum_value)="PPC", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_POOLS_MAXIMUM = 15             [(fix.enum_value)="PMAX",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_POOLS_PER_LOT = 16            [(fix.enum_value)="PPL",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_POOLS_PER_MILLION = 17        [(fix.enum_value)="PPM",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_POOLS_PER_TRADE = 18          [(fix.enum_value)="PPT",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_PRODUCTION_YEAR = 19          [(fix.enum_value)="PROD",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_SINGLE_MONTHLY_MORTALITY = 20 [(fix.enum_value)="SMM",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_TRADE_VARIANCE = 21           [(fix.enum_value)="TRDVAR",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_WEIGHTED_AVERAGE_COUPON = 22 [(fix.enum_value)="WAC",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_WEIGHTED_AVERAGE_LIFE_COUPON = 23 [(fix.enum_value)="WAL",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_WEIGHTED_AVERAGE_LOAN_AGE = 24 [(fix.enum_value)="WALA",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_WEIGHTED_AVERAGE_MATURITY = 25 [(fix.enum_value)="WAM",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_STIP_TYPE_ALTERNATIVE_MINIMUM_TAX = 26 [(fix.enum_value)="AMT",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_AUTO_REINVESTMENT = 27        [(fix.enum_value)="AUTOREINV",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_BANK_QUALIFIED = 28           [(fix.enum_value)="BANKQUAL",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_BARGAIN_CONDITIONS = 29       [(fix.enum_value)="BGNCON",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_BENCHMARK_PRICE_SOURCE = 30   [(fix.enum_value)="PXSOURCE",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_CALL_PROTECTION = 31          [(fix.enum_value)="PROTECT",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_COUPON_RANGE = 32            [(fix.enum_value)="COUPON",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_CUSTOM_START = 33            [(fix.enum_value)="CUSTOMDATE",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_EXPLICIT_LOT_IDENTIFIER = 34 [(fix.enum_value)="LOT",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_FREEFORM_TEXT = 35            [(fix.enum_value)="TEXT",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_INSURED = 36                 [(fix.enum_value)="INSURED",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_ISO_CURRENCY_CODE = 37        [(fix.enum_value)="CURRENCY",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_ISSUER = 38                  [(fix.enum_value)="ISSUER",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_ISSUE_SIZE_RANGE = 39         [(fix.enum_value)="ISSUESIZE",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_LOOKBACK_DAYS = 40           [(fix.enum_value)="LOOKBACK",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_MARKET_SECTOR = 41           [(fix.enum_value)="SECTOR",
(fix.enum_added)=VERSION_FIX_4_4];

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    UNDERLYING_STIP_TYPE_MATURITY_RANGE = 42           [(fix.enum_value)="MATURITY",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_MAXIMUM_SUBSTITUTIONS = 43   [(fix.enum_value)="MAXSUBS",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_MINIMUM_DENOMINATION = 44    [(fix.enum_value)="MINDNOM",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_MINIMUM_INCREMENT = 45       [(fix.enum_value)="MININCR",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_MINIMUM_QUANTITY = 46        [(fix.enum_value)="MINQTY",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_PAYMENT_FREQUENCY = 47       [(fix.enum_value)="PAYFREQ",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_PRICE_RANGE = 48             [(fix.enum_value)="PRICE",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_PRICING_FREQUENCY = 49       [(fix.enum_value)="PRICEFREQ",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_PURPOSE = 50 [(fix.enum_value)="PURPOSE",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_RATING_SOURCE_AND_RANGE = 51 [(fix.enum_value)="RATING",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_RESTRICTED = 52 [(fix.enum_value)="RESTRICTED",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_SECURITY_TYPE_INCLUDED_OR_EXCLUDED = 53
[(fix.enum_value)="SECTYPE", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_STRUCTURE = 54 [(fix.enum_value)="STRUCT",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_SUBSTITUTIONS_FREQUENCY = 55 [(fix.enum_value)="SUBSFREQ",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_SUBSTITUTIONS_LEFT = 56      [(fix.enum_value)="SUBSLEFT",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_TYPE_OF_REDEMPTION = 57      [(fix.enum_value)="REDEMPTION",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_VALUATION_DISCOUNT = 58     [(fix.enum_value)="HAIRCUT",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_WHOLE_POOL = 59 [(fix.enum_value)="WHOLE",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_YIELD_RANGE = 60 [(fix.enum_value)="YIELD",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_STIP_TYPE_AVAILABLE_OFFER_QUANTITY_TO_BE_SHOWN_TO_THE_STREET = 61
[(fix.enum_value)="AVAILQTY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_AVERAGE_FICOSCORE = 62      [(fix.enum_value)="AVFICO",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_AVERAGE_LOAN_SIZE = 63      [(fix.enum_value)="AVSIZE",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_BROKER_CREDIT = 64 [(fix.enum_value)="BROKERCREDIT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_BROKER_SALES_CREDIT_OVERRIDE = 65 [(fix.enum_value)="SALESCREDITOVR",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_DISCOUNT_RATE = 66 [(fix.enum_value)="DISCOUNT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_INTEREST_OF_ROLLING_OR_CLOSING_TRADE = 67
[(fix.enum_value)="REFINT", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_MAXIMUM_LOAN_BALANCE = 68 [(fix.enum_value)="MAXBAL",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_MAXIMUM_ORDER_SIZE = 69 [(fix.enum_value)="MAXORDQTY",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_OFFER_PRICE_TO_BE_SHOWN_TO_INTERNAL_BROKERS = 70
[(fix.enum_value)="INTERNALPX", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_OFFER_QUANTITY_TO_BE_SHOWN_TO_INTERNAL_BROKERS = 71
[(fix.enum_value)="INTERNALQTY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_ORDER_QUANTITY_INCREMENT = 72 [(fix.enum_value)="ORDRINCR",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];

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    UNDERLYING_STIP_TYPE_POOL_IDENTIFIER = 73                [(fix.enum_value)="POOL",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_PRIMARY_OR_SECONDARY_MARKET_INDICATOR = 74
[(fix.enum_value)="PRIMARY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_PRINCIPAL_OF_ROLLING_OR_CLOSING_TRADE = 75
[(fix.enum_value)="REFPRIN", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_REFERENCE_TO_ROLLING_OR_CLOSING_TRADE = 76
[(fix.enum_value)="REFTRADE", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_THE_MINIMUM_RESIDUAL_OFFER_QUANTITY = 77
[(fix.enum_value)="LEAVEQTY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_TRADER_CREDIT = 78                [(fix.enum_value)="TRADERCREDIT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_TYPE_OF_ROLL_TRADE = 79            [(fix.enum_value)="ROLLTYPE",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_STIP_TYPE_YIELD_TO_MATURITY = 80            [(fix.enum_value)="YTM",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
}

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enum UnderlyingInstrumentPartyIDSourceEnum {
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_UNSPECIFIED = 0;
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_AUSTRALIAN_BUSINESS_NUMBER = 1
[(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_AUSTRALIAN_TAX_FILE_NUMBER = 2
[(fix.enum_value)="A", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_BIC = 3           [(fix.enum_value)="B",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_CHINESE_INVESTOR_ID = 4
[(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_GENERAL_IDENTIFIER = 5
[(fix.enum_value)="C", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_ISO_COUNTRY_CODE = 6
[(fix.enum_value)="E", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_KOREAN_INVESTOR_ID = 7
[(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_MALAYSIAN_CENTRAL_DEPOSITORY = 8
[(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_PROPRIETARY = 9   [(fix.enum_value)="D",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_SETTLEMENT_ENTITY_LOCATION = 10
[(fix.enum_value)="F", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_TAIWANESE_FOREIGN_INVESTOR_ID = 11
[(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_TAIWANESE_TRADING_ACCT = 12
[(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_UK_NATIONAL_INSURANCE_OR_PENSION_NUMBER = 13
[(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_US_EMPLOYER_OR_TAX_ID_NUMBER = 14
[(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_US_SOCIAL_SECURITY_NUMBER = 15
[(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_CSDPARTICIPANT = 16
[(fix.enum_value)="H", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_ISITCACRONYM = 17 [(fix.enum_value)="I",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ID_SOURCE_MIC = 18         [(fix.enum_value)="G",
(fix.enum_added)=VERSION_FIX_4_4];
}

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enum UnderlyingInstrumentPartyRoleEnum {
    UNDERLYING_INSTRUMENT_PARTY_ROLE_UNSPECIFIED = 0;
    UNDERLYING_INSTRUMENT_PARTY_ROLE_BROKER_OF_CREDIT = 1   [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_4_3];
}

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    UNDERLYING_INSTRUMENT_PARTY_ROLE_CLEARING_FIRM = 2      [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CLIENT_ID = 3          [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CONTRA_CLEARING_FIRM = 4
[(fix.enum_value)="18", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CONTRA_FIRM = 5        [(fix.enum_value)="17",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CORRESPONDANT_CLEARING_FIRM = 6
[(fix.enum_value)="15", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ENTERING_FIRM = 7      [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_EXECUTING_FIRM = 8     [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_EXECUTING_SYSTEM = 9   [(fix.enum_value)="16",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_EXECUTING_TRADER = 10  [(fix.enum_value)="12",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_FUND_MANAGER_CLIENT_ID = 11
[(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_GIVEUP_CLEARING_FIRM = 12
[(fix.enum_value)="14", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_INTRODUCING_FIRM = 13  [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_INVESTOR_ID = 14       [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_LOCATE = 15            [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ORDER_ORIGINATION_FIRM = 16
[(fix.enum_value)="13", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ORDER_ORIGINATION_TRADER = 17
[(fix.enum_value)="11", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_SETTLEMENT_LOCATION = 18
[(fix.enum_value)="10", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_SPONSORING_FIRM = 19   [(fix.enum_value)="19",
(fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_UNDERLYING_CONTRA_FIRM = 20
[(fix.enum_value)="20", (fix.enum_added)=VERSION_FIX_4_3];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_AGENT = 21             [(fix.enum_value)="30",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_BENEFICIARY = 22      [(fix.enum_value)="32",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_BUYER = 23            [(fix.enum_value)="27",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CLEARING_ORGANIZATION = 24
[(fix.enum_value)="21", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CONTRA_INVESTOR_ID = 25
[(fix.enum_value)="39", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CONTRA_TRADER = 26     [(fix.enum_value)="37",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CORRESPONDENT_BROKER = 27
[(fix.enum_value)="26", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CORRESPONDENT_CLEARING_ORGANIZATION = 28
[(fix.enum_value)="25", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CUSTODIAN = 29         [(fix.enum_value)="28",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CUSTOMER_ACCOUNT = 30  [(fix.enum_value)="24",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ENTERING_TRADER = 31  [(fix.enum_value)="36",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_EXCHANGE = 32         [(fix.enum_value)="22",
(fix.enum_added)=VERSION_FIX_4_4];

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    UNDERLYING_INSTRUMENT_PARTY_ROLE_INTERESTED_PARTY = 33 [(fix.enum_value)="33",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_INTERMEDIARY = 34 [(fix.enum_value)="29",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_LIQUIDITY_PROVIDER = 35
[(fix.enum_value)="35", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_POSITION_ACCOUNT = 36 [(fix.enum_value)="38",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_REGULATORY_BODY = 37 [(fix.enum_value)="34",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_SUB_CUSTODIAN = 38 [(fix.enum_value)="31",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_TRANSFER_TO_FIRM = 39 [(fix.enum_value)="40",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_INTRODUCING_BROKER = 40
[(fix.enum_value)="60", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=4];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CONTRA_EXCHANGE = 41 [(fix.enum_value)="42",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CONTRA_POSITION_ACCOUNT = 42
[(fix.enum_value)="41", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_INTERNAL_CARRY_ACCOUNT = 43
[(fix.enum_value)="43", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ORDER_ENTRY_OPERATOR_ID = 44
[(fix.enum_value)="44", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_SECONDARY_ACCOUNT_NUMBER = 45
[(fix.enum_value)="45", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ASSET_MANAGER = 46 [(fix.enum_value)="49",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CLAIMING_ACCOUNT = 47 [(fix.enum_value)="48",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_FOREIGN_FIRM = 48 [(fix.enum_value)="46",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_LARGE_TRADER_REPORTABLE_ACCOUNT = 49
[(fix.enum_value)="52", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_PLEDGEE_ACCOUNT = 50 [(fix.enum_value)="51",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_PLEDGOR_ACCOUNT = 51 [(fix.enum_value)="50",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_SENDER_LOCATION = 52 [(fix.enum_value)="54",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_SESSION_ID = 53 [(fix.enum_value)="55",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_THIRD_PARTY_ALLOCATION_FIRM = 54
[(fix.enum_value)="47", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_TRADER_MNEMONIC = 55 [(fix.enum_value)="53",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ACCEPTABLE_COUNTERPARTY = 56
[(fix.enum_value)="56", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ENTERING_UNIT = 57 [(fix.enum_value)="58",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_EXECUTING_UNIT = 58 [(fix.enum_value)="59",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_UNACCEPTABLE_COUNTERPARTY = 59
[(fix.enum_value)="57", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=22];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_COMPETENT_AUTHORITY_LIQUIDITY = 60
[(fix.enum_value)="70", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_COMPETENT_AUTHORITY_TRANSACTION_VENUE = 61
[(fix.enum_value)="71", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_DESK_ID = 62 [(fix.enum_value)="76",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_EXECUTION_VENUE = 63 [(fix.enum_value)="73",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];

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    UNDERLYING_INSTRUMENT_PARTY_ROLE_HOME_COMPETENT_AUTHORITY = 64
[(fix.enum_value)="69", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_HOST_COMPETENT_AUTHORITY = 65
[(fix.enum_value)="68", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_INVESTMENT_FIRM = 66 [(fix.enum_value)="67",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_LOCATION_ID = 67 [(fix.enum_value)="75",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_MARKET_DATA_ENTRY_ORIGINATOR = 68
[(fix.enum_value)="74", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_MARKET_DATA_MARKET = 69
[(fix.enum_value)="77", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_MARKET_MAKER = 70 [(fix.enum_value)="66",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_MULTILATERAL_TRADING_FACILITY = 71
[(fix.enum_value)="64", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_QUOTE_ORIGINATOR = 72 [(fix.enum_value)="61",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_REGULATED_MARKET = 73 [(fix.enum_value)="65",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_REPORTING_INTERMEDIARY = 74
[(fix.enum_value)="72", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_REPORT_ORIGINATOR = 75 [(fix.enum_value)="62",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_SYSTEMATIC_INTERNALISER = 76
[(fix.enum_value)="63", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ALLOCATION_ENTITY = 77 [(fix.enum_value)="78",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=35];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_BROKER_CLEARING_ID = 78
[(fix.enum_value)="81", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_PRIME_BROKER = 79 [(fix.enum_value)="79",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_STEP_OUT_FIRM = 80 [(fix.enum_value)="80",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CENTRAL_REGISTRATION_DEPOSITORY = 81
[(fix.enum_value)="82", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=79];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_ACCEPTABLE_SETTLING_COUNTERPARTY = 82
[(fix.enum_value)="84", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=96];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_CLEARING_ACCOUNT = 83 [(fix.enum_value)="83",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=96];
    UNDERLYING_INSTRUMENT_PARTY_ROLE_UNACCEPTABLE_SETTLING_COUNTERPARTY = 84
[(fix.enum_value)="85", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=96];
}

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enum UnderlyingInstrumentPartySubIDTypeEnum {
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_UNSPECIFIED = 0;
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_APPLICATION = 1 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_BIC = 2 [(fix.enum_value)="16",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_CASH_ACCOUNT_NAME = 3
[(fix.enum_value)="23", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_CASH_ACCOUNT_NUMBER = 4
[(fix.enum_value)="15", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_CONTACT_NAME = 5
[(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_CSDPARTICIPANT_MEMBER_CODE = 6
[(fix.enum_value)="17", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_DEPARTMENT = 7 [(fix.enum_value)="24",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_EMAIL_ADDRESS = 8
[(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_4];
}

