FpML 4.0 - Foreign Exchange Component Definitions

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Errata For This Version:

http://www.fpml.org/spec/errata/lcwd-fpml-4-2-2006-03-15-errata.html

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1 Global Elements

1.1 fxAverageRateOption

1.1.1 Description:

A component describing an FX Average Rate Option product.

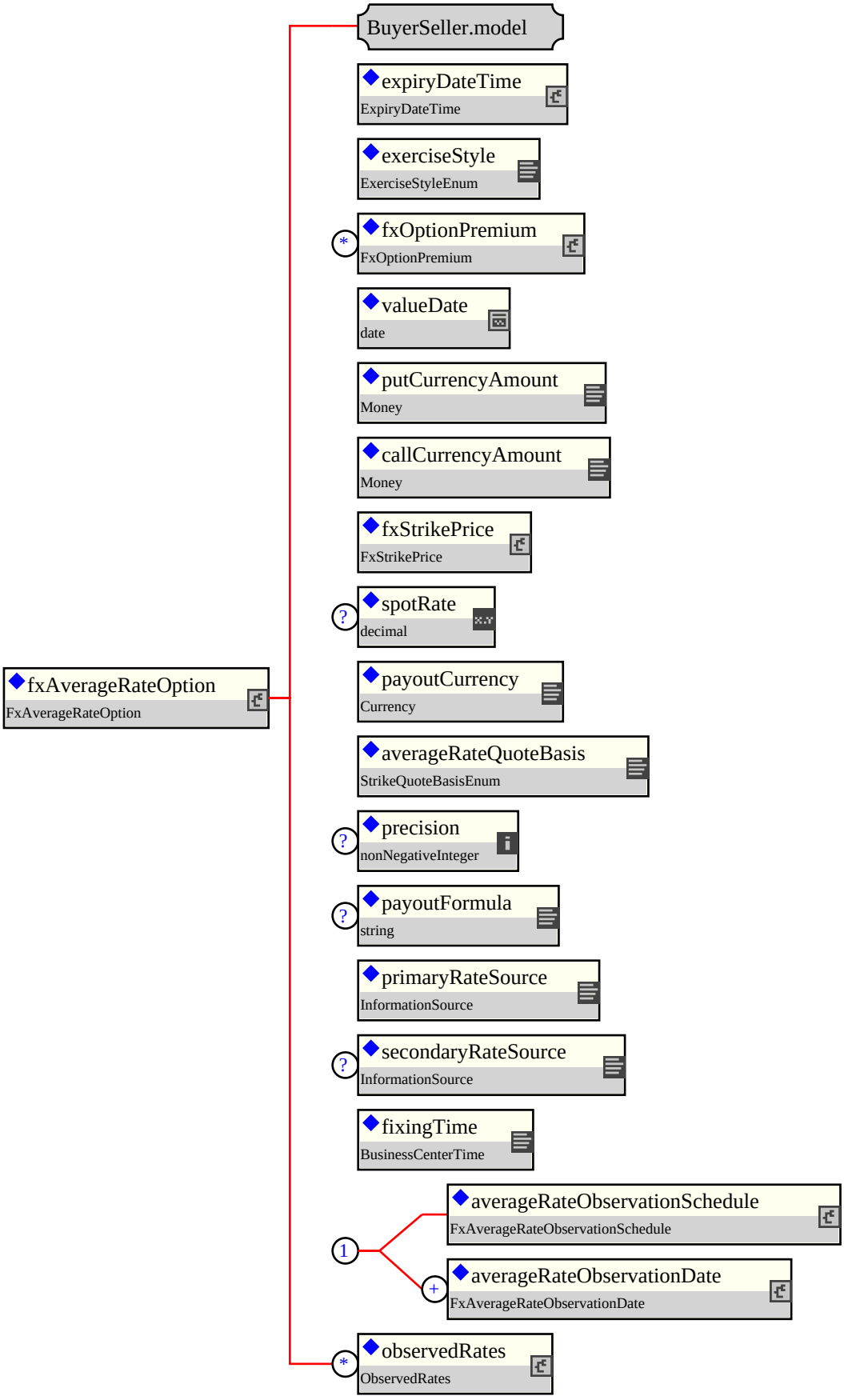
1.1.2 Contents:

