



**Financial products Markup Language**

## **FpML - Valuation Shared Component Definitions**

## ***Version: 4.3***

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### **Document built**

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# ***1 Global Complex Types***

## 1.1 AnyAssetReference

### 1.1.1 Description:

A reference to an asset, e.g. a portfolio, trade, or reference instrument..

### 1.1.2 Contents:

Inherited element(s): (This definition inherits the content defined by the type Reference)

- Specifies the anchor as an href attribute. The href attribute value is a pointer style reference to the element or component elsewhere in the document where the anchor is defined.

### 1.1.3 Used by:

- Complex type: PricingMethod
- Complex type: ScheduledDate
- Complex type: Valuation
- Complex type: VolatilityRepresentation

### 1.1.4 Derived Types:

### 1.1.5 Figure:

### 1.1.6 Schema Fragment:

```
<xsd:complexType name="AnyAssetReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A reference to an asset, e.g. a portfolio, trade, or reference
      instrument..
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference"/>
  </xsd:complexContent>
</xsd:complexType>
```

## 1.2 AssetMeasureType

### 1.2.1 Description:

A scheme identifying the types of measures that can be used to describe an asset.

### 1.2.2 Contents:

Inherited element(s): (This definition inherits the content defined by the type xsd:normalizedString)

•

### 1.2.3 Used by:

### 1.2.4 Derived Types:

### 1.2.5 Figure:

### 1.2.6 Schema Fragment:

```
<xsd:complexType name="AssetMeasureType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A scheme identifying the types of measures that can be used to
      describe an asset.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="assetMeasureScheme" default="http://www.fpml.org/coding-scheme/asset" />
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

## 1.3 BasicAssetValuation

### 1.3.1 Description:

A structure that holds a set of measures about an asset.

### 1.3.2 Contents:

Inherited element(s): (This definition inherits the content defined by the type Valuation)

- A valuation of an valuable object - an asset or a pricing input. This is an abstract type, used as a base for values of pricing structures such as yield curves as well as asset values.

**quote** (one or more occurrences; of the type BasicQuotation) One or more numerical measures relating to the asset, possibly together with sensitivities of that measure to pricing inputs

### 1.3.3 Used by:

- Complex type: QuotedAssetSet

### 1.3.4 Derived Types:

### 1.3.5 Figure:

### 1.3.6 Schema Fragment:

```
<xsd:complexType name="BasicAssetValuation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A structure that holds a set of measures about an asset.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Valuation">
      <xsd:sequence>
        <xsd:element name="quote" type="BasicQuotation" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              One or more numerical measures relating to the asset,
              possibly together with sensitivities of that measure to
              pricing inputs
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

## 1.4 BasicQuotation

### 1.4.1 Description:

Some kind of numerical measure about an asset, eg. its NPV, together with characteristics of that measure.

### 1.4.2 Contents:

**value** (zero or one occurrence; of the type xsd:decimal) The value of the the quotation.

### 1.4.3 Used by:

- Complex type: BasicAssetValuation
- Complex type: CashflowObservation

### 1.4.4 Derived Types:

### 1.4.5 Figure:

### 1.4.6 Schema Fragment:

```
<xsd:complexType name="BasicQuotation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Some kind of numerical measure about an asset, eg. its NPV,
      together with characteristics of that measure.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="Quotation.model"/>
  </xsd:sequence>
</xsd:complexType>
```

## 1.5 PriceQuoteUnits

### 1.5.1 Description:

The units in which a price is quoted.

### 1.5.2 Contents:

Inherited element(s): (This definition inherits the content defined by the type xsd:normalizedString)