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    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_FAX_NUMBER = 9 [(fix.enum_value)="21",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_FIRM = 10 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_FULL_LEGAL_NAME_OF_FIRM = 11
[(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_FUND_ACCOUNT_NAME = 12
[(fix.enum_value)="19", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_LOCATION_DESK = 13
[(fix.enum_value)="25", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_PERSON = 14 [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_PHONE_NUMBER = 15
[(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_POSITION_ACCOUNT_TYPE = 16
[(fix.enum_value)="26", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_POSTAL_ADDRESS = 17
[(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_REGISTERED_ADDRESS = 18
[(fix.enum_value)="18", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_REGISTERED_ADDRESS_FOR_CONFIRMATION = 19
[(fix.enum_value)="12", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_REGISTRATION_NAME = 20
[(fix.enum_value)="14", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_REGISTRATION_NUMBER = 21
[(fix.enum_value)="11", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_REGULATORY_STATUS = 22
[(fix.enum_value)="13", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_SECURITIES_ACCOUNT_NAME = 23
[(fix.enum_value)="22", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_SECURITIES_ACCOUNT_NUMBER = 24
[(fix.enum_value)="10", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_SYSTEM = 25 [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_TELEX_NUMBER = 26
[(fix.enum_value)="20", (fix.enum_added)=VERSION_FIX_4_4];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_SECURITY_LOCATE_ID = 27
[(fix.enum_value)="27", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=1];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_ELIGIBLE_COUNTERPARTY = 28
[(fix.enum_value)="29", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_EXECUTION_VENUE = 29
[(fix.enum_value)="32", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_LOCATION = 30 [(fix.enum_value)="31",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_MARKET_MAKER = 31
[(fix.enum_value)="28", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_PROFESSIONAL_CLIENT = 32
[(fix.enum_value)="30", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=26];
    UNDERLYING_INSTRUMENT_PARTY_SUB_ID_TYPE_CURRENCY_DELIVERY_IDENTIFIER = 33
[(fix.enum_value)="33", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=44];
}

enum RoundingDirectionEnum {
    ROUNDING_DIRECTION_UNSPECIFIED = 0;
    ROUNDING_DIRECTION_ROUND_DOWN = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_3];
    ROUNDING_DIRECTION_ROUND_TO_NEAREST = 2 [(fix.enum_value)="0",
(fix.enum_added)=VERSION_FIX_4_3];
    ROUNDING_DIRECTION_ROUND_UP = 3 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_3];
}

enum StipulationTypeEnum {
    STIPULATION_TYPE_UNSPECIFIED = 0;

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    STIPULATION_TYPE_ABSOLUTE_PREPAYMENT_SPEED = 1           [(fix.enum_value)="ABS",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_CONSTANT_PREPAYMENT_PENALTY = 2         [(fix.enum_value)="CPP",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_CONSTANT_PREPAYMENT_RATE = 3           [(fix.enum_value)="CPR",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_CONSTANT_PREPAYMENT_YIELD = 4          [(fix.enum_value)="CPY",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_FINAL_CP_ROF_HOME_EQUITY_PREPAYMENT_CURVE = 5
[(fix.enum_value)="HEP", (fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_GEOGRAPHICS = 6                       [(fix.enum_value)="GEOG", (fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_ISSUE_DATE = 7                        [(fix.enum_value)="ISSUE", (fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_LOT_VARIANCE = 8                     [(fix.enum_value)="LOTVAR",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_MATURITY_YEAR_AND_MONTH = 9           [(fix.enum_value)="MAT",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_MONTHLY_PREPAYMENT_RATE = 10          [(fix.enum_value)="MPR",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_NUMBER_OF_PIECES = 11                 [(fix.enum_value)="PIECES",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_PERCENT_OF_BMAPREPAYMENT_CURVE = 12   [(fix.enum_value)="PSA",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_PERCENT_OF_MANUFACTURED_HOUSING_PREPAYMENT_CURVE = 13
[(fix.enum_value)="MHP", (fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_PERCENT_OF_PROSPECTUS_PREPAYMENT_CURVE = 14
[(fix.enum_value)="PPC", (fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_POOLS_MAXIMUM = 15 [(fix.enum_value)="PMAX", (fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_POOLS_PER_LOT = 16 [(fix.enum_value)="PPL", (fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_POOLS_PER_MILLION = 17                [(fix.enum_value)="PPM",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_POOLS_PER_TRADE = 18                 [(fix.enum_value)="PPT",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_PRODUCTION_YEAR = 19                 [(fix.enum_value)="PROD",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_SINGLE_MONTHLY_MORTALITY = 20        [(fix.enum_value)="SMM",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_TRADE_VARIANCE = 21                  [(fix.enum_value)="TRDVAR",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_WEIGHTED_AVERAGE_COUPON = 22        [(fix.enum_value)="WAC",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_WEIGHTED_AVERAGE_LIFE_COUPON = 23   [(fix.enum_value)="WAL",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_WEIGHTED_AVERAGE_LOAN_AGE = 24      [(fix.enum_value)="WALA",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_WEIGHTED_AVERAGE_MATURITY = 25     [(fix.enum_value)="WAM",
(fix.enum_added)=VERSION_FIX_4_3];
    STIPULATION_TYPE_ALTERNATIVE_MINIMUM_TAX = 26        [(fix.enum_value)="AMT",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_AUTO_REINVESTMENT = 27               [(fix.enum_value)="AUTOREINV",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_BANK_QUALIFIED = 28                  [(fix.enum_value)="BANKQUAL",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_BARGAIN_CONDITIONS = 29              [(fix.enum_value)="BGNCON",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_BENCHMARK_PRICE_SOURCE = 30          [(fix.enum_value)="PXSOURCE",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_CALL_PROTECTION = 31                 [(fix.enum_value)="PROTECT",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_COUPON_RANGE = 32 [(fix.enum_value)="COUPON",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_CUSTOM_START = 33 [(fix.enum_value)="CUSTOMDATE",
(fix.enum_added)=VERSION_FIX_4_4];

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    STIPULATION_TYPE_EXPLICIT_LOT_IDENTIFIER = 34          [(fix.enum_value)="LOT",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_FREEFORM_TEXT = 35 [(fix.enum_value)="TEXT", (fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_INSURED = 36          [(fix.enum_value)="INSURED",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_ISO_CURRENCY_CODE = 37          [(fix.enum_value)="CURRENCY",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_ISSUER = 38          [(fix.enum_value)="ISSUER",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_ISSUE_SIZE_RANGE = 39          [(fix.enum_value)="ISSUESIZE",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_LOOKBACK_DAYS = 40 [(fix.enum_value)="LOOKBACK",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_MARKET_SECTOR = 41 [(fix.enum_value)="SECTOR",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_MATURITY_RANGE = 42          [(fix.enum_value)="MATURITY",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_MAXIMUM_SUBSTITUTIONS = 43          [(fix.enum_value)="MAXSUBS",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_MINIMUM_DENOMINATION = 44          [(fix.enum_value)="MINDNOM",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_MINIMUM_INCREMENT = 45          [(fix.enum_value)="MININCR",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_MINIMUM_QUANTITY = 46          [(fix.enum_value)="MINQTY",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_PAYMENT_FREQUENCY = 47          [(fix.enum_value)="PAYFREQ",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_PRICE_RANGE = 48 [(fix.enum_value)="PRICE", (fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_PRICING_FREQUENCY = 49          [(fix.enum_value)="PRICEFREQ",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_PURPOSE = 50          [(fix.enum_value)="PURPOSE",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_RATING_SOURCE_AND_RANGE = 51          [(fix.enum_value)="RATING",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_RESTRICTED = 52 [(fix.enum_value)="RESTRICTED",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_SECURITY_TYPE_INCLUDED_OR_EXCLUDED = 53
[(fix.enum_value)="SECTYPE", (fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_STRUCTURE = 54 [(fix.enum_value)="STRUCT",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_SUBSTITUTIONS_FREQUENCY = 55          [(fix.enum_value)="SUBSFREQ",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_SUBSTITUTIONS_LEFT = 56          [(fix.enum_value)="SUBSLEFT",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_TYPE_OF_REDEMPTION = 57          [(fix.enum_value)="REDEMPTION",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_VALUATION_DISCOUNT = 58          [(fix.enum_value)="HAIRCUT",
(fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_WHOLE_POOL = 59 [(fix.enum_value)="WHOLE", (fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_YIELD_RANGE = 60 [(fix.enum_value)="YIELD", (fix.enum_added)=VERSION_FIX_4_4];
    STIPULATION_TYPE_AVAILABLE_OFFER_QUANTITY_TO_BE_SHOWN_TO_THE_STREET = 61
[(fix.enum_value)="AVAILQTY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    STIPULATION_TYPE_AVERAGE_FICOSCORE = 62          [(fix.enum_value)="AVFICO",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    STIPULATION_TYPE_AVERAGE_LOAN_SIZE = 63          [(fix.enum_value)="AVSIZE",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    STIPULATION_TYPE_BROKER_CREDIT = 64 [(fix.enum_value)="BROKERCREDIT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    STIPULATION_TYPE_BROKER_SALES_CREDIT_OVERRIDE = 65          [(fix.enum_value)="SALESCREDITOVR",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    STIPULATION_TYPE_DISCOUNT_RATE = 66 [(fix.enum_value)="DISCOUNT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];

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    STIPULATION_TYPE_INTEREST_OF_ROLLING_OR_CLOSING_TRADE = 67
  [(fix.enum_value)="REFINT", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_MAXIMUM_LOAN_BALANCE = 68 [(fix.enum_value)="MAXBAL",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_MAXIMUM_ORDER_SIZE = 69 [(fix.enum_value)="MAXORDQTY",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_OFFER_PRICE_TO_BE_SHOWN_TO_INTERNAL_BROKERS = 70
  [(fix.enum_value)="INTERNALPX", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_OFFER_QUANTITY_TO_BE_SHOWN_TO_INTERNAL_BROKERS = 71
  [(fix.enum_value)="INTERNALQTY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_ORDER_QUANTITY_INCREMENT = 72 [(fix.enum_value)="ORDRINCR",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_POOL_IDENTIFIER = 73 [(fix.enum_value)="POOL",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_PRIMARY_OR_SECONDARY_MARKET_INDICATOR = 74
  [(fix.enum_value)="PRIMARY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_PRINCIPAL_OF_ROLLING_OR_CLOSING_TRADE = 75
  [(fix.enum_value)="REFPRIN", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_REFERENCE_TO_ROLLING_OR_CLOSING_TRADE = 76
  [(fix.enum_value)="REFTRADE", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_THE_MINIMUM_RESIDUAL_OFFER_QUANTITY = 77
  [(fix.enum_value)="LEAVEQTY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_TRADER_CREDIT = 78 [(fix.enum_value)="TRADERCREDIT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_TYPE_OF_ROLL_TRADE = 79 [(fix.enum_value)="ROLLTYPE",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
  STIPULATION_TYPE_YIELD_TO_MATURITY = 80 [(fix.enum_value)="YTM",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
}

enum LegIOIQtyEnum {
  LEG_IOI_QTY_UNSPECIFIED = 0;
  LEG_IOI_QTY_LARGE = 1 [(fix.enum_value)="L", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=25];
  LEG_IOI_QTY_MEDIUM = 2 [(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=25];
  LEG_IOI_QTY_SMALL = 3 [(fix.enum_value)="S", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=25];
  LEG_IOI_QTY_UNDISCLOSED_QUANTITY = 4 [(fix.enum_value)="U",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=25];
}

enum LegSymbolsfxEnum {
  LEG_SYMBOL_SFX_UNSPECIFIED = 0;
  LEG_SYMBOL_SFX_EUCP_WITH_LUMP_SUM_INTEREST = 1 [(fix.enum_value)="CD",
(fix.enum_added)=VERSION_FIX_4_4];
  LEG_SYMBOL_SFX_WHEN_ISSUED = 2 [(fix.enum_value)="WI", (fix.enum_added)=VERSION_FIX_4_4];
}

enum LegSecurityIDSourceEnum {
  LEG_SECURITY_ID_SOURCE_UNSPECIFIED = 0;
  LEG_SECURITY_ID_SOURCE_CUSIP = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_2_7];
  LEG_SECURITY_ID_SOURCE_QUIK = 2 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_2_7];
  LEG_SECURITY_ID_SOURCE_SEDOL = 3 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_2_7];
  LEG_SECURITY_ID_SOURCE_ISIN_NUMBER = 4 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_3_0];
  LEG_SECURITY_ID_SOURCE_RIC_CODE = 5 [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_3_0];
  LEG_SECURITY_ID_SOURCE_ISO_COUNTRY_CODE = 6 [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_1];
  LEG_SECURITY_ID_SOURCE_ISO_CURRENCY_CODE = 7 [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_1];
  LEG_SECURITY_ID_SOURCE_CONSOLIDATED_TAPE_ASSOCIATION = 8
  [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_2];
}

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    LEG_SECURITY_ID_SOURCE_EXCHANGE_SYMBOL = 9           [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_2];
    LEG_SECURITY_ID_SOURCE_BELGIAN = 10 [(fix.enum_value)="F", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_SECURITY_ID_SOURCE_BLOOMBERG_SYMBOL = 11         [(fix.enum_value)="A",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_SECURITY_ID_SOURCE_COMMON = 12 [(fix.enum_value)="G", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_SECURITY_ID_SOURCE_DUTCH = 13 [(fix.enum_value)="C", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_SECURITY_ID_SOURCE_SICOVAM = 14 [(fix.enum_value)="E", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_SECURITY_ID_SOURCE_VALOREN = 15 [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_SECURITY_ID_SOURCE_WERTPAPIER = 16              [(fix.enum_value)="B",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_SECURITY_ID_SOURCE_CLEARING_HOUSE = 17          [(fix.enum_value)="H",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_SECURITY_ID_SOURCE_ISDA_FPML_SPECIFICATION = 18 [(fix.enum_value)="I",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_SECURITY_ID_SOURCE_OPTION_PRICE_REPORTING_AUTHORITY = 19
[(fix.enum_value)="J", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_SECURITY_ID_SOURCE_LETTER_OF_CREDIT = 20        [(fix.enum_value)="L",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    LEG_SECURITY_ID_SOURCE_ISDA_FPML_URL = 21           [(fix.enum_value)="K",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=15];
    LEG_SECURITY_ID_SOURCE_MARKETPLACE_ASSIGNED_IDENTIFIER = 22
[(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=58];
}

enum LegProductEnum {
    LEG_PRODUCT_UNSPECIFIED = 0;
    LEG_PRODUCT_AGENCY = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_COMMODITY = 2 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_CORPORATE = 3 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_CURRENCY = 4 [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_EQUITY = 5 [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_GOVERNMENT = 6 [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_INDEX = 7 [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_LOAN = 8 [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_MONEYMARKET = 9 [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_MORTGAGE = 10 [(fix.enum_value)="10", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_MUNICIPAL = 11 [(fix.enum_value)="11", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_OTHER = 12 [(fix.enum_value)="12", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_PRODUCT_FINANCING = 13 [(fix.enum_value)="13", (fix.enum_added)=VERSION_FIX_4_4];
}

enum LegSecurityTypeEnum {
    LEG_SECURITY_TYPE_UNSPECIFIED = 0;
    LEG_SECURITY_TYPE_BANKERS_ACCEPTANCE = 1 [(fix.enum_value)="BA",
(fix.enum_added)=VERSION_FIX_4_1];
    LEG_SECURITY_TYPE_CERTIFICATE_OF_DEPOSIT = 2 [(fix.enum_value)="CD",
(fix.enum_added)=VERSION_FIX_4_1];
    LEG_SECURITY_TYPE_COLLATERALIZED_MORTGAGE_OBLIGATION = 3
[(fix.enum_value)="CMO", (fix.enum_added)=VERSION_FIX_4_1];
    LEG_SECURITY_TYPE_COMMERCIAL_PAPER = 4 [(fix.enum_value)="CP",
(fix.enum_added)=VERSION_FIX_4_1];
    LEG_SECURITY_TYPE_COMMON_STOCK = 5 [(fix.enum_value)="CS", (fix.enum_added)=VERSION_FIX_4_1];
    LEG_SECURITY_TYPE_CORPORATE_BOND = 6 [(fix.enum_value)="CORP",
(fix.enum_added)=VERSION_FIX_4_1];
    LEG_SECURITY_TYPE_CORPORATE_PRIVATE_PLACEMENT = 7 [(fix.enum_value)="CPP",
(fix.enum_added)=VERSION_FIX_4_1];
    LEG_SECURITY_TYPE_FOREIGN_EXCHANGE_CONTRACT = 8 [(fix.enum_value)="FOR",
(fix.enum_added)=VERSION_FIX_4_1, (fix.enum_deprecated)=VERSION_FIX_5_0SP1];
    LEG_SECURITY_TYPE_FUTURE = 9 [(fix.enum_value)="FUT", (fix.enum_added)=VERSION_FIX_4_1];
    LEG_SECURITY_TYPE_MISCELLANEOUS_PASS_THROUGH = 10 [(fix.enum_value)="MPT",
(fix.enum_added)=VERSION_FIX_4_1];
}