Element fxAverageRateOption is defined by the complex type FxAverageRateOption

1.1.3 Used by:

1.1.4 Substituted by:

1.1.5 Figure:


BuyerSeller.model
fxAverageRateOption
FxAverageRateOption
expiryDateTime
ExpiryDateTime
exerciseStyle
ExerciseStyleEnum
fxOptionPremium
FxOptionPremium
valueDate
date
putCurrencyAmount
Money
callCurrencyAmount
Money
fxStrikePrice
FxStrikePrice
spotRate
decimal
payoutCurrency
Currency
averageRateQuoteBasis
StrikeQuoteBasisEnum
precision
nonNegativeInteger
payoutFormula
string
primaryRateSource
InformationSource
secondaryRateSource
InformationSource
fixingTime
BusinessCenterTime
averageRateObservationSchedule
FxAverageRateObservationSchedule
averageRateObservationDate
FxAverageRateObservationDate
observedRates
ObservedRates

1.1.6 Schema Fragment:

```
<xsd:element name="fxAverageRateOption" type="FxAverageRateOption" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A component describing an FX Average Rate Option product.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.2 fxBarrierOption

1.2.1 Description:

A component describing a FX Barrier Option product.

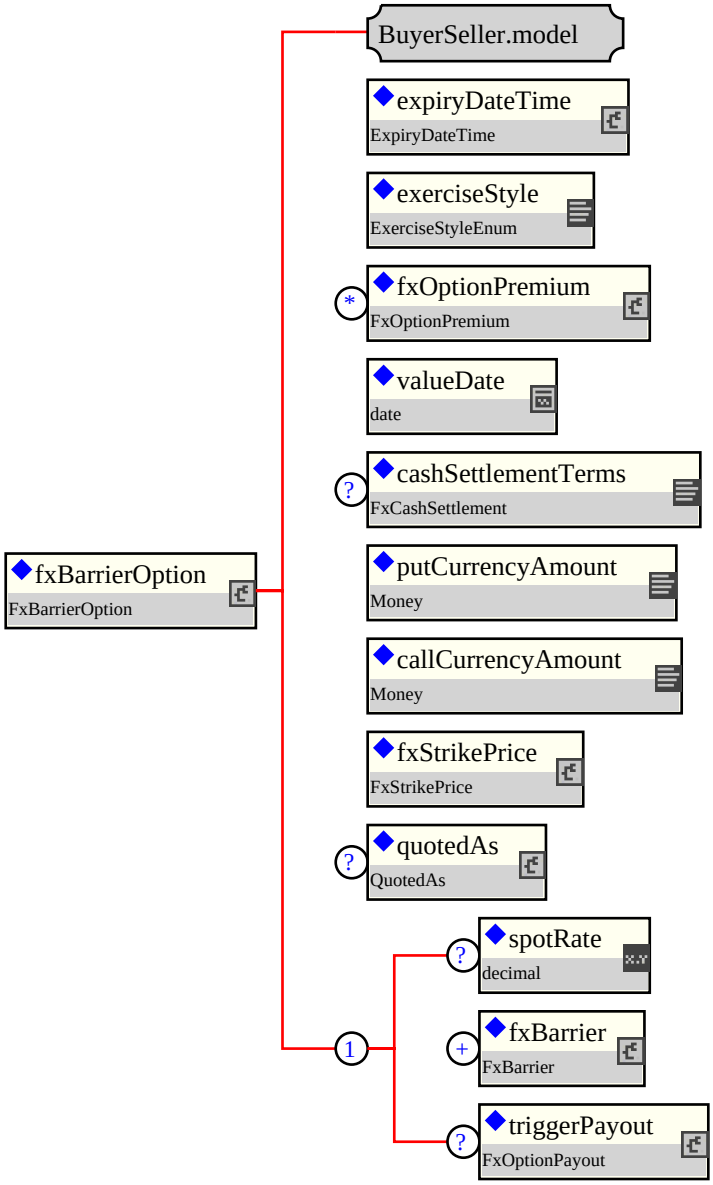
1.2.2 Contents:

Element fxBarrierOption is defined by the complex type FxBarrierOption

1.2.3 Used by:

1.2.4 Substituted by:

1.2.5 Figure:



1.2.6 Schema Fragment:

```
<xsd:element name="fxBarrierOption" type="FxBarrierOption" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A component describing a FX Barrier Option product.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.3 fxDigitalOption

1.3.1 Description:

A component describing a FX Digital Option product.