•

### 1.5.3 Used by:

- Complex type: ParametricAdjustment
- Complex type: PricingParameterShift

### 1.5.4 Derived Types:

### 1.5.5 Figure:

### 1.5.6 Schema Fragment:

```
<xsd:complexType name="PriceQuoteUnits">
  <xsd:annotation>
    <xsd:documentation source="http://www.FpML.org" xml:lang="en">
      The units in which a price is quoted.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="priceQuoteUnitsScheme" type="xsd:anyURI" default="http://www.fpml.org" />
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

## 1.6 QuotationCharacteristics

### 1.6.1 Description:

A type representing a set of characteristics that describe a quotation.

### 1.6.2 Contents:

**measureType** (zero or one occurrence; of the type AssetMeasureType) The type of the value that is measured. This could be an NPV, a cash flow, a clean price, etc.

**quoteUnits** (zero or one occurrence; of the type PriceQuoteUnits) The optional units that the measure is expressed in. If not supplied, this is assumed to be a price/value in currency units.

**side** (zero or one occurrence; of the type QuotationSideEnum) The side (bid/mid/ask) of the measure.

**currency** (zero or one occurrence; of the type Currency) The optional currency that the measure is expressed in. If not supplied, this is defaulted from the reportingCurrency in the valuationScenarioDefinition.

**timing** (zero or one occurrence; of the type QuoteTiming) When during a day the quote is for. Typically, if this element is supplied, the QuoteLocation needs also to be supplied.

**informationSource** (zero or more occurrences; of the type InformationSource) The information source where a published or displayed market rate will be obtained, e.g. Telerate Page 3750.

**time** (zero or one occurrence; of the type xsd:dateTime) When the quote was observed or derived.

**valuationDate** (zero or one occurrence; of the type xsd:date) When the quote was computed.

**expiryTime** (zero or one occurrence; of the type xsd:dateTime) When does the quote cease to be valid.

**cashFlowType** (zero or one occurrence; of the type CashflowType) For cash flows, the type of the cash flows. Examples include: Coupon payment, Premium Fee, Settlement Fee, Brokerage Fee, etc.

### 1.6.3 Used by:

- Complex type: PositionReport
- Complex type: Price
- Complex type: SensitivitySetDefinition
- Complex type: ValuationSet

### 1.6.4 Derived Types:

### 1.6.5 Figure:

### 1.6.6 Schema Fragment:

```
<xsd:complexType name="QuotationCharacteristics">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type representing a set of characteristics that describe a
      quotation.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="QuotationCharacteristics.model"/>
  </xsd:sequence>
</xsd:complexType>
```

## 1.7 QuoteTiming

### 1.7.1 Description:

The type of the time of the quote.

### 1.7.2 Contents:

Inherited element(s): (This definition inherits the content defined by the type xsd:normalizedString)

•

### 1.7.3 Used by:

### 1.7.4 Derived Types:

### 1.7.5 Figure:

### 1.7.6 Schema Fragment:

```
<xsd:complexType name="QuoteTiming">
  <xsd:annotation>
    <xsd:documentation source="http://www.FpML.org" xml:lang="en">
      The type of the time of the quote.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="quoteTimingScheme" type="xsd:anyURI" default="http://www.fpml.org/c">
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

## 1.8 Valuation

### 1.8.1 Description:

A valuation of an valuable object - an asset or a pricing input. This is an abstract type, used as a base for values of pricing structures such as yield curves as well as asset values.

### 1.8.2 Contents:

**objectReference** (exactly one occurrence; of the type AnyAssetReference) A reference to the asset or pricing structure that this values.

**valuationScenarioReference** (zero or one occurrence; of the type ValuationScenarioReference) A reference to the valuation scenario used to calculate this valuation. If the Valuation occurs within a ValuationSet, this value is optional and is defaulted from the ValuationSet. If this value occurs in both places, the lower level value (i.e. the one here) overrides that in the higher (i.e. ValuationSet).

### 1.8.3 Used by:

- Complex type: AssetValuation
- Complex type: BasicAssetValuation
- Complex type: PricingStructureValuation

### 1.8.4 Derived Types:

- Complex type: AssetValuation
- Complex type: BasicAssetValuation
- Complex type: PricingStructureValuation

### 1.8.5 Figure:

### 1.8.6 Schema Fragment:

```
<xsd:complexType name="Valuation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A valuation of an valuable object - an asset or a pricing input.
      This is an abstract type, used as a base for values of pricing
      structures such as yield curves as well as asset values.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="objectReference" type="AnyAssetReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A reference to the asset or pricing structure that this
          values.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="valuationScenarioReference" type="ValuationScenarioReference" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A reference to the valuation scenario used to calculate this
          valuation. If the Valuation occurs within a ValuationSet,
          this value is optional and is defaulted from the
          ValuationSet. If this value occurs in both places, the lower
          level value (i.e. the one here) overrides that in the higher
          (i.e. ValuationSet).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
  <xsd:attribute name="definitionRef" type="xsd:IDREF" ecore:reference="ValuationScenario">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        An optional reference to the scenario that this valuation
        applies to.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:complexType>
```



## 1.9 ValuationReference

### 1.9.1 Description:

Reference to a Valuation or any derived structure such as PricingStructureValuation.