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LEG_SECURITY_TYPE_MORTGAGE_INTEREST_ONLY = 11 [(fix.enum_value)="MIO",
(fix.enum_added)=VERSION_FIX_4_1];
LEG_SECURITY_TYPE_MORTGAGE_PRINCIPAL_ONLY = 12 [(fix.enum_value)="MPO",
(fix.enum_added)=VERSION_FIX_4_1];
LEG_SECURITY_TYPE_MORTGAGE_PRIVATE_PLACEMENT = 13 [(fix.enum_value)="MPP",
(fix.enum_added)=VERSION_FIX_4_1];
LEG_SECURITY_TYPE_MUTUAL_FUND = 14 [(fix.enum_value)="MF", (fix.enum_added)=VERSION_FIX_4_1];
LEG_SECURITY_TYPE_NO_SECURITY_TYPE = 15 [(fix.enum_value)="NONE",
(fix.enum_added)=VERSION_FIX_4_1];
LEG_SECURITY_TYPE_OPTION = 16 [(fix.enum_value)="OPT", (fix.enum_added)=VERSION_FIX_4_1];
LEG_SECURITY_TYPE_PREFERRED_STOCK = 17 [(fix.enum_value)="PS",
(fix.enum_added)=VERSION_FIX_4_1];
LEG_SECURITY_TYPE_TIME_DEPOSIT = 18 [(fix.enum_value)="TD", (fix.enum_added)=VERSION_FIX_4_1];
LEG_SECURITY_TYPE_US_TREASURY_BILL_OLD = 19 [(fix.enum_value)="USTB",
(fix.enum_added)=VERSION_FIX_4_1, (fix.enum_deprecated)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_WARRANT = 20 [(fix.enum_value)="WAR", (fix.enum_added)=VERSION_FIX_4_1];
LEG_SECURITY_TYPE_CONVERTIBLE_BOND = 21 [(fix.enum_value)="CB",
(fix.enum_added)=VERSION_FIX_4_2];
LEG_SECURITY_TYPE_IOETTEMORTGAGE = 22 [(fix.enum_value)="IET",
(fix.enum_added)=VERSION_FIX_4_2];
LEG_SECURITY_TYPE_WILDCARD = 23 [(fix.enum_value)="?", (fix.enum_added)=VERSION_FIX_4_2];
LEG_SECURITY_TYPE_AMENDED = 24 [(fix.enum_value)="AMENDED",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_ASSET_BACKED_SECURITIES = 25 [(fix.enum_value)="ABS",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_BANK_NOTES = 26 [(fix.enum_value)="BN", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_BILL_OF_EXCHANGES = 27 [(fix.enum_value)="BOX",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_BRADY_BOND = 28 [(fix.enum_value)="BRADY", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_BRIDGE_LOAN = 29 [(fix.enum_value)="BRIDGE",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_CALL_LOANS = 30 [(fix.enum_value)="CL", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_CERTIFICATE_OF_OBLIGATION = 31 [(fix.enum_value)="COFO",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_CERTIFICATE_OF_PARTICIPATION = 32 [(fix.enum_value)="COFP",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_CORP = 33 [(fix.enum_value)="CMBS", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_DEBTOR_IN_POSSESSION = 34 [(fix.enum_value)="DINP",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_DEFAULTED = 35 [(fix.enum_value)="DEFLTED",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_DEPOSIT_NOTES = 36 [(fix.enum_value)="DN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_DUAL_CURRENCY = 37 [(fix.enum_value)="DUAL",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_EXTENDED_COMM_NOTE = 38 [(fix.enum_value)="XCN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_FEDERAL_AGENCY_COUPON = 39 [(fix.enum_value)="FAC",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_FEDERAL_AGENCY_DISCOUNT_NOTE = 40 [(fix.enum_value)="FADN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_GENERAL_OBLIGATION_BONDS = 41 [(fix.enum_value)="GO",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_INDEXED_LINKED = 42 [(fix.enum_value)="XLINKD",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_INTEREST_STRIP_FROM_ANY_BOND_OR_NOTE = 43
[(fix.enum_value)="TINT", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_LETTER_OF_CREDIT = 44 [(fix.enum_value)="LOFC",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_LIQUIDITY_NOTE = 45 [(fix.enum_value)="LQN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_MANDATORY_TENDER = 46 [(fix.enum_value)="MT",
(fix.enum_added)=VERSION_FIX_4_3];

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LEG_SECURITY_TYPE_MATURED = 47      [(fix.enum_value)="MATURED",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_MEDIUM_TERM_NOTES = 48      [(fix.enum_value)="MTN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_MORTGAGE_BACKED_SECURITIES = 49      [(fix.enum_value)="MBS",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_MULTILEG_INSTRUMENT = 50      [(fix.enum_value)="MLEG",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_OTHER_ANTICIPATION_NOTES = 51      [(fix.enum_value)="AN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_OVERNIGHT = 52      [(fix.enum_value)="ONITE", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_PLAZOS_FIJOS = 53 [(fix.enum_value)="PZFJ", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_PRINCIPAL_STRIP_FROM_ANON_CALLABLE_BOND_OR_NOTE = 54
[(fix.enum_value)="TPRN", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_PRINCIPAL_STRIP_OF_ACALLABLE_BOND_OR_NOTE = 55
[(fix.enum_value)="TCAL", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_PRIVATE_EXPORT_FUNDING = 56      [(fix.enum_value)="PEF",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_PROMISSORY_NOTE = 57      [(fix.enum_value)="PN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_REPLACED = 58      [(fix.enum_value)="REPLACD",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_RETIRED = 59      [(fix.enum_value)="RETIRED",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_REVENUE_ANTICIPATION_NOTE = 60      [(fix.enum_value)="RAN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_REVENUE_BONDS = 61      [(fix.enum_value)="REV",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_REVOLVER = 62      [(fix.enum_value)="RVLVTRM",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_REVOLVER_LOAN = 63      [(fix.enum_value)="RVLV",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_SHORT_TERM_LOAN_NOTE = 64      [(fix.enum_value)="STN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_SPECIAL_ASSESSMENT = 65      [(fix.enum_value)="SPCLA",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_SPECIAL_OBLIGATION = 66      [(fix.enum_value)="SPCLO",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_SPECIAL_TAX = 67 [(fix.enum_value)="SPCLT", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_STRUCTURED_NOTES = 68      [(fix.enum_value)="STRUCT",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_SWING_LINE_FACILITY = 69      [(fix.enum_value)="SWING",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_TAX_ALLOCATION = 70      [(fix.enum_value)="TAXA",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_TAX_ANTICIPATION_NOTE = 71      [(fix.enum_value)="TAN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_TAX_EXEMPT_COMMERCIAL_PAPER = 72      [(fix.enum_value)="TECP",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_TAX_REVENUE_ANTICIPATION_NOTE = 73      [(fix.enum_value)="TRAN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_TERM_LOAN = 74      [(fix.enum_value)="TERM", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_TO_BE_ANNOUNCED = 75      [(fix.enum_value)="TBA",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_TREASURY_INFLATION_PROTECTED_SECURITIES = 76
[(fix.enum_value)="TIPS", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_US_TREASURY_BOND = 77      [(fix.enum_value)="TBOND",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_US_TREASURY_NOTE_OLD = 78      [(fix.enum_value)="UST",
(fix.enum_added)=VERSION_FIX_4_3, (fix.enum_deprecated)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_VARIABLE_RATE_DEMAND_NOTE = 79      [(fix.enum_value)="VRDN",
(fix.enum_added)=VERSION_FIX_4_3];

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LEG_SECURITY_TYPE_WITHDRAWN = 80 [(fix.enum_value)="WITHDRN",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_YANKEE_CORPORATE_BOND = 81 [(fix.enum_value)="YANK",
(fix.enum_added)=VERSION_FIX_4_3];
LEG_SECURITY_TYPE_BUY_SELLBACK = 82 [(fix.enum_value)="BUYSELL",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_EURO_CERTIFICATE_OF_DEPOSIT = 83 [(fix.enum_value)="EUCD",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_EURO_COMMERCIAL_PAPER = 84 [(fix.enum_value)="EUCP",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_EURO_CORPORATE_BOND = 85 [(fix.enum_value)="EUCORP",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_EURO_SOVEREIGNS = 86 [(fix.enum_value)="EUSOV",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_EURO_SUPRANATIONAL_COUPONS = 87 [(fix.enum_value)="EUSUPRA",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_FORWARD = 88 [(fix.enum_value)="FORWARD",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_PFANDBRIEFE = 89 [(fix.enum_value)="PFAND", (fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_REPURCHASE = 90 [(fix.enum_value)="REPO", (fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_SECURITIES_LOAN = 91 [(fix.enum_value)="SECLOAN",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_SECURITIES_PLEDGE = 92 [(fix.enum_value)="SECPLEDGE",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_USD_SUPRANATIONAL_COUPONS = 93 [(fix.enum_value)="SUPRA",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_US_TREASURY_BILL = 94 [(fix.enum_value)="TBILL",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_US_TREASURY_NOTE = 95 [(fix.enum_value)="TNOTE",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_YANKEE_CERTIFICATE_OF_DEPOSIT = 96 [(fix.enum_value)="YCD",
(fix.enum_added)=VERSION_FIX_4_4];
LEG_SECURITY_TYPE_OPTIONS_ON_FUTURES = 97 [(fix.enum_value)="OOF",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
LEG_SECURITY_TYPE_OPTIONS_ON_PHYSICAL = 98 [(fix.enum_value)="OOP",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
LEG_SECURITY_TYPE_CASH = 99 [(fix.enum_value)="CASH", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=28];
LEG_SECURITY_TYPE_OPTIONS_ON_COMBO = 100 [(fix.enum_value)="OOC",
(fix.enum_added)=VERSION_FIX_5_0];
LEG_SECURITY_TYPE_INTEREST_RATE_SWAP = 101 [(fix.enum_value)="IRS",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=54];
LEG_SECURITY_TYPE_BANK_DEPOSITORY_NOTE = 102 [(fix.enum_value)="BDN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
LEG_SECURITY_TYPE_CANADIAN_MONEY_MARKETS = 103 [(fix.enum_value)="CAMM",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
LEG_SECURITY_TYPE_CANADIAN_MORTGAGE_BONDS = 104 [(fix.enum_value)="CMB",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
LEG_SECURITY_TYPE_CANADIAN_PROVINCIAL_BONDS = 105 [(fix.enum_value)="PROV",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
LEG_SECURITY_TYPE_CANADIAN_TREASURY_BILLS = 106 [(fix.enum_value)="CTB",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
LEG_SECURITY_TYPE_CANADIAN_TREASURY_NOTES = 107 [(fix.enum_value)="CAN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
LEG_SECURITY_TYPE_CREDIT_DEFAULT_SWAP = 108 [(fix.enum_value)="CDS",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
LEG_SECURITY_TYPE_EURO_CORPORATE_FLOATING_RATE_NOTES = 109
[(fix.enum_value)="EUFRN", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
LEG_SECURITY_TYPE_SECURED_LIQUIDITY_NOTE = 110 [(fix.enum_value)="SLQN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
LEG_SECURITY_TYPE_TAXABLE_MUNICIPAL_CP = 111 [(fix.enum_value)="TMCP",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];

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    LEG_SECURITY_TYPE_TERM_LIQUIDITY_NOTE = 112          [(fix.enum_value)="TLQN",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_SECURITY_TYPE_TREASURY_BILL = 113              [(fix.enum_value)="TB",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_SECURITY_TYPE_US_CORPORATE_FLOATING_RATE_NOTES = 114
[(fix.enum_value)="FRN", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_SECURITY_TYPE_FX_FORWARD = 115 [(fix.enum_value)="FXFWD",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
    LEG_SECURITY_TYPE_FX_SPOT = 116 [(fix.enum_value)="FXSPOT",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
    LEG_SECURITY_TYPE_FX_SWAP = 117 [(fix.enum_value)="FXSWAP",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
    LEG_SECURITY_TYPE_NON_DELIVERABLE_FORWARD = 118 [(fix.enum_value)="FXNDF",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=82];
}

enum LegContractMultiplierUnitEnum {
    LEG_CONTRACT_MULTIPLIER_UNIT_UNSPECIFIED = 0;
    LEG_CONTRACT_MULTIPLIER_UNIT_DAYS = 1 [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    LEG_CONTRACT_MULTIPLIER_UNIT_HOURS = 2 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    LEG_CONTRACT_MULTIPLIER_UNIT_SHARES = 3 [(fix.enum_value)="0",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
}

enum LegFlowScheduleTypeEnum {
    LEG_FLOW_SCHEDULE_TYPE_UNSPECIFIED = 0;
    LEG_FLOW_SCHEDULE_TYPE_NERC_CALENDAR_ALL_DAYS_IN_MONTH = 1
[(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    LEG_FLOW_SCHEDULE_TYPE_NERC_EASTERN_OFF_PEAK = 2 [(fix.enum_value)="0",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    LEG_FLOW_SCHEDULE_TYPE_NERC_EASTERN_PEAK = 3 [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    LEG_FLOW_SCHEDULE_TYPE_NERC_WESTERN_OFF_PEAK = 4 [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
    LEG_FLOW_SCHEDULE_TYPE_NERC_WESTERN_PEAK = 5 [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=80];
}

enum LegUnitOfMeasureEnum {
    LEG_UNIT_OF_MEASURE_UNSPECIFIED = 0;
    LEG_UNIT_OF_MEASURE_BARRELS = 1 [(fix.enum_value)="Bbl", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_BILLION_CUBIC_FEET = 2 [(fix.enum_value)="Bcf",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_BUSHELS = 3 [(fix.enum_value)="Bu", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_GALLONS = 4 [(fix.enum_value)="Gal", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_MEGAWATT_HOURS = 5 [(fix.enum_value)="MWh",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_METRIC_TONS = 6 [(fix.enum_value)="t", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_MILLION_BARRELS = 7 [(fix.enum_value)="MMbbl",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_deprecated)=VERSION_FIX_5_0SP1];
    LEG_UNIT_OF_MEASURE_ONE_MILLION_BTU = 8 [(fix.enum_value)="MMBtu",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_POUNDS = 9 [(fix.enum_value)="lbs", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_TONS = 10 [(fix.enum_value)="tn", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_TROY_OUNCES = 11 [(fix.enum_value)="oz_tr",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_USDOLLARS = 12 [(fix.enum_value)="USD", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_UNIT_OF_MEASURE_ALLOWANCES = 13 [(fix.enum_value)="Alw", (fix.enum_added)=VERSION_FIX_5_0SP1,
(fix.enum_added_ep)=89];
}

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enum LegPriceUnitOfMeasureEnum {
    LEG_PRICE_UNIT_OF_MEASURE_UNSPECIFIED = 0;
    LEG_PRICE_UNIT_OF_MEASURE_BARRELS = 1                [(fix.enum_value)="Bbl",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_BILLION_CUBIC_FEET = 2    [(fix.enum_value)="Bcf",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_BUSHELS = 3              [(fix.enum_value)="Bu",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_GALLONS = 4              [(fix.enum_value)="Gal",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_MEGAWATT_HOURS = 5       [(fix.enum_value)="MWh",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_METRIC_TONS = 6          [(fix.enum_value)="t",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_MILLION_BARRELS = 7      [(fix.enum_value)="MMbbl",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_deprecated)=VERSION_FIX_5_0SP1];
    LEG_PRICE_UNIT_OF_MEASURE_ONE_MILLION_BTU = 8      [(fix.enum_value)="MMBtu",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_POUNDS = 9               [(fix.enum_value)="lbs",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_TONS = 10 [(fix.enum_value)="tn", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_TROY_OUNCES = 11        [(fix.enum_value)="oz_tr",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_USDOLLARS = 12          [(fix.enum_value)="USD",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_PRICE_UNIT_OF_MEASURE_ALLOWANCES = 13         [(fix.enum_value)="Alw",
(fix.enum_added)=VERSION_FIX_5_0SP1, (fix.enum_added_ep)=89];
}

enum LegTimeUnitEnum {
    LEG_TIME_UNIT_UNSPECIFIED = 0;
    LEG_TIME_UNIT_DAY = 1                             [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_TIME_UNIT_HOUR = 2                           [(fix.enum_value)="H", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_TIME_UNIT_MINUTE = 3                         [(fix.enum_value)="Min", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_TIME_UNIT_MONTH = 4                         [(fix.enum_value)="Mo", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_TIME_UNIT_SECOND = 5                       [(fix.enum_value)="S", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_TIME_UNIT_WEEK = 6                         [(fix.enum_value)="Wk", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_TIME_UNIT_YEAR = 7                         [(fix.enum_value)="Yr", (fix.enum_added)=VERSION_FIX_4_4];
}

enum LegExerciseStyleEnum {
    LEG_EXERCISE_STYLE_UNSPECIFIED = 0;
    LEG_EXERCISE_STYLE_AMERICAN = 1                [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    LEG_EXERCISE_STYLE_BERMUDA = 2                [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
    LEG_EXERCISE_STYLE_EUROPEAN = 3                [(fix.enum_value)="0", (fix.enum_added)=VERSION_FIX_5_0,
(fix.enum_added_ep)=52];
}

enum LegSideEnum {
    LEG_SIDE_UNSPECIFIED = 0;
    LEG_SIDE_BUY = 1                               [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_2_7];
    LEG_SIDE_BUY_MINUS = 2                       [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_2_7];
    LEG_SIDE_SELL = 3                             [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_2_7];
    LEG_SIDE_SELL_PLUS = 4                       [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_2_7];
    LEG_SIDE_SELL_SHORT = 5                     [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_2_7];
    LEG_SIDE_SELL_SHORT_EXEMPT = 6              [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_2_7];
    LEG_SIDE_CROSS = 7                           [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_1];
    LEG_SIDE_UNDISCLOSED = 8                    [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_1];
    LEG_SIDE_CROSS_SHORT = 9                     [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_2];
    LEG_SIDE_AS_DEFINED = 10                     [(fix.enum_value)="B", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_SIDE_CROSS_SHORT_EXEMPT = 11            [(fix.enum_value)="A", (fix.enum_added)=VERSION_FIX_4_3];
}

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LEG_SIDE_OPPOSITE = 12          [(fix.enum_value)="C", (fix.enum_added)=VERSION_FIX_4_3];
LEG_SIDE_BORROW = 13           [(fix.enum_value)="G", (fix.enum_added)=VERSION_FIX_4_4];
LEG_SIDE_LEND = 14             [(fix.enum_value)="F", (fix.enum_added)=VERSION_FIX_4_4];
LEG_SIDE_REDEEM = 15          [(fix.enum_value)="E", (fix.enum_added)=VERSION_FIX_4_4];
LEG_SIDE_SUBSCRIBE = 16       [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_4];
}

enum LegSecurityAltIDSourceEnum {
  LEG_SECURITY_ALT_ID_SOURCE_UNSPECIFIED = 0;
  LEG_SECURITY_ALT_ID_SOURCE_CUSIP = 1          [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_2_7];
  LEG_SECURITY_ALT_ID_SOURCE_QUIK = 2 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_2_7];
  LEG_SECURITY_ALT_ID_SOURCE_SEDOL = 3         [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_2_7];
  LEG_SECURITY_ALT_ID_SOURCE_ISIN_NUMBER = 4   [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_3_0];
  LEG_SECURITY_ALT_ID_SOURCE_RIC_CODE = 5      [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_3_0];
  LEG_SECURITY_ALT_ID_SOURCE_ISO_COUNTRY_CODE = 6 [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_1];
  LEG_SECURITY_ALT_ID_SOURCE_ISO_CURRENCY_CODE = 7 [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_1];
  LEG_SECURITY_ALT_ID_SOURCE_CONSOLIDATED_TAPE_ASSOCIATION = 8
[(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_2];
  LEG_SECURITY_ALT_ID_SOURCE_EXCHANGE_SYMBOL = 9 [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_2];
  LEG_SECURITY_ALT_ID_SOURCE_BELGIAN = 10      [(fix.enum_value)="F",
(fix.enum_added)=VERSION_FIX_4_3];
  LEG_SECURITY_ALT_ID_SOURCE_BLOOMBERG_SYMBOL = 11 [(fix.enum_value)="A",
(fix.enum_added)=VERSION_FIX_4_3];
  LEG_SECURITY_ALT_ID_SOURCE_COMMON = 12      [(fix.enum_value)="G",
(fix.enum_added)=VERSION_FIX_4_3];
  LEG_SECURITY_ALT_ID_SOURCE_DUTCH = 13       [(fix.enum_value)="C",
(fix.enum_added)=VERSION_FIX_4_3];
  LEG_SECURITY_ALT_ID_SOURCE_SICOVAM = 14     [(fix.enum_value)="E",
(fix.enum_added)=VERSION_FIX_4_3];
  LEG_SECURITY_ALT_ID_SOURCE_VALOREN = 15     [(fix.enum_value)="D",
(fix.enum_added)=VERSION_FIX_4_3];
  LEG_SECURITY_ALT_ID_SOURCE_WERTPAPIER = 16  [(fix.enum_value)="B",
(fix.enum_added)=VERSION_FIX_4_3];
  LEG_SECURITY_ALT_ID_SOURCE_CLEARING_HOUSE = 17 [(fix.enum_value)="H",
(fix.enum_added)=VERSION_FIX_4_4];
  LEG_SECURITY_ALT_ID_SOURCE_ISDA_FPML_SPECIFICATION = 18 [(fix.enum_value)="I",
(fix.enum_added)=VERSION_FIX_4_4];
  LEG_SECURITY_ALT_ID_SOURCE_OPTION_PRICE_REPORTING_AUTHORITY = 19
[(fix.enum_value)="J", (fix.enum_added)=VERSION_FIX_4_4];
  LEG_SECURITY_ALT_ID_SOURCE_LETTER_OF_CREDIT = 20 [(fix.enum_value)="L",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
  LEG_SECURITY_ALT_ID_SOURCE_ISDA_FPML_URL = 21 [(fix.enum_value)="K",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=15];
  LEG_SECURITY_ALT_ID_SOURCE_MARKETPLACE_ASSIGNED_IDENTIFIER = 22
[(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=58];
}

enum LegStipulationTypeEnum {
  LEG_STIPULATION_TYPE_UNSPECIFIED = 0;
  LEG_STIPULATION_TYPE_ABSOLUTE_PREPAYMENT_SPEED = 1 [(fix.enum_value)="ABS",
(fix.enum_added)=VERSION_FIX_4_3];
  LEG_STIPULATION_TYPE_CONSTANT_PREPAYMENT_PENALTY = 2 [(fix.enum_value)="CPP",
(fix.enum_added)=VERSION_FIX_4_3];
  LEG_STIPULATION_TYPE_CONSTANT_PREPAYMENT_RATE = 3 [(fix.enum_value)="CPR",
(fix.enum_added)=VERSION_FIX_4_3];
}

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    LEG_STIPULATION_TYPE_CONSTANT_PREPAYMENT_YIELD = 4      [(fix.enum_value)="CPY",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_FINAL_CP_ROF_HOME_EQUITY_PREPAYMENT_CURVE = 5
[(fix.enum_value)="HEP", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_GEOGRAPHICS = 6                    [(fix.enum_value)="GEOG",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_ISSUE_DATE = 7 [(fix.enum_value)="ISSUE", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_LOT_VARIANCE = 8                   [(fix.enum_value)="LOTVAR",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_MATURITY_YEAR_AND_MONTH = 9        [(fix.enum_value)="MAT",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_MONTHLY_PREPAYMENT_RATE = 10       [(fix.enum_value)="MPR",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_NUMBER_OF_PIECES = 11              [(fix.enum_value)="PIECES",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_PERCENT_OF_BMAPREPAYMENT_CURVE = 12
[(fix.enum_value)="PSA", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_PERCENT_OF_MANUFACTURED_HOUSING_PREPAYMENT_CURVE = 13
[(fix.enum_value)="MHP", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_PERCENT_OF_PROSPECTUS_PREPAYMENT_CURVE = 14
[(fix.enum_value)="PPC", (fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_POOLS_MAXIMUM = 15                 [(fix.enum_value)="PMAX",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_POOLS_PER_LOT = 16                 [(fix.enum_value)="PPL",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_POOLS_PER_MILLION = 17             [(fix.enum_value)="PPM",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_POOLS_PER_TRADE = 18               [(fix.enum_value)="PPT",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_PRODUCTION_YEAR = 19               [(fix.enum_value)="PROD",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_SINGLE_MONTHLY_MORTALITY = 20      [(fix.enum_value)="SMM",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_TRADE_VARIANCE = 21                [(fix.enum_value)="TRDVAR",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_WEIGHTED_AVERAGE_COUPON = 22       [(fix.enum_value)="WAC",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_WEIGHTED_AVERAGE_LIFE_COUPON = 23 [(fix.enum_value)="WAL",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_WEIGHTED_AVERAGE_LOAN_AGE = 24     [(fix.enum_value)="WALA",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_WEIGHTED_AVERAGE_MATURITY = 25     [(fix.enum_value)="WAM",
(fix.enum_added)=VERSION_FIX_4_3];
    LEG_STIPULATION_TYPE_ALTERNATIVE_MINIMUM_TAX = 26        [(fix.enum_value)="AMT",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_AUTO_REINVESTMENT = 27              [(fix.enum_value)="AUTOREINV",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_BANK_QUALIFIED = 28                 [(fix.enum_value)="BANKQUAL",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_BARGAIN_CONDITIONS = 29             [(fix.enum_value)="BGNCON",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_BENCHMARK_PRICE_SOURCE = 30         [(fix.enum_value)="PXSOURCE",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_CALL_PROTECTION = 31                [(fix.enum_value)="PROTECT",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_COUPON_RANGE = 32                   [(fix.enum_value)="COUPON",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_CUSTOM_START = 33                   [(fix.enum_value)="CUSTOMDATE",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_EXPLICIT_LOT_IDENTIFIER = 34        [(fix.enum_value)="LOT",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_FREEFORM_TEXT = 35                  [(fix.enum_value)="TEXT",
(fix.enum_added)=VERSION_FIX_4_4];

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    LEG_STIPULATION_TYPE_INSURED = 36 [(fix.enum_value)="INSURED",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_ISO_CURRENCY_CODE = 37 [(fix.enum_value)="CURRENCY",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_ISSUER = 38 [(fix.enum_value)="ISSUER",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_ISSUE_SIZE_RANGE = 39 [(fix.enum_value)="ISSUESIZE",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_LOOKBACK_DAYS = 40 [(fix.enum_value)="LOOKBACK",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_MARKET_SECTOR = 41 [(fix.enum_value)="SECTOR",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_MATURITY_RANGE = 42 [(fix.enum_value)="MATURITY",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_MAXIMUM_SUBSTITUTIONS = 43 [(fix.enum_value)="MAXSUBS",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_MINIMUM_DENOMINATION = 44 [(fix.enum_value)="MINDNOM",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_MINIMUM_INCREMENT = 45 [(fix.enum_value)="MININCR",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_MINIMUM_QUANTITY = 46 [(fix.enum_value)="MINQTY",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_PAYMENT_FREQUENCY = 47 [(fix.enum_value)="PAYFREQ",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_PRICE_RANGE = 48 [(fix.enum_value)="PRICE",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_PRICING_FREQUENCY = 49 [(fix.enum_value)="PRICFREQ",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_PURPOSE = 50 [(fix.enum_value)="PURPOSE",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_RATING_SOURCE_AND_RANGE = 51 [(fix.enum_value)="RATING",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_RESTRICTED = 52 [(fix.enum_value)="RESTRICTED",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_SECURITY_TYPE_INCLUDED_OR_EXCLUDED = 53
[(fix.enum_value)="SECTYPE", (fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_STRUCTURE = 54 [(fix.enum_value)="STRUCT",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_SUBSTITUTIONS_FREQUENCY = 55 [(fix.enum_value)="SUBSFREQ",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_SUBSTITUTIONS_LEFT = 56 [(fix.enum_value)="SUBSLEFT",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_TYPE_OF_REDEMPTION = 57 [(fix.enum_value)="REDEMPTION",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_VALUATION_DISCOUNT = 58 [(fix.enum_value)="HAIRCUT",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_WHOLE_POOL = 59 [(fix.enum_value)="WHOLE",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_YIELD_RANGE = 60 [(fix.enum_value)="YIELD",
(fix.enum_added)=VERSION_FIX_4_4];
    LEG_STIPULATION_TYPE_AVAILABLE_OFFER_QUANTITY_TO_BE_SHOWN_TO_THE_STREET = 61
[(fix.enum_value)="AVAILQTY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_AVERAGE_FICOSCORE = 62 [(fix.enum_value)="AVFICO",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_AVERAGE_LOAN_SIZE = 63 [(fix.enum_value)="AVSIZE",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_BROKER_CREDIT = 64 [(fix.enum_value)="BROKER_CREDIT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_BROKER_SALES_CREDIT_OVERRIDE = 65 [(fix.enum_value)="SALESCREDITOVR",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_DISCOUNT_RATE = 66 [(fix.enum_value)="DISCOUNT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];