### 1.9.2 Contents:

### 1.9.3 Used by:

- Complex type: PricingParameterDerivative

### 1.9.4 Derived Types:

### 1.9.5 Figure:

### 1.9.6 Schema Fragment:

```
<xsd:complexType name="ValuationReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a Valuation or any derived structure such as
      PricingStructureValuation.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="Valuation"/>
</xsd:complexType>
```

## ***2 Groups***

## 2.1 Quotation.model

### 2.1.1 Description:

Some kind of numerical measure about an asset, eg. its price or NPV, together with characteristics of that measure.

### 2.1.2 Contents:

**value** (zero or one occurrence; of the type xsd:decimal) The value of the the quotation.

**measureType** (zero or one occurrence; of the type AssetMeasureType) The type of the value that is measured. This could be an NPV, a cash flow, a clean price, etc.

**quoteUnits** (zero or one occurrence; of the type PriceQuoteUnits) The optional units that the measure is expressed in. If not supplied, this is assumed to be a price/value in currency units.

**side** (zero or one occurrence; of the type QuotationSideEnum) The side (bid/mid/ask) of the measure.

**currency** (zero or one occurrence; of the type Currency) The optional currency that the measure is expressed in. If not supplied, this is defaulted from the reportingCurrency in the valuationScenarioDefinition.

**timing** (zero or one occurrence; of the type QuoteTiming) When during a day the quote is for. Typically, if this element is supplied, the QuoteLocation needs also to be supplied.

**informationSource** (zero or more occurrences; of the type InformationSource) The information source where a published or displayed market rate will be obtained, e.g. Telerate Page 3750.

**time** (zero or one occurrence; of the type xsd:dateTime) When the quote was observed or derived.

**valuationDate** (zero or one occurrence; of the type xsd:date) When the quote was computed.

**expiryTime** (zero or one occurrence; of the type xsd:dateTime) When does the quote cease to be valid.

**cashFlowType** (zero or one occurrence; of the type CashflowType) For cash flows, the type of the cash flows. Examples include: Coupon payment, Premium Fee, Settlement Fee, Brokerage Fee, etc.

### 2.1.3 Used by:

- Complex type: BasicQuotation
- Complex type: PricingStructurePoint
- Complex type: Quotation

### 2.1.4 Figure:

### 2.1.5 Schema Fragment:

```
<xsd:group name="Quotation.model">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Some kind of numerical measure about an asset, eg. its price or
      NPV, together with characteristics of that measure.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="value" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The value of the the quotation.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:group ref="QuotationCharacteristics.model">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The characteristics of the quotation.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:group>
  </xsd:sequence>
</xsd:group>
```

## 2.2 QuotationCharacteristics.model

### 2.2.1 Description:

A group collecting a set of characteristics that can be used to describe a quotation.

### 2.2.2 Contents:

**measureType** (zero or one occurrence; of the type AssetMeasureType) The type of the value that is measured. This could be an NPV, a cash flow, a clean price, etc.

**quoteUnits** (zero or one occurrence; of the type PriceQuoteUnits) The optional units that the measure is expressed in. If not supplied, this is assumed to be a price/value in currency units.

**side** (zero or one occurrence; of the type QuotationSideEnum) The side (bid/mid/ask) of the measure.

**currency** (zero or one occurrence; of the type Currency) The optional currency that the measure is expressed in. If not supplied, this is defaulted from the reportingCurrency in the valuationScenarioDefinition.

**timing** (zero or one occurrence; of the type QuoteTiming) When during a day the quote is for. Typically, if this element is supplied, the QuoteLocation needs also to be supplied.

Either

**businessCenter** (exactly one occurrence; of the type BusinessCenter) A city or other business center.

Or

**exchangeld** (exactly one occurrence; of the type Exchangeld) The exchange (e.g. stock or futures exchange) from which the quote is obtained.

**informationSource** (zero or more occurrences; of the type InformationSource) The information source where a published or displayed market rate will be obtained, e.g. Telerate Page 3750.