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    LEG_STIPULATION_TYPE_INTEREST_OF_ROLLING_OR_CLOSING_TRADE = 67
[(fix.enum_value)="REFINT", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_MAXIMUM_LOAN_BALANCE = 68 [(fix.enum_value)="MAXBAL",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_MAXIMUM_ORDER_SIZE = 69 [(fix.enum_value)="MAXORDQTY",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_OFFER_PRICE_TO_BE_SHOWN_TO_INTERNAL_BROKERS = 70
[(fix.enum_value)="INTERNALPX", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_OFFER_QUANTITY_TO_BE_SHOWN_TO_INTERNAL_BROKERS = 71
[(fix.enum_value)="INTERNALQTY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_ORDER_QUANTITY_INCREMENT = 72 [(fix.enum_value)="ORDRINCR",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_POOL_IDENTIFIER = 73 [(fix.enum_value)="POOL",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_PRIMARY_OR_SECONDARY_MARKET_INDICATOR = 74
[(fix.enum_value)="PRIMARY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_PRINCIPAL_OF_ROLLING_OR_CLOSING_TRADE = 75
[(fix.enum_value)="REFPRIN", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_REFERENCE_TO_ROLLING_OR_CLOSING_TRADE = 76
[(fix.enum_value)="REFTRADE", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_THE_MINIMUM_RESIDUAL_OFFER_QUANTITY = 77
[(fix.enum_value)="LEAVEQTY", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_TRADER_CREDIT = 78 [(fix.enum_value)="TRADERCREDIT",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_TYPE_OF_ROLL_TRADE = 79 [(fix.enum_value)="ROLLTYPE",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
    LEG_STIPULATION_TYPE_YIELD_TO_MATURITY = 80 [(fix.enum_value)="YTM",
(fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=68];
}

enum RoutingTypeEnum {
    ROUTING_TYPE_UNSPECIFIED = 0;
    ROUTING_TYPE_BLOCK_FIRM = 1 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_2];
    ROUTING_TYPE_BLOCK_LIST = 2 [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_2];
    ROUTING_TYPE_TARGET_FIRM = 3 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_2];
    ROUTING_TYPE_TARGET_LIST = 4 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_2];
}

enum BenchmarkCurveNameEnum {
    BENCHMARK_CURVE_NAME_UNSPECIFIED = 0;
    BENCHMARK_CURVE_NAME_EURIBOR = 1 [(fix.enum_value)="Euribor",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_CURVE_NAME_FUTURE_SWAP = 2 [(fix.enum_value)="FutureSWAP",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_CURVE_NAME_LIBID = 3 [(fix.enum_value)="LIBID", (fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_CURVE_NAME_LIBOR = 4 [(fix.enum_value)="LIBOR", (fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_CURVE_NAME_MUNI_AAA = 5 [(fix.enum_value)="MuniAAA",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_CURVE_NAME_OTHER = 6 [(fix.enum_value)="OTHER", (fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_CURVE_NAME_PFANDBRIEFE = 7 [(fix.enum_value)="Pfanbriefer",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_CURVE_NAME_SWAP = 8 [(fix.enum_value)="SWAP", (fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_CURVE_NAME_TREASURY = 9 [(fix.enum_value)="Treasury",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_CURVE_NAME_EONIA = 10 [(fix.enum_value)="EONIA", (fix.enum_added)=VERSION_FIX_4_4];
    BENCHMARK_CURVE_NAME_EUREPO = 11 [(fix.enum_value)="EUREPO",
(fix.enum_added)=VERSION_FIX_4_4];
    BENCHMARK_CURVE_NAME_SONIA = 12 [(fix.enum_value)="SONIA", (fix.enum_added)=VERSION_FIX_4_4];
}

enum BenchmarkPriceTypeEnum {
    BENCHMARK_PRICE_TYPE_UNSPECIFIED = 0;

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    BENCHMARK_PRICE_TYPE_FIXED_AMOUNT = 1                [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_4_2];
    BENCHMARK_PRICE_TYPE_PERCENTAGE = 2 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_2];
    BENCHMARK_PRICE_TYPE_PER_UNIT = 3 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_2];
    BENCHMARK_PRICE_TYPE_DISCOUNT = 4 [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_PRICE_TYPE_PREMIUM = 5 [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_PRICE_TYPE_SPREAD = 6 [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_PRICE_TYPE_TEDPRICE = 7 [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_PRICE_TYPE_TEDYIELD = 8 [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_PRICE_TYPE_FIXED_CABINET_TRADE_PRICE = 9 [(fix.enum_value)="10",
(fix.enum_added)=VERSION_FIX_4_4];
    BENCHMARK_PRICE_TYPE_VARIABLE_CABINET_TRADE_PRICE = 10 [(fix.enum_value)="11",
(fix.enum_added)=VERSION_FIX_4_4];
    BENCHMARK_PRICE_TYPE_YIELD = 11 [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_4];
    BENCHMARK_PRICE_TYPE_PRODUCT_TICKS_IN_EIGHTS = 12 [(fix.enum_value)="15",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    BENCHMARK_PRICE_TYPE_PRODUCT_TICKS_IN_FOURTHS = 13 [(fix.enum_value)="14",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    BENCHMARK_PRICE_TYPE_PRODUCT_TICKS_IN_HALFS = 14 [(fix.enum_value)="13",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    BENCHMARK_PRICE_TYPE_PRODUCT_TICKS_IN_ONE_TWENTY_EIGHTS = 15
[(fix.enum_value)="19", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    BENCHMARK_PRICE_TYPE_PRODUCT_TICKS_IN_SIXTEENTHS = 16 [(fix.enum_value)="16",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    BENCHMARK_PRICE_TYPE_PRODUCT_TICKS_IN_SIXTY_FORTHS = 17 [(fix.enum_value)="18",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    BENCHMARK_PRICE_TYPE_PRODUCT_TICKS_IN_THIRTY_SECONDS = 18
[(fix.enum_value)="17", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
}

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enum BenchmarkSecurityIDSourceEnum {
    BENCHMARK_SECURITY_ID_SOURCE_UNSPECIFIED = 0;
    BENCHMARK_SECURITY_ID_SOURCE_CUSIP = 1                [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_2_7];
    BENCHMARK_SECURITY_ID_SOURCE_QUIK = 2                [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_2_7];
    BENCHMARK_SECURITY_ID_SOURCE_SEDOL = 3                [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_2_7];
    BENCHMARK_SECURITY_ID_SOURCE_ISIN_NUMBER = 4         [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_3_0];
    BENCHMARK_SECURITY_ID_SOURCE_RIC_CODE = 5            [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_3_0];
    BENCHMARK_SECURITY_ID_SOURCE_ISO_COUNTRY_CODE = 6    [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_1];
    BENCHMARK_SECURITY_ID_SOURCE_ISO_CURRENCY_CODE = 7   [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_1];
    BENCHMARK_SECURITY_ID_SOURCE_CONSOLIDATED_TAPE_ASSOCIATION = 8
[(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_2];
    BENCHMARK_SECURITY_ID_SOURCE_EXCHANGE_SYMBOL = 9     [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_2];
    BENCHMARK_SECURITY_ID_SOURCE_BELGIAN = 10           [(fix.enum_value)="F",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_SECURITY_ID_SOURCE_BLOOMBERG_SYMBOL = 11  [(fix.enum_value)="A",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_SECURITY_ID_SOURCE_COMMON = 12            [(fix.enum_value)="G",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_SECURITY_ID_SOURCE_DUTCH = 13             [(fix.enum_value)="C",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_SECURITY_ID_SOURCE_SICOVAM = 14           [(fix.enum_value)="E",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_SECURITY_ID_SOURCE_VALOREN = 15           [(fix.enum_value)="D",
(fix.enum_added)=VERSION_FIX_4_3];
}

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    BENCHMARK_SECURITY_ID_SOURCE_WERTPAPIER = 16          [(fix.enum_value)="B",
(fix.enum_added)=VERSION_FIX_4_3];
    BENCHMARK_SECURITY_ID_SOURCE_CLEARING_HOUSE = 17      [(fix.enum_value)="H",
(fix.enum_added)=VERSION_FIX_4_4];
    BENCHMARK_SECURITY_ID_SOURCE_ISDA_FPML_SPECIFICATION = 18
[(fix.enum_value)="I", (fix.enum_added)=VERSION_FIX_4_4];
    BENCHMARK_SECURITY_ID_SOURCE_OPTION_PRICE_REPORTING_AUTHORITY = 19
[(fix.enum_value)="J", (fix.enum_added)=VERSION_FIX_4_4];
    BENCHMARK_SECURITY_ID_SOURCE_LETTER_OF_CREDIT = 20    [(fix.enum_value)="L",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=8];
    BENCHMARK_SECURITY_ID_SOURCE_ISDA_FPML_URL = 21      [(fix.enum_value)="K",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=15];
    BENCHMARK_SECURITY_ID_SOURCE_MARKETPLACE_ASSIGNED_IDENTIFIER = 22
[(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_5_0, (fix.enum_added_ep)=58];
}

enum YieldTypeEnum {
    YIELD_TYPE_UNSPECIFIED = 0;
    YIELD_TYPE_AFTER_TAX_YIELD = 1          [(fix.enum_value)="AFTERTAX",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_ANNUAL_YIELD = 2            [(fix.enum_value)="ANNUAL",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_BOOK_YIELD = 3              [(fix.enum_value)="BOOK", (fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_CLOSING_YIELD = 4           [(fix.enum_value)="CLOSE", (fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_CLOSING_YIELD_MOST_RECENT_MONTH = 5      [(fix.enum_value)="LASTMONTH",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_CLOSING_YIELD_MOST_RECENT_QUARTER = 6    [(fix.enum_value)="LASTQUARTER",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_CLOSING_YIELD_MOST_RECENT_YEAR = 7       [(fix.enum_value)="LASTYEAR",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_COMPOUND_YIELD = 8          [(fix.enum_value)="COMPOUND",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_CURRENT_YIELD = 9           [(fix.enum_value)="CURRENT",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_GVNT_EQUIVALENT_YIELD = 10      [(fix.enum_value)="GOVTEQUIV",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_INVERSE_FLOATER_BOND_YIELD = 11      [(fix.enum_value)="INVERSEFLOATER",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_MARK_TO_MARKET_YIELD = 12        [(fix.enum_value)="MARK",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_MOST_RECENT_CLOSING_YIELD = 13      [(fix.enum_value)="LASTCLOSE",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_OPEN_AVERAGE_YIELD = 14         [(fix.enum_value)="OPENAVG",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_PREVIOUS_CLOSE_YIELD = 15         [(fix.enum_value)="PREVCLOSE",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_PROCEEDS_YIELD = 16            [(fix.enum_value)="PROCEEDS",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_SEMI_ANNUAL_YIELD = 17          [(fix.enum_value)="SEMIANNUAL",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_SIMPLE_YIELD = 18              [(fix.enum_value)="SIMPLE",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_TAX_EQUIVALENT_YIELD = 19        [(fix.enum_value)="TAXEQUIV",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_TRUE_GROSS_YIELD = 20           [(fix.enum_value)="GROSS", (fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_TRUE_YIELD = 21                [(fix.enum_value)="TRUE", (fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_AT_ISSUE = 22            [(fix.enum_value)="ATISSUE",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_CHANGE_SINCE_CLOSE = 23     [(fix.enum_value)="CHANGE",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_TO_AVERAGE_MATURITY = 24    [(fix.enum_value)="AVGMATURITY",
(fix.enum_added)=VERSION_FIX_4_3];
}

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    YIELD_TYPE_YIELD_TO_LONGEST_AVERAGE_LIFE = 25          [(fix.enum_value)="LONGAVGLIFE",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_TO_MATURITY = 26      [(fix.enum_value)="MATURITY",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_TO_NEXT_CALL = 27     [(fix.enum_value)="CALL", (fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_TO_NEXT_PUT = 28     [(fix.enum_value)="PUT", (fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_TO_NEXT_REFUND = 29   [(fix.enum_value)="NEXTREFUND",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_TO_SHORTEST_AVERAGE_LIFE = 30        [(fix.enum_value)="SHORTAVGLIFE",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_TO_TENDER_DATE = 31   [(fix.enum_value)="TENDER",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_TO_WORST = 32        [(fix.enum_value)="WORST", (fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_WITH_INFLATION_ASSUMPTION = 33       [(fix.enum_value)="INFLATION",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_TYPE_YIELD_VALUE_OF32NDS = 34 [(fix.enum_value)="VALUE1_32",
(fix.enum_added)=VERSION_FIX_4_4];
}

enum YieldRedemptionPriceTypeEnum {
    YIELD_REDEMPTION_PRICE_TYPE_UNSPECIFIED = 0;
    YIELD_REDEMPTION_PRICE_TYPE_FIXED_AMOUNT = 1          [(fix.enum_value)="3",
(fix.enum_added)=VERSION_FIX_4_2];
    YIELD_REDEMPTION_PRICE_TYPE_PERCENTAGE = 2           [(fix.enum_value)="1",
(fix.enum_added)=VERSION_FIX_4_2];
    YIELD_REDEMPTION_PRICE_TYPE_PER_UNIT = 3            [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_4_2];
    YIELD_REDEMPTION_PRICE_TYPE_DISCOUNT = 4          [(fix.enum_value)="4",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_REDEMPTION_PRICE_TYPE_PREMIUM = 5            [(fix.enum_value)="5",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_REDEMPTION_PRICE_TYPE_SPREAD = 6             [(fix.enum_value)="6",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_REDEMPTION_PRICE_TYPE_TEDPRICE = 7           [(fix.enum_value)="7",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_REDEMPTION_PRICE_TYPE_TEDYIELD = 8           [(fix.enum_value)="8",
(fix.enum_added)=VERSION_FIX_4_3];
    YIELD_REDEMPTION_PRICE_TYPE_FIXED_CABINET_TRADE_PRICE = 9
[(fix.enum_value)="10", (fix.enum_added)=VERSION_FIX_4_4];
    YIELD_REDEMPTION_PRICE_TYPE_VARIABLE_CABINET_TRADE_PRICE = 10
[(fix.enum_value)="11", (fix.enum_added)=VERSION_FIX_4_4];
    YIELD_REDEMPTION_PRICE_TYPE_YIELD = 11             [(fix.enum_value)="9",
(fix.enum_added)=VERSION_FIX_4_4];
    YIELD_REDEMPTION_PRICE_TYPE_PRODUCT_TICKS_IN_EIGHTS = 12
[(fix.enum_value)="15", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    YIELD_REDEMPTION_PRICE_TYPE_PRODUCT_TICKS_IN_FOURTHS = 13
[(fix.enum_value)="14", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    YIELD_REDEMPTION_PRICE_TYPE_PRODUCT_TICKS_IN_HALFS = 14 [(fix.enum_value)="13",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    YIELD_REDEMPTION_PRICE_TYPE_PRODUCT_TICKS_IN_ONE_TWENTY_EIGHTS = 15
[(fix.enum_value)="19", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    YIELD_REDEMPTION_PRICE_TYPE_PRODUCT_TICKS_IN_SIXTEENTHS = 16
[(fix.enum_value)="16", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    YIELD_REDEMPTION_PRICE_TYPE_PRODUCT_TICKS_IN_SIXTY_FORTHS = 17
[(fix.enum_value)="18", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    YIELD_REDEMPTION_PRICE_TYPE_PRODUCT_TICKS_IN_THIRTY_SECONDS = 18
[(fix.enum_value)="17", (fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
}

message ApplicationSequenceControl {
    optional string appl_id = 1          [(fix.tag)=1180, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_5_0];

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    optional sfixed64 appl_last_seq_num = 2                [(fix.tag)=1350,
(fix.type)=DATATYPE_SEQ_NUM, (fix.field_added)=VERSION_FIX_5_0];
    optional bool appl_resend_flag = 3 [(fix.tag)=1352, (fix.type)=DATATYPE_BOOLEAN,
(fix.field_added)=VERSION_FIX_5_0];
    optional sfixed64 appl_seq_num = 4 [(fix.tag)=1181, (fix.type)=DATATYPE_SEQ_NUM,
(fix.field_added)=VERSION_FIX_5_0];
}

message Instrument {
    optional string cfi_code = 1 [(fix.tag)=461, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 contract_multiplier = 2 [(fix.tag)=231,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_3];
    optional string country_of_issue = 3 [(fix.tag)=470,
(fix.type)=DATATYPE_COUNTRY, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 coupon_payment_date = 4 [(fix.tag)=224,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 coupon_rate = 5 [(fix.tag)=223,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_4_3];
    optional string credit_rating = 6 [(fix.tag)=255, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional string encoded_issuer = 7 [(fix.tag)=349, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 encoded_issuer_len = 8 [(fix.tag)=348,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_4_3];
    optional string encoded_security_desc = 9 [(fix.tag)=351, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 encoded_security_desc_len = 10 [(fix.tag)=350,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 factor = 11 [(fix.tag)=228, (fix.type)=DATATYPE_FLOAT,
(fix.field_added)=VERSION_FIX_4_3];
    optional string instr_registry = 12 [(fix.tag)=543, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 issue_date = 13 [(fix.tag)=225, (fix.type)=DATATYPE_LOCAL_MKT_DATE,
(fix.field_added)=VERSION_FIX_4_3];
    optional string issuer = 14 [(fix.tag)=106, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional string locale_of_issue = 15 [(fix.tag)=472,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 maturity_date = 16 [(fix.tag)=541,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 maturity_month_year = 17 [(fix.tag)=200,
(fix.type)=DATATYPE_MONTH_YEAR, (fix.field_added)=VERSION_FIX_4_3];
    optional bytes opt_attribute = 18 [(fix.tag)=206, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_4_3];
    optional ProductEnum product = 19 [(fix.tag)=460, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 redemption_date = 20 [(fix.tag)=240,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional string repo_collateral_security_type = 21 [(fix.tag)=239,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 repurchase_rate = 22 [(fix.tag)=227,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 repurchase_term = 23 [(fix.tag)=226, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_3];
    optional string security_desc = 24 [(fix.tag)=107, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional string security_exchange = 25 [(fix.tag)=207,
(fix.type)=DATATYPE_EXCHANGE, (fix.field_added)=VERSION_FIX_4_3];
    optional string security_id = 26 [(fix.tag)=48, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional SecurityIDSourceEnum security_id_source = 27 [(fix.tag)=22,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];

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    optional SecurityTypeEnum security_type = 28          [(fix.tag)=167,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional string state_or_province_of_issue = 29      [(fix.tag)=471,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 strike_price = 30            [(fix.tag)=202,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_4_3];
    optional string symbol = 31                        [(fix.tag)=55, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional SymbolSfxEnum symbol_sfx = 32             [(fix.tag)=65,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 contract_settl_month = 33        [(fix.tag)=667,
(fix.type)=DATATYPE_MONTH_YEAR, (fix.field_added)=VERSION_FIX_4_4];
    oneof cp_program_union {
      CPPProgramEnum cp_program = 34                   [(fix.tag)=875, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_4];
      fixed32 cp_program_reserved100plus = 35          [(fix.tag)=875,
(fix.type)=DATATYPE_RESERVED100PLUS, (fix.field_added)=VERSION_FIX_4_4];
    }
    optional string cp_reg_type = 36                   [(fix.tag)=876, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
    optional sfixed32 dated_date = 37                  [(fix.tag)=873, (fix.type)=DATATYPE_LOCAL_MKT_DATE,
(fix.field_added)=VERSION_FIX_4_4];
    repeated EvntGrp evnt_grp = 38                    [(fix.field_added)=VERSION_FIX_4_4];
    optional bytes instrmt_assignment_method = 39      [(fix.tag)=1049,
(fix.type)=DATATYPE_CHAR, (fix.field_added)=VERSION_FIX_4_4];
    repeated InstrumentParties instrument_parties = 40 [(fix.field_added)=VERSION_FIX_4_4];
    optional sfixed32 interest_accrual_date = 41       [(fix.tag)=874,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.LocalTimeOnly maturity_time = 42     [(fix.tag)=1079,
(fix.type)=DATATYPE_TZ_TIME_ONLY, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 min_price_increment = 43    [(fix.tag)=969,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_4];
    optional sfixed64 nt_position_limit = 44          [(fix.tag)=971, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_4];
    optional string pool = 45                         [(fix.tag)=691, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
    optional sfixed64 position_limit = 46              [(fix.tag)=970, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_4];
    optional PutOrCallEnum put_or_call = 47           [(fix.tag)=201, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_4];
    repeated SecAltIDGrp sec_alt_id_grp = 48          [(fix.field_added)=VERSION_FIX_4_4];
    optional SecurityStatusEnum security_status = 49  [(fix.tag)=965,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string security_sub_type = 50            [(fix.tag)=762,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string settle_on_open_flag = 51          [(fix.tag)=966,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string strike_currency = 52             [(fix.tag)=947,
(fix.type)=DATATYPE_CURRENCY, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 strike_multiplier = 53     [(fix.tag)=967,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 strike_value = 54          [(fix.tag)=968,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_4];
    optional TimeUnitEnum time_unit = 55             [(fix.tag)=997,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional UnitOfMeasureEnum unit_of_measure = 56   [(fix.tag)=996,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 cap_price = 57             [(fix.tag)=1199,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_5_0];
    optional ExerciseStyleEnum exercise_style = 58    [(fix.tag)=1194, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_5_0];
    optional bool flex_product_eligibility_indicator = 59 [(fix.tag)=1242,
(fix.type)=DATATYPE_BOOLEAN, (fix.field_added)=VERSION_FIX_5_0];

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    optional bool flexible_indicator = 60 [(fix.tag)=1244,
(fix.type)=DATATYPE_BOOLEAN, (fix.field_added)=VERSION_FIX_5_0];
    optional fix.Decimal64 floor_price = 61 [(fix.tag)=1200,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_5_0];
    optional ListMethodEnum list_method = 62 [(fix.tag)=1198, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_5_0];
    optional fix.Decimal64 min_price_increment_amount = 63 [(fix.tag)=1146, (fix.type)=DATATYPE_AMT,
(fix.field_added)=VERSION_FIX_5_0];
    optional fix.Decimal64 opt_payout_amount = 64 [(fix.tag)=1195, (fix.type)=DATATYPE_AMT,
(fix.field_added)=VERSION_FIX_5_0];
    optional PriceQuoteMethodEnum price_quote_method = 65 [(fix.tag)=1196,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_0];
    optional PriceUnitOfMeasureEnum price_unit_of_measure = 66 [(fix.tag)=1191,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_0];
    optional fix.Decimal64 price_unit_of_measure_qty = 67 [(fix.tag)=1192, (fix.type)=DATATYPE_QTY,
(fix.field_added)=VERSION_FIX_5_0];
    optional string product_complex = 68 [(fix.tag)=1227,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_0];
    optional string security_group = 69 [(fix.tag)=1151, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_5_0];
    optional SecurityXML security_xml = 70 [(fix.field_added)=VERSION_FIX_5_0];
    optional SettlMethodEnum settl_method = 71 [(fix.tag)=1193,
(fix.type)=DATATYPE_CHAR, (fix.field_added)=VERSION_FIX_5_0];
    optional fix.Decimal64 unit_of_measure_qty = 72 [(fix.tag)=1147, (fix.type)=DATATYPE_QTY,
(fix.field_added)=VERSION_FIX_5_0];
    optional ValuationMethodEnum valuation_method = 73 [(fix.tag)=1197,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_0];
    repeated ComplexEvents complex_events = 74 [(fix.field_added)=VERSION_FIX_5_OSP1];
    optional ContractMultiplierUnitEnum contract_multiplier_unit = 75 [(fix.tag)=1435,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=80];
    oneof flow_schedule_type_union {
        FlowScheduleTypeEnum flow_schedule_type = 76 [(fix.tag)=1439,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=80];
        fixed32 flow_schedule_type_reserved100plus = 77 [(fix.tag)=1439,
(fix.type)=DATATYPE_RESERVED100PLUS, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=80];
    }
    optional fix.Decimal64 attachment_point = 78 [(fix.tag)=1457,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional fix.Decimal64 detachment_point = 79 [(fix.tag)=1458,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional fix.Decimal64 notional_percentage_outstanding = 80 [(fix.tag)=1451,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional fix.Decimal64 original_notional_percentage_outstanding = 81 [(fix.tag)=1452,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional RestructuringTypeEnum restructuring_type = 82 [(fix.tag)=1449,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional SeniorityEnum seniority = 83 [(fix.tag)=1450,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional OptPayoutTypeEnum opt_payout_type = 84 [(fix.tag)=1482, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
    optional StrikePriceBoundaryMethodEnum strike_price_boundary_method = 85 [(fix.tag)=1479,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
    optional fix.Decimal64 strike_price_boundary_precision = 86 [(fix.tag)=1480,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
    oneof strike_price_determination_method_union {
        StrikePriceDeterminationMethodEnum strike_price_determination_method = 87 [(fix.tag)=1478,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
        fixed32 strike_price_determination_method_reserved100plus = 88 [(fix.tag)=1478,
(fix.type)=DATATYPE_RESERVED100PLUS, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
    }
    optional UnderlyingPriceDeterminationMethodEnum underlying_price_determination_method = 89
[(fix.tag)=1481, (fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1,
(fix.field_added_ep)=92];

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}

message SecAltIDGrp {
  optional string security_alt_id = 1 [(fix.tag)=455, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
  optional SecurityAltIDSourceEnum security_alt_id_source = 2 [(fix.tag)=456,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
}

message SecurityXML {
  optional string security_xml = 1 [(fix.tag)=1185, (fix.type)=DATATYPE_XML_DATA,
(fix.field_added)=VERSION_FIX_5_0];
  optional sfixed64 security_xml_len = 2 [(fix.tag)=1184,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_5_0];
  optional string security_xml_schema = 3 [(fix.tag)=1186,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_0];
}

message EvntGrp {
  optional sfixed32 event_date = 1 [(fix.tag)=866, (fix.type)=DATATYPE_LOCAL_MKT_DATE,
(fix.field_added)=VERSION_FIX_4_4];
  optional fix.Decimal64 event_px = 2 [(fix.tag)=867, (fix.type)=DATATYPE_PRICE,
(fix.field_added)=VERSION_FIX_4_4];
  optional string event_text = 3 [(fix.tag)=868, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
  oneof event_type_union {
    EventTypeEnum event_type = 4 [(fix.tag)=865, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_4];
    fixed32 event_type_reserved100plus = 5 [(fix.tag)=865,
(fix.type)=DATATYPE_RESERVED100PLUS, (fix.field_added)=VERSION_FIX_4_4];
  }
  optional fix.Timestamp event_time = 6 [(fix.tag)=1145,
(fix.type)=DATATYPE_UTC_TIMESTAMP, (fix.field_added)=VERSION_FIX_5_0];
}

message InstrumentParties {
  optional string instrument_party_id = 1 [(fix.tag)=1019,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
  optional InstrumentPartyIDSourceEnum instrument_party_id_source = 2 [(fix.tag)=1050,
(fix.type)=DATATYPE_CHAR, (fix.field_added)=VERSION_FIX_4_4];
  optional InstrumentPartyRoleEnum instrument_party_role = 3 [(fix.tag)=1051,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_4_4];
  repeated InstrumentPtysSubGrp instrument_ptys_sub_grp = 4
[(fix.field_added)=VERSION_FIX_4_4];
}

message InstrumentPtysSubGrp {
  optional string instrument_party_sub_id = 1 [(fix.tag)=1053,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
  optional InstrumentPartySubIDTypeEnum instrument_party_sub_id_type = 2 [(fix.tag)=1054,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_4_4];
}

message ComplexEvents {
  repeated ComplexEventDates complex_event_dates = 1 [(fix.field_added)=VERSION_FIX_5_OSP1];
  optional ComplexEventConditionEnum complex_event_condition = 2 [(fix.tag)=1490,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
  optional fix.Decimal64 complex_event_price = 3 [(fix.tag)=1486,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
  optional ComplexEventPriceBoundaryMethodEnum complex_event_price_boundary_method = 4
[(fix.tag)=1487, (fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1,
(fix.field_added_ep)=92];
}

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    optional fix.Decimal64 complex_event_price_boundary_precision = 5          [(fix.tag)=1488,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
    optional ComplexEventPriceTimeTypeEnum complex_event_price_time_type = 6 [(fix.tag)=1489,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
    optional ComplexEventTypeEnum complex_event_type = 7 [(fix.tag)=1484, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
    optional fix.Decimal64 complex_opt_payout_amount = 8 [(fix.tag)=1485, (fix.type)=DATATYPE_AMT,
(fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
}

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message ComplexEventDates {
    repeated ComplexEventTimes complex_event_times = 1 [(fix.field_added)=VERSION_FIX_5_OSP1];
    optional fix.Timestamp complex_event_end_date = 2 [(fix.tag)=1493,
(fix.type)=DATATYPE_UTC_TIMESTAMP, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
    optional fix.Timestamp complex_event_start_date = 3 [(fix.tag)=1492,
(fix.type)=DATATYPE_UTC_TIMESTAMP, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
}