**time** (zero or one occurrence; of the type xsd:dateTime) When the quote was observed or derived.

**valuationDate** (zero or one occurrence; of the type xsd:date) When the quote was computed.

**expiryTime** (zero or one occurrence; of the type xsd:dateTime) When does the quote cease to be valid.

**cashFlowType** (zero or one occurrence; of the type CashflowType) For cash flows, the type of the cash flows. Examples include: Coupon payment, Premium Fee, Settlement Fee, Brokerage Fee, etc.

### 2.2.3 Used by:

- Complex type: MultiDimensionalPricingData
- Complex type: QuotationCharacteristics

### 2.2.4 Figure:

### 2.2.5 Schema Fragment:

```
<xsd:group name="QuotationCharacteristics.model">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A group collecting a set of characteristics that can be used to
      describe a quotation.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="measureType" type="AssetMeasureType" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The type of the value that is measured. This could be an NPV,
          a cash flow, a clean price, etc.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quoteUnits" type="PriceQuoteUnits" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The optional units that the measure is expressed in. If not
          supplied, this is assumed to be a price/value in currency
          units.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:group>
```

```

<xsd:element name="side" type="QuotationSideEnum" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The side (bid/mid/ask) of the measure.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="currency" type="Currency" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The optional currency that the measure is expressed in. If
      not supplied, this is defaulted from the reportingCurrency in
      the valuationScenarioDefinition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="timing" type="QuoteTiming" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      When during a day the quote is for. Typically, if this
      element is supplied, the QuoteLocation needs also to be
      supplied.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:group ref="QuoteLocation.model" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Where the quote is from.
    </xsd:documentation>
  </xsd:annotation>
</xsd:group>
<xsd:element name="informationSource" type="InformationSource" minOccurs="0" maxOccurs="unbounded">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The information source where a published or displayed market
      rate will be obtained, e.g. Telerate Page 3750.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="time" type="xsd:dateTime" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      When the quote was observed or derived.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="valuationDate" type="xsd:date" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      When the quote was computed.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="expiryTime" type="xsd:dateTime" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      When does the quote cease to be valid.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="cashFlowType" type="CashflowType" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      For cash flows, the type of the cash flows. Examples include:
      Coupon payment, Premium Fee, Settlement Fee, Brokerage Fee,
      etc.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:sequence>
</xsd:group>

```

## 2.3 QuoteLocation.model

### 2.3.1 Description:

A group describing where a quote was or will be obtained, e.g. observed or calculated.

### 2.3.2 Contents:

Either

**businessCenter** (exactly one occurrence; of the type BusinessCenter) A city or other business center.

Or

**exchangeId** (exactly one occurrence; of the type ExchangeId) The exchange (e.g. stock or futures exchange) from which the quote is obtained.

### 2.3.3 Used by:

### 2.3.4 Figure:

### 2.3.5 Schema Fragment:

```
<xsd:group name="QuoteLocation.model">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A group describing where a quote was or will be obtained, e.g.
      observed or calculated.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="businessCenter" type="BusinessCenter">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A city or other business center.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="exchangeId" type="ExchangeId">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The exchange (e.g. stock or futures exchange) from which the
          quote is obtained.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
</xsd:group>
```