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message ComplexEventTimes {
    optional fix.TimeOnly complex_event_end_time = 1 [(fix.tag)=1496,
(fix.type)=DATATYPE_UTC_TIME_ONLY, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
    optional fix.TimeOnly complex_event_start_time = 2 [(fix.tag)=1495,
(fix.type)=DATATYPE_UTC_TIME_ONLY, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=92];
}

```

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message Parties {
    optional string party_id = 1 [(fix.tag)=448, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional PartyIDSourceEnum party_id_source = 2 [(fix.tag)=447, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_4_3];
    optional PartyRoleEnum party_role = 3 [(fix.tag)=452, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_3];
    repeated PtysSubGrp ptys_sub_grp = 4 [(fix.field_added)=VERSION_FIX_4_4];
}

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message PtysSubGrp {
    optional string party_sub_id = 1 [(fix.tag)=523, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
    oneof party_sub_id_type union {
        PartySubIDTypeEnum party_sub_id_type = 2 [(fix.tag)=803,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_4_4];
        fixed32 party_sub_id_type_reserved4000plus = 3 [(fix.tag)=803,
(fix.type)=DATATYPE_RESERVED4000PLUS, (fix.field_added)=VERSION_FIX_4_4];
    }
}

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message FinancingDetails {
    optional string agreement_currency = 1 [(fix.tag)=918,
(fix.type)=DATATYPE_CURRENCY, (fix.field_added)=VERSION_FIX_4_4];
    optional sfixed32 agreement_date = 2 [(fix.tag)=915,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_4];
    optional string agreement_desc = 3 [(fix.tag)=913, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
    optional string agreement_id = 4 [(fix.tag)=914, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
    optional DeliveryTypeEnum delivery_type = 5 [(fix.tag)=919, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_4];
    optional sfixed32 end_date = 6 [(fix.tag)=917, (fix.type)=DATATYPE_LOCAL_MKT_DATE,
(fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 margin_ratio = 7 [(fix.tag)=898,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_4_4];
    optional sfixed32 start_date = 8 [(fix.tag)=916, (fix.type)=DATATYPE_LOCAL_MKT_DATE,
(fix.field_added)=VERSION_FIX_4_4];
}

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    optional TerminationTypeEnum termination_type = 9          [(fix.tag)=788, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_4];
}

message UndInstrmtGrp {
    optional UnderlyingInstrument underlying_instrument = 1 [(fix.field_added)=VERSION_FIX_4_4];
}

message UnderlyingInstrument {
    optional string encoded_underlying_issuer = 1            [(fix.tag)=363, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 encoded_underlying_issuer_len = 2      [(fix.tag)=362,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_4_3];
    optional string encoded_underlying_security_desc = 3     [(fix.tag)=365, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 encoded_underlying_security_desc_len = 4 [(fix.tag)=364,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_cfi_code = 5                  [(fix.tag)=463,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 underlying_contract_multiplier = 6 [(fix.tag)=436,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_country_of_issue = 7          [(fix.tag)=592,
(fix.type)=DATATYPE_COUNTRY, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 underlying_coupon_payment_date = 8     [(fix.tag)=241,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 underlying_coupon_rate = 9        [(fix.tag)=435,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_credit_rating = 10            [(fix.tag)=256,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 underlying_factor = 11            [(fix.tag)=246,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_instr_registry = 12           [(fix.tag)=595,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 underlying_issue_date = 13             [(fix.tag)=242,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_issuer = 14                  [(fix.tag)=306,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_locale_of_issue = 15          [(fix.tag)=594,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 underlying_maturity_date = 16         [(fix.tag)=542,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 underlying_maturity_month_year = 17   [(fix.tag)=313,
(fix.type)=DATATYPE_MONTH_YEAR, (fix.field_added)=VERSION_FIX_4_3];
    optional bytes underlying_opt_attribute = 18             [(fix.tag)=317, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_4_3];
    optional UnderlyingProductEnum underlying_product = 19 [(fix.tag)=462, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 underlying_put_or_call = 20           [(fix.tag)=315, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 underlying_redemption_date = 21       [(fix.tag)=247,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_repo_collateral_security_type = 22 [(fix.tag)=243,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 underlying_repurchase_rate = 23 [(fix.tag)=245,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 underlying_repurchase_term = 24       [(fix.tag)=244, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_security_desc = 25           [(fix.tag)=307,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_security_exchange = 26       [(fix.tag)=308,
(fix.type)=DATATYPE_EXCHANGE, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_security_id = 27             [(fix.tag)=309,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
}

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    optional UnderlyingSecurityIDSourceEnum underlying_security_id_source = 28 [(fix.tag)=305,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional UnderlyingSecurityTypeEnum underlying_security_type = 29 [(fix.tag)=310,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_state_or_province_of_issue = 30 [(fix.tag)=593,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 underlying_strike_price = 31 [(fix.tag)=316,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_4_3];
    optional string underlying_symbol = 32 [(fix.tag)=311,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional UnderlyingSymbolSfxEnum underlying_symbol_sfx = 33 [(fix.tag)=312,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    repeated UndSecAltIDGrp und_sec_alt_id_grp = 34 [(fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_adjusted_quantity = 35 [(fix.tag)=1044,
(fix.type)=DATATYPE_QTY, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_allocation_percent = 36 [(fix.tag)=972,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_cap_value = 37 [(fix.tag)=1038, (fix.type)=DATATYPE_AMT,
(fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_cash_amount = 38 [(fix.tag)=973, (fix.type)=DATATYPE_AMT,
(fix.field_added)=VERSION_FIX_4_4];
    optional UnderlyingCashTypeEnum underlying_cash_type = 39 [(fix.tag)=974,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string underlying_cp_program = 40 [(fix.tag)=877,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string underlying_cp_reg_type = 41 [(fix.tag)=878,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string underlying_currency = 42 [(fix.tag)=318,
(fix.type)=DATATYPE_CURRENCY, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_current_value = 43 [(fix.tag)=885, (fix.type)=DATATYPE_AMT,
(fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_dirty_price = 44 [(fix.tag)=882,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_end_price = 45 [(fix.tag)=883,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_end_value = 46 [(fix.tag)=886, (fix.type)=DATATYPE_AMT,
(fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_fx_rate = 47 [(fix.tag)=1045,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_4];
    optional UnderlyingFXRateCalcEnum underlying_fx_rate_calc = 48 [(fix.tag)=1046,
(fix.type)=DATATYPE_CHAR, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_px = 49 [(fix.tag)=810,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_qty = 50 [(fix.tag)=879, (fix.type)=DATATYPE_QTY,
(fix.field_added)=VERSION_FIX_4_4];
    optional string underlying_security_sub_type = 51 [(fix.tag)=763,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string underlying_settl_method = 52 [(fix.tag)=1039,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional UnderlyingSettlementTypeEnum underlying_settlement_type = 53 [(fix.tag)=975,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 underlying_start_value = 54 [(fix.tag)=884, (fix.type)=DATATYPE_AMT,
(fix.field_added)=VERSION_FIX_4_4];
    repeated UnderlyingStipulations underlying_stipulations = 55
[(fix.field_added)=VERSION_FIX_4_4];
    optional string underlying_strike_currency = 56 [(fix.tag)=941,
(fix.type)=DATATYPE_CURRENCY, (fix.field_added)=VERSION_FIX_4_4];
    optional UnderlyingTimeUnitEnum underlying_time_unit = 57 [(fix.tag)=1000,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional UnderlyingUnitOfMeasureEnum underlying_unit_of_measure = 58 [(fix.tag)=998,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    repeated UndlyInstrumentParties undly_instrument_parties = 59
[(fix.field_added)=VERSION_FIX_4_4];

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    optional UnderlyingExerciseStyleEnum underlying_exercise_style = 60 [(fix.tag)=1419,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_0];
    optional fix.LocalTimeOnly underlying_maturity_time = 61 [(fix.tag)=1213,
(fix.type)=DATATYPE_TZ_TIME_ONLY, (fix.field_added)=VERSION_FIX_5_0];
    optional UnderlyingPriceUnitOfMeasureEnum underlying_price_unit_of_measure = 62
[(fix.tag)=1424, (fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_0];
    optional fix.Decimal64 underlying_price_unit_of_measure_qty = 63 [(fix.tag)=1425,
(fix.type)=DATATYPE_QTY, (fix.field_added)=VERSION_FIX_5_0];
    optional fix.Decimal64 underlying_unit_of_measure_qty = 64 [(fix.tag)=1423,
(fix.type)=DATATYPE_QTY, (fix.field_added)=VERSION_FIX_5_0];
    optional UnderlyingContractMultiplierUnitEnum underlying_contract_multiplier_unit = 65
[(fix.tag)=1437, (fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1,
(fix.field_added_ep)=80];
    oneof underlying_flow_schedule_type_union {
        UnderlyingFlowScheduleTypeEnum underlying_flow_schedule_type = 66 [(fix.tag)=1441,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=80];
        fixed32 underlying_flow_schedule_type_reserved100plus = 67 [(fix.tag)=1441,
(fix.type)=DATATYPE_RESERVED100PLUS, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=80];
    }
    optional fix.Decimal64 underlying_attachment_point = 68 [(fix.tag)=1459,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional fix.Decimal64 underlying_detachment_point = 69 [(fix.tag)=1460,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional fix.Decimal64 underlying_notional_percentage_outstanding = 70 [(fix.tag)=1455,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional fix.Decimal64 underlying_original_notional_percentage_outstanding = 71
[(fix.tag)=1456, (fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_5_OSP1,
(fix.field_added_ep)=83];
    optional UnderlyingRestructuringTypeEnum underlying_restructuring_type = 72 [(fix.tag)=1453,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
    optional UnderlyingSeniorityEnum underlying_seniority = 73 [(fix.tag)=1454,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_OSP1, (fix.field_added_ep)=83];
}

message UndSecAltIDGrp {
    optional string underlying_security_alt_id = 1 [(fix.tag)=458,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional UnderlyingSecurityAltIDSourceEnum underlying_security_alt_id_source = 2
[(fix.tag)=459, (fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
}

message UnderlyingStipulations {
    optional UnderlyingStipTypeEnum underlying_stip_type = 1 [(fix.tag)=888,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string underlying_stip_value = 2 [(fix.tag)=889,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
}

message UndlyInstrumentParties {
    optional string underlying_instrument_party_id = 1 [(fix.tag)=1059,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional UnderlyingInstrumentPartyIDSourceEnum underlying_instrument_party_id_source = 2
[(fix.tag)=1060, (fix.type)=DATATYPE_CHAR, (fix.field_added)=VERSION_FIX_4_4];
    optional UnderlyingInstrumentPartyRoleEnum underlying_instrument_party_role = 3
[(fix.tag)=1061, (fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_4_4];
    repeated UndlyInstrumentPtysSubGrp undly_instrument_ptys_sub_grp = 4
[(fix.field_added)=VERSION_FIX_4_4];
}

message UndlyInstrumentPtysSubGrp {
    optional string underlying_instrument_party_sub_id = 1 [(fix.tag)=1063,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
}

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    optional UnderlyingInstrumentPartySubIDTypeEnum underlying_instrument_party_sub_id_type = 2
    [(fix.tag)=1064, (fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_4_4];
}

message OrderQtyData {
    optional fix.Decimal64 cash_order_qty = 1 [(fix.tag)=152, (fix.type)=DATATYPE_QTY,
(fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 order_percent = 2 [(fix.tag)=516,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 order_qty = 3 [(fix.tag)=38, (fix.type)=DATATYPE_QTY,
(fix.field_added)=VERSION_FIX_4_3];
    optional RoundingDirectionEnum rounding_direction = 4 [(fix.tag)=468, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 rounding_modulus = 5 [(fix.tag)=469,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_3];
}

message Stipulations {
    optional StipulationTypeEnum stipulation_type = 1 [(fix.tag)=233,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional string stipulation_value = 2 [(fix.tag)=234,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
}

message InstrmtLegIOIGrp {
    optional InstrumentLeg instrument_leg = 1 [(fix.field_added)=VERSION_FIX_4_4];
    optional LegIOIQtyEnum leg_ioi_qty = 2 [(fix.tag)=682,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    repeated LegStipulations leg_stipulations = 3 [(fix.field_added)=VERSION_FIX_4_4];
}

message InstrumentLeg {
    optional string encoded_leg_issuer = 1 [(fix.tag)=619, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 encoded_leg_issuer_len = 2 [(fix.tag)=618,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_4_3];
    optional string encoded_leg_security_desc = 3 [(fix.tag)=622, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 encoded_leg_security_desc_len = 4 [(fix.tag)=621,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_4_3];
    optional string leg_cfi_code = 5 [(fix.tag)=608, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 leg_contract_multiplier = 6 [(fix.tag)=614,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_3];
    optional string leg_country_of_issue = 7 [(fix.tag)=596,
(fix.type)=DATATYPE_COUNTRY, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 leg_coupon_payment_date = 8 [(fix.tag)=248,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 leg_coupon_rate = 9 [(fix.tag)=615,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_4_3];
    optional string leg_credit_rating = 10 [(fix.tag)=257,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 leg_factor = 11 [(fix.tag)=253,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_3];
    optional string leg_instr_registry = 12 [(fix.tag)=599,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 leg_issue_date = 13 [(fix.tag)=249,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional string leg_issuer = 14 [(fix.tag)=617, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional string leg_locale_of_issue = 15 [(fix.tag)=598,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
}

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    optional sfixed32 leg_maturity_date = 16                [(fix.tag)=611,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 leg_maturity_month_year = 17         [(fix.tag)=610,
(fix.type)=DATATYPE_MONTH_YEAR, (fix.field_added)=VERSION_FIX_4_3];
    optional bytes leg_opt_attribute = 18                 [(fix.tag)=613, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_4_3];
    optional LegProductEnum leg_product = 19             [(fix.tag)=607, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 leg_ratio_qty = 20            [(fix.tag)=623,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 leg_redemption_date = 21           [(fix.tag)=254,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_3];
    optional string leg_repo_collateral_security_type = 22 [(fix.tag)=250,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 leg_repurchase_rate = 23       [(fix.tag)=252,
(fix.type)=DATATYPE_PERCENTAGE, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed64 leg_repurchase_term = 24           [(fix.tag)=251, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_3];
    optional string leg_security_desc = 25               [(fix.tag)=620,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional string leg_security_exchange = 26           [(fix.tag)=616,
(fix.type)=DATATYPE_EXCHANGE, (fix.field_added)=VERSION_FIX_4_3];
    optional string leg_security_id = 27                 [(fix.tag)=602,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional LegSecurityIDSourceEnum leg_security_id_source = 28 [(fix.tag)=603,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional LegSecurityTypeEnum leg_security_type = 29   [(fix.tag)=609,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional LegSideEnum leg_side = 30 [(fix.tag)=624, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_4_3];
    optional string leg_state_or_province_of_issue = 31  [(fix.tag)=597,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 leg_strike_price = 32         [(fix.tag)=612,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_4_3];
    optional string leg_symbol = 33 [(fix.tag)=600, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_3];
    optional LegSymbolsSfxEnum leg_symbol_sfx = 34       [(fix.tag)=601,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 leg_contract_settl_month = 35      [(fix.tag)=955,
(fix.type)=DATATYPE_MONTH_YEAR, (fix.field_added)=VERSION_FIX_4_4];
    optional string leg_currency = 36 [(fix.tag)=556, (fix.type)=DATATYPE_CURRENCY,
(fix.field_added)=VERSION_FIX_4_4];
    optional sfixed32 leg_dated_date = 37                [(fix.tag)=739,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_4];
    optional sfixed32 leg_interest_accrual_date = 38     [(fix.tag)=956,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 leg_option_ratio = 39         [(fix.tag)=1017,
(fix.type)=DATATYPE_FLOAT, (fix.field_added)=VERSION_FIX_4_4];
    optional string leg_pool = 40 [(fix.tag)=740, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 leg_price = 41                [(fix.tag)=566,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_4_4];
    repeated LegSecAltIDGrp leg_sec_alt_id_grp = 42     [(fix.field_added)=VERSION_FIX_4_4];
    optional string leg_security_sub_type = 43           [(fix.tag)=764,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string leg_strike_currency = 44             [(fix.tag)=942,
(fix.type)=DATATYPE_CURRENCY, (fix.field_added)=VERSION_FIX_4_4];
    optional LegTimeUnitEnum leg_time_unit = 45         [(fix.tag)=1001,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional LegUnitOfMeasureEnum leg_unit_of_measure = 46 [(fix.tag)=999,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional LegExerciseStyleEnum leg_exercise_style = 47 [(fix.tag)=1420, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_5_0];

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    optional fix.LocalTimeOnly leg_maturity_time = 48      [(fix.tag)=1212,
(fix.type)=DATATYPE_TZ_TIME_ONLY, (fix.field_added)=VERSION_FIX_5_0];
    optional LegPriceUnitOfMeasureEnum leg_price_unit_of_measure = 49      [(fix.tag)=1421,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_5_0];
    optional fix.Decimal64 leg_price_unit_of_measure_qty = 50      [(fix.tag)=1422,
(fix.type)=DATATYPE_QTY, (fix.field_added)=VERSION_FIX_5_0];
    optional sfixed64 leg_put_or_call = 51      [(fix.tag)=1358, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_5_0];
    optional fix.Decimal64 leg_unit_of_measure_qty = 52      [(fix.tag)=1224, (fix.type)=DATATYPE_QTY,
(fix.field_added)=VERSION_FIX_5_0];
    optional LegContractMultiplierUnitEnum leg_contract_multiplier_unit = 53      [(fix.tag)=1436,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_0SP1, (fix.field_added_ep)=80];
    oneof leg_flow_schedule_type_union {
        LegFlowScheduleTypeEnum leg_flow_schedule_type = 54      [(fix.tag)=1440,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_5_0SP1, (fix.field_added_ep)=80];
        fixed32 leg_flow_schedule_type_reserved100plus = 55      [(fix.tag)=1440,
(fix.type)=DATATYPE_RESERVED100PLUS, (fix.field_added)=VERSION_FIX_5_0SP1, (fix.field_added_ep)=80];
    }
}

message LegSecAltIDGrp {
    optional string leg_security_alt_id = 1      [(fix.tag)=605,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional LegSecurityAltIDSourceEnum leg_security_alt_id_source = 2      [(fix.tag)=606,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
}

message LegStipulations {
    optional LegStipulationTypeEnum leg_stipulation_type = 1      [(fix.tag)=688,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional string leg_stipulation_value = 2      [(fix.tag)=689,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
}

message RoutingGrp {
    optional string routing_id = 1      [(fix.tag)=217, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_4];
    optional RoutingTypeEnum routing_type = 2      [(fix.tag)=216, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_4];
}

message SpreadOrBenchmarkCurveData {
    optional string benchmark_curve_currency = 1      [(fix.tag)=220,
(fix.type)=DATATYPE_CURRENCY, (fix.field_added)=VERSION_FIX_4_3];
    optional BenchmarkCurveNameEnum benchmark_curve_name = 2      [(fix.tag)=221,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional string benchmark_curve_point = 3      [(fix.tag)=222,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 spread = 4      [(fix.tag)=218, (fix.type)=DATATYPE_PRICE_OFFSET,
(fix.field_added)=VERSION_FIX_4_3];
    optional fix.Decimal64 benchmark_price = 5      [(fix.tag)=662,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_4_4];
    optional BenchmarkPriceTypeEnum benchmark_price_type = 6      [(fix.tag)=663,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_4_4];
    optional string benchmark_security_id = 7      [(fix.tag)=699,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
    optional BenchmarkSecurityIDSourceEnum benchmark_security_id_source = 8      [(fix.tag)=761,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_4];
}

message YieldData {
    optional fix.Decimal64 yield = 1      [(fix.tag)=236, (fix.type)=DATATYPE_PERCENTAGE,
(fix.field_added)=VERSION_FIX_4_3];
}

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    optional YieldTypeEnum yield_type = 2                [(fix.tag)=235,
(fix.type)=DATATYPE_STRING, (fix.field_added)=VERSION_FIX_4_3];
    optional sfixed32 yield_calc_date = 3                [(fix.tag)=701,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_4];
    optional sfixed32 yield_redemption_date = 4         [(fix.tag)=696,
(fix.type)=DATATYPE_LOCAL_MKT_DATE, (fix.field_added)=VERSION_FIX_4_4];
    optional fix.Decimal64 yield_redemption_price = 5   [(fix.tag)=697,
(fix.type)=DATATYPE_PRICE, (fix.field_added)=VERSION_FIX_4_4];
    optional YieldRedemptionPriceTypeEnum yield_redemption_price_type = 6   [(fix.tag)=698,
(fix.type)=DATATYPE_INT, (fix.field_added)=VERSION_FIX_4_4];
}

//
//   FIX Unified Repository mapping to Google Protocol Buffers
//
//   Copyright (c) FIX Trading Community. All Rights Reserved.
//
//   Category: Indication
//
//   File: indication.proto
//
syntax = "proto2";
import "meta.proto";
import "fix.proto";
import "session.proto";
import "common.proto";

option java_package = "org.fixprotocol.components";
option java_outer_classname = "Indication";

package Indication;

enum IOIQualifierEnum {
    IOI_QUALIFIER_UNSPECIFIED = 0;
    IOI_QUALIFIER_ALL_OR_NONE = 1                [(fix.enum_value)="A", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_AT_THE_CLOSE = 2              [(fix.enum_value)="C", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_AT_THE_MARKET = 3             [(fix.enum_value)="Q", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_AT_THE_OPEN = 4              [(fix.enum_value)="O", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_CROSSING_OPPORTUNITY = 5      [(fix.enum_value)="X",
(fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_INDICATION = 6                [(fix.enum_value)="W", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_IN_TOUCH_WITH = 7             [(fix.enum_value)="I", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_LIMIT = 8                    [(fix.enum_value)="L", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_MORE_BEHIND = 9              [(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_PORTFOLIO_SHOWN = 10          [(fix.enum_value)="S", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_TAKING_APOSITION = 11         [(fix.enum_value)="P", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_THROUGH_THE_DAY = 12         [(fix.enum_value)="T", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_VERSUS = 13                  [(fix.enum_value)="V", (fix.enum_added)=VERSION_FIX_3_0];
    IOI_QUALIFIER_AT_THE_MIDPOINT = 14         [(fix.enum_value)="Y", (fix.enum_added)=VERSION_FIX_4_1];
    IOI_QUALIFIER_PRE_OPEN = 15                [(fix.enum_value)="Z", (fix.enum_added)=VERSION_FIX_4_1];
    IOI_QUALIFIER_READY_TO_TRADE = 16          [(fix.enum_value)="R", (fix.enum_added)=VERSION_FIX_4_2];
    IOI_QUALIFIER_MARKET_ON_CLOSE = 17         [(fix.enum_value)="B", (fix.enum_added)=VERSION_FIX_4_3];
    IOI_QUALIFIER_VWAP = 18                    [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_3];
}

enum IOITransTypeEnum {
    IOI_TRANS_TYPE_UNSPECIFIED = 0;
    IOI_TRANS_TYPE_CANCEL = 1                  [(fix.enum_value)="C", (fix.enum_added)=VERSION_FIX_2_7];
    IOI_TRANS_TYPE_NEW = 2                    [(fix.enum_value)="N", (fix.enum_added)=VERSION_FIX_2_7];
    IOI_TRANS_TYPE_REPLACE = 3                [(fix.enum_value)="R", (fix.enum_added)=VERSION_FIX_2_7];
}

enum SideEnum {

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SIDE_UNSPECIFIED = 0;
SIDE_BUY = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_2_7];
SIDE_BUY_MINUS = 2 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_2_7];
SIDE_SELL = 3 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_2_7];
SIDE_SELL_PLUS = 4 [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_2_7];
SIDE_SELL_SHORT = 5 [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_2_7];
SIDE_SELL_SHORT_EXEMPT = 6 [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_2_7];
SIDE_CROSS = 7 [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_1];
SIDE_UNDISCLOSED = 8 [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_1];
SIDE_CROSS_SHORT = 9 [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_2];
SIDE_AS_DEFINED = 10 [(fix.enum_value)="B", (fix.enum_added)=VERSION_FIX_4_3];
SIDE_CROSS_SHORT_EXEMPT = 11 [(fix.enum_value)="A", (fix.enum_added)=VERSION_FIX_4_3];
SIDE_OPPOSITE = 12 [(fix.enum_value)="C", (fix.enum_added)=VERSION_FIX_4_3];
SIDE_BORROW = 13 [(fix.enum_value)="G", (fix.enum_added)=VERSION_FIX_4_4];
SIDE_LEND = 14 [(fix.enum_value)="F", (fix.enum_added)=VERSION_FIX_4_4];
SIDE_REDEEM = 15 [(fix.enum_value)="E", (fix.enum_added)=VERSION_FIX_4_4];
SIDE_SUBSCRIBE = 16 [(fix.enum_value)="D", (fix.enum_added)=VERSION_FIX_4_4];
}

enum QtyTypeEnum {
  QTY_TYPE_UNSPECIFIED = 0;
  QTY_TYPE_CONTRACTS = 1 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_4];
  QTY_TYPE_UNITS = 2 [(fix.enum_value)="0", (fix.enum_added)=VERSION_FIX_4_4];
  QTY_TYPE_UNITS_OF_MEASURE_PER_TIME_UNIT = 3 [(fix.enum_value)="2",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=5];
}

enum IOIQtyEnum {
  IOI_QTY_UNSPECIFIED = 0;
  IOI_QTY_LARGE = 1 [(fix.enum_value)="L", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=25];
  IOI_QTY_MEDIUM = 2 [(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=25];
  IOI_QTY_SMALL = 3 [(fix.enum_value)="S", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=25];
  IOI_QTY_UNDISCLOSED_QUANTITY = 4 [(fix.enum_value)="U", (fix.enum_added)=VERSION_FIX_4_4,
(fix.enum_added_ep)=25];
}

enum PriceTypeEnum {
  PRICE_TYPE_UNSPECIFIED = 0;
  PRICE_TYPE_FIXED_AMOUNT = 1 [(fix.enum_value)="3", (fix.enum_added)=VERSION_FIX_4_2];
  PRICE_TYPE_PERCENTAGE = 2 [(fix.enum_value)="1", (fix.enum_added)=VERSION_FIX_4_2];
  PRICE_TYPE_PER_UNIT = 3 [(fix.enum_value)="2", (fix.enum_added)=VERSION_FIX_4_2];
  PRICE_TYPE_DISCOUNT = 4 [(fix.enum_value)="4", (fix.enum_added)=VERSION_FIX_4_3];
  PRICE_TYPE_PREMIUM = 5 [(fix.enum_value)="5", (fix.enum_added)=VERSION_FIX_4_3];
  PRICE_TYPE_SPREAD = 6 [(fix.enum_value)="6", (fix.enum_added)=VERSION_FIX_4_3];
  PRICE_TYPE_TEDPRICE = 7 [(fix.enum_value)="7", (fix.enum_added)=VERSION_FIX_4_3];
  PRICE_TYPE_TEDYIELD = 8 [(fix.enum_value)="8", (fix.enum_added)=VERSION_FIX_4_3];
  PRICE_TYPE_FIXED_CABINET_TRADE_PRICE = 9 [(fix.enum_value)="10",
(fix.enum_added)=VERSION_FIX_4_4];
  PRICE_TYPE_VARIABLE_CABINET_TRADE_PRICE = 10 [(fix.enum_value)="11",
(fix.enum_added)=VERSION_FIX_4_4];
  PRICE_TYPE_YIELD = 11 [(fix.enum_value)="9", (fix.enum_added)=VERSION_FIX_4_4];
  PRICE_TYPE_PRODUCT_TICKS_IN_EIGHTS = 12 [(fix.enum_value)="15",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
  PRICE_TYPE_PRODUCT_TICKS_IN_FOURTHS = 13 [(fix.enum_value)="14",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
  PRICE_TYPE_PRODUCT_TICKS_IN_HALFS = 14 [(fix.enum_value)="13",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
  PRICE_TYPE_PRODUCT_TICKS_IN_ONE_TWENTY_EIGHTS = 15 [(fix.enum_value)="19",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
}

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    PRICE_TYPE_PRODUCT_TICKS_IN_SIXTEENTHS = 16          [(fix.enum_value)="16",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    PRICE_TYPE_PRODUCT_TICKS_IN_SIXTY_FORTHS = 17        [(fix.enum_value)="18",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
    PRICE_TYPE_PRODUCT_TICKS_IN_THIRTY_SECONDS = 18      [(fix.enum_value)="17",
(fix.enum_added)=VERSION_FIX_4_4, (fix.enum_added_ep)=19];
}

enum IOIQltyIndEnum {
    IOI_QLTY_IND_UNSPECIFIED = 0;
    IOI_QLTY_IND_HIGH = 1          [(fix.enum_value)="H", (fix.enum_added)=VERSION_FIX_2_7];
    IOI_QLTY_IND_LOW = 2           [(fix.enum_value)="L", (fix.enum_added)=VERSION_FIX_2_7];
    IOI_QLTY_IND_MEDIUM = 3        [(fix.enum_value)="M", (fix.enum_added)=VERSION_FIX_2_7];
}

message IOIQualGrp {
    optional IOIQualifierEnum ioi_qualifier = 1          [(fix.tag)=104, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_4_4];
}

message IOI {
    option (fix.msg_type_value)="6";
    optional string currency = 1          [(fix.tag)=15, (fix.type)=DATATYPE_CURRENCY,
(fix.field_added)=VERSION_FIX_2_7];
    optional string ioi_id = 2           [(fix.tag)=23, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_2_7];
    optional IOIQltyIndEnum ioi_qlty_ind = 3          [(fix.tag)=25, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_2_7];
    oneof ioi_qty_union {
        IOIQtyEnum ioi_qty = 4          [(fix.tag)=27, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_2_7];
        fix.Decimal64 ioi_qty_qty = 5    [(fix.tag)=27, (fix.type)=DATATYPE_QTY,
(fix.field_added)=VERSION_FIX_2_7];
    }
    optional string ioi_ref_id = 6        [(fix.tag)=26, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_2_7];
    optional IOITransTypeEnum ioi_trans_type = 7      [(fix.tag)=28, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_2_7];
    optional fix.Decimal64 price = 8      [(fix.tag)=44, (fix.type)=DATATYPE_PRICE,
(fix.field_added)=VERSION_FIX_2_7];
    optional SideEnum side = 9           [(fix.tag)=54, (fix.type)=DATATYPE_CHAR,
(fix.field_added)=VERSION_FIX_2_7];
    optional Session.StandardHeader standard_header = 10 [(fix.field_added)=VERSION_FIX_2_7];
    optional Session.StandardTrailer standard_trailer = 11 [(fix.field_added)=VERSION_FIX_2_7];
    optional string text = 12            [(fix.tag)=58, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_2_7];
    optional fix.Timestamp valid_until_time = 13      [(fix.tag)=62,
(fix.type)=DATATYPE_UTC_TIMESTAMP, (fix.field_added)=VERSION_FIX_2_7];
    optional bool ioi_natural_flag = 14 [(fix.tag)=130, (fix.type)=DATATYPE_BOOLEAN,
(fix.field_added)=VERSION_FIX_4_0];
    optional fix.Timestamp transact_time = 15         [(fix.tag)=60,
(fix.type)=DATATYPE_UTC_TIMESTAMP, (fix.field_added)=VERSION_FIX_4_1];
    optional string urllink = 16          [(fix.tag)=149, (fix.type)=DATATYPE_STRING,
(fix.field_added)=VERSION_FIX_4_1];
    optional string encoded_text = 17     [(fix.tag)=355, (fix.type)=DATATYPE_DATA,
(fix.field_added)=VERSION_FIX_4_2];
    optional sfixed64 encoded_text_len = 18          [(fix.tag)=354,
(fix.type)=DATATYPE_LENGTH, (fix.field_added)=VERSION_FIX_4_2];
    optional Common.Instrument instrument = 19       [(fix.field_added)=VERSION_FIX_4_3];
    optional PriceTypeEnum price_type = 20          [(fix.tag)=423, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_3];
    optional Common.SpreadOrBenchmarkCurveData spread_or_benchmark_curve_data = 21
[(fix.field_added)=VERSION_FIX_4_3];
}

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    optional Common.FinancingDetails financing_details = 22 [(fix.field_added)=VERSION_FIX_4_4];
    repeated Common.InstrmtLegIOIGrp instrmt_leg_ioi_grp = 23
[(fix.field_added)=VERSION_FIX_4_4];
    repeated IOIQualGrp ioi_qual_grp = 24 [(fix.field_added)=VERSION_FIX_4_4];
    optional Common.OrderQtyData order_qty_data = 25 [(fix.field_added)=VERSION_FIX_4_4];
    repeated Common.Parties parties = 26 [(fix.field_added)=VERSION_FIX_4_4];
    optional QtyTypeEnum qty_type = 27 [(fix.tag)=854, (fix.type)=DATATYPE_INT,
(fix.field_added)=VERSION_FIX_4_4];
    repeated Common.RoutingGrp routing_grp = 28 [(fix.field_added)=VERSION_FIX_4_4];
    repeated Common.Stipulations stipulations = 29 [(fix.field_added)=VERSION_FIX_4_4];
    repeated Common.UndInstrmtGrp und_instrmt_grp = 30 [(fix.field_added)=VERSION_FIX_4_4];
    optional Common.YieldData yield_data = 31 [(fix.field_added)=VERSION_FIX_4_4];
    optional Common.ApplicationSequenceControl application_sequence_control = 32
[(fix.field_added)=VERSION_FIX_5_0];
}
```