### 3 Schema listing

```
<xsd:schema ecore:nsPrefix="fpml" ecore:package="org.fpml" ecore:documentRoot="FpML" targetNameSpace="http://www.fpml.org" >
  <xsd:include schemaLocation="fpml-shared-4-3.xsd"/>
  <xsd:complexType name="AnyAssetReference">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A reference to an asset, e.g. a portfolio, trade, or reference instrument..
      </xsd:documentation>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="Reference"/>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="AssetMeasureType">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A scheme identifying the types of measures that can be used to describe an asset.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:simpleContent>
      <xsd:extension base="xsd:normalizedString">
        <xsd:attribute name="assetMeasureScheme" default="http://www.fpml.org/coding-scheme/assetMeasureScheme"/>
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
  <xsd:complexType name="BasicAssetValuation">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A structure that holds a set of measures about an asset.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="Valuation">
        <xsd:sequence>
          <xsd:element name="quote" type="BasicQuotation" maxOccurs="unbounded">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                One or more numerical measures relating to the asset, possibly together with sensitivities of that measure to pricing inputs
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="BasicQuotation">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        Some kind of numerical measure about an asset, eg. its NPV, together with characteristics of that measure.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
      <xsd:group ref="Quotation.model"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="PriceQuoteUnits">
    <xsd:annotation>
      <xsd:documentation source="http://www.FpML.org" xml:lang="en">
        The units in which a price is quoted.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:simpleContent>
      <xsd:extension base="xsd:normalizedString">
        <xsd:attribute name="priceQuoteUnitsScheme" type="xsd:anyURI" default="http://www.fpml.org/coding-scheme/priceQuoteUnitsScheme"/>
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
  <xsd:complexType name="QuotationCharacteristics">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A type representing a set of characteristics that describe a quotation.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
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    <xsd:group ref="QuotationCharacteristics.model"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="QuoteTiming">
  <xsd:annotation>
    <xsd:documentation source="http://www.FpML.org" xml:lang="en">
      The type of the time of the quote.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="quoteTimingScheme" type="xsd:anyURI" default="http://www.fpml.org">
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="Valuation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A valuation of an valuable object - an asset or a pricing
      input. This is an abstract type, used as a base for values of
      pricing structures such as yield curves as well as asset
      values.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="objectReference" type="AnyAssetReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A reference to the asset or pricing structure that this
          values.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="valuationScenarioReference" type="ValuationScenarioReference" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A reference to the valuation scenario used to calculate
          this valuation. If the Valuation occurs within a
          ValuationSet, this value is optional and is defaulted from
          the ValuationSet. If this value occurs in both places, the
          lower level value (i.e. the one here) overrides that in the
          higher (i.e. ValuationSet).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
  <xsd:attribute name="definitionRef" type="xsd:IDREF" ecore:reference="ValuationScenario">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        An optional reference to the scenario that this valuation
        applies to.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:complexType>
<xsd:complexType name="ValuationReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a Valuation or any derived structure such as
      PricingStructureValuation.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="Valuation"/>
</xsd:complexType>
<xsd:group name="Quotation.model">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Some kind of numerical measure about an asset, eg. its price or
      NPV, together with characteristics of that measure.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="value" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The value of the the quotation.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:group ref="QuotationCharacteristics.model">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
    </xsd:annotation>
  </xsd:group>

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        The characteristics of the quotation.
    </xsd:documentation>
</xsd:annotation>
</xsd:group>
</xsd:sequence>
</xsd:group>
<xsd:group name="QuotationCharacteristics.model">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            A group collecting a set of characteristics that can be used to
            describe a quotation.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
        <xsd:element name="measureType" type="AssetMeasureType" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    The type of the value that is measured. This could be an
                    NPV, a cash flow, a clean price, etc.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="quoteUnits" type="PriceQuoteUnits" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    The optional units that the measure is expressed in. If not
                    supplied, this is assumed to be a price/value in currency
                    units.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="side" type="QuotationSideEnum" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    The side (bid/mid/ask) of the measure.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="currency" type="Currency" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    The optional currency that the measure is expressed in. If
                    not supplied, this is defaulted from the reportingCurrency
                    in the valuationScenarioDefinition.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="timing" type="QuoteTiming" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    When during a day the quote is for. Typically, if this
                    element is supplied, the QuoteLocation needs also to be
                    supplied.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:group ref="QuoteLocation.model" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    Where the quote is from.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:group>
        <xsd:element name="informationSource" type="InformationSource" minOccurs="0" maxOccurs="1">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    The information source where a published or displayed
                    market rate will be obtained, e.g. Telerate Page 3750.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="time" type="xsd:dateTime" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    When the quote was observed or derived.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="valuationDate" type="xsd:date" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    When the quote was computed.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
    </xsd:sequence>

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    </xsd:annotation>
  </xsd:element>
  <xsd:element name="expiryTime" type="xsd:dateTime" minOccurs="0">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        When does the quote cease to be valid.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="cashFlowType" type="CashflowType" minOccurs="0">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        For cash flows, the type of the cash flows. Examples
        include: Coupon payment, Premium Fee, Settlement Fee,
        Brokerage Fee, etc.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:sequence>
</xsd:group>
<xsd:group name="QuoteLocation.model">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A group describing where a quote was or will be obtained, e.g.
      observed or calculated.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="businessCenter" type="BusinessCenter">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A city or other business center.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="exchangeId" type="ExchangeId">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The exchange (e.g. stock or futures exchange) from which
          the quote is obtained.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
</xsd:group>
</xsd:schema>

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