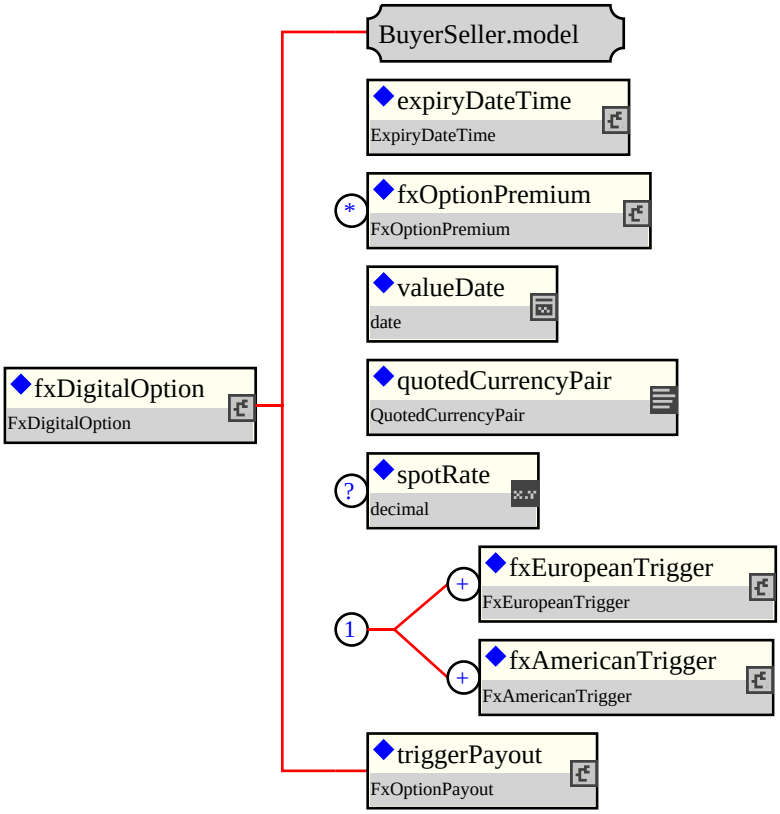
1.3.2 Contents:

Element fxDigitalOption is defined by the complex type FxDigitalOption

1.3.3 Used by:

1.3.4 Substituted by:

1.3.5 Figure:



1.3.6 Schema Fragment:

```
<xsd:element name="fxDigitalOption" type="FxDigitalOption" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A component describing a FX Digital Option product.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.4 fxSimpleOption

1.4.1 Description:

A component describing a FX Simple Option product

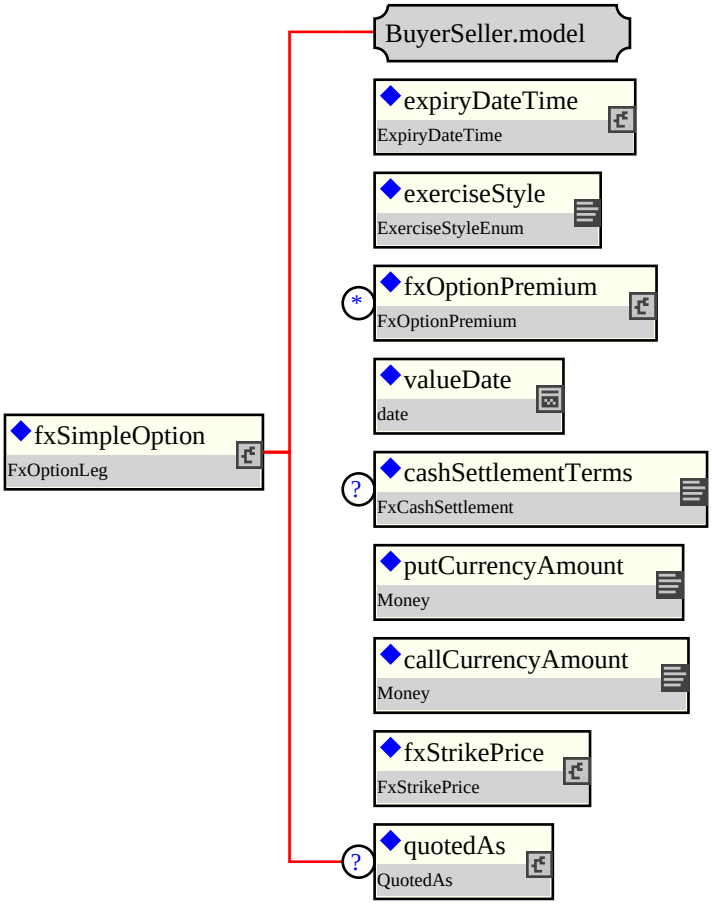
1.4.2 Contents:

Element fxSimpleOption is defined by the complex type FxOptionLeg

1.4.3 Used by:

1.4.4 Substituted by:

1.4.5 Figure:



1.4.6 Schema Fragment:

```
<xsd:element name="fxSimpleOption" type="FxOptionLeg" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A component describing a FX Simple Option product
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.5 fxSingleLeg

1.5.1 Description:

A single-legged FX transaction definition (e.g., spot or forward).

1.5.2 Contents:

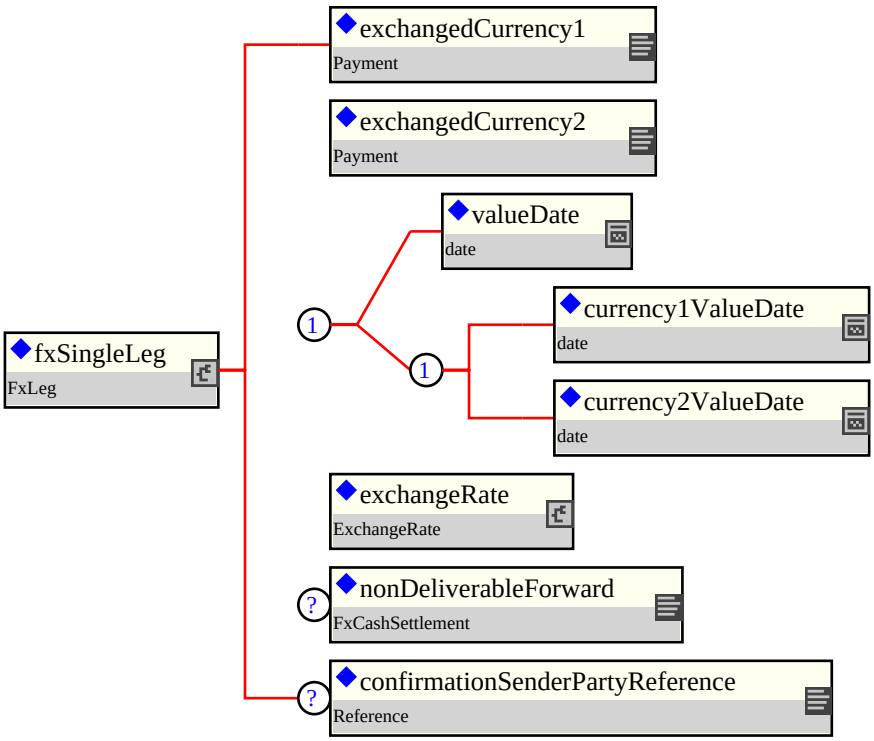
Element fxSingleLeg is defined by the complex type FxLeg

1.5.3 Used by:

- Complex type: FxSwap

1.5.4 Substituted by:

1.5.5 Figure:



1.5.6 Schema Fragment:

```
<xsd:element name="fxSingleLeg" type="FxLeg" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A single-legged FX transaction definition (e.g., spot or
      forward).
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.6 fxSwap

1.6.1 Description:

A component describing a FX Swap product.

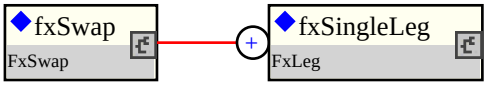
1.6.2 Contents:

Element fxSwap is defined by the complex type FxSwap

1.6.3 Used by:

1.6.4 Substituted by:

1.6.5 Figure:



1.6.6 Schema Fragment:

```
<xsd:element name="fxSwap" type="FxSwap" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A component describing a FX Swap product.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.7 termDeposit

1.7.1 Description:

A term deposit product definition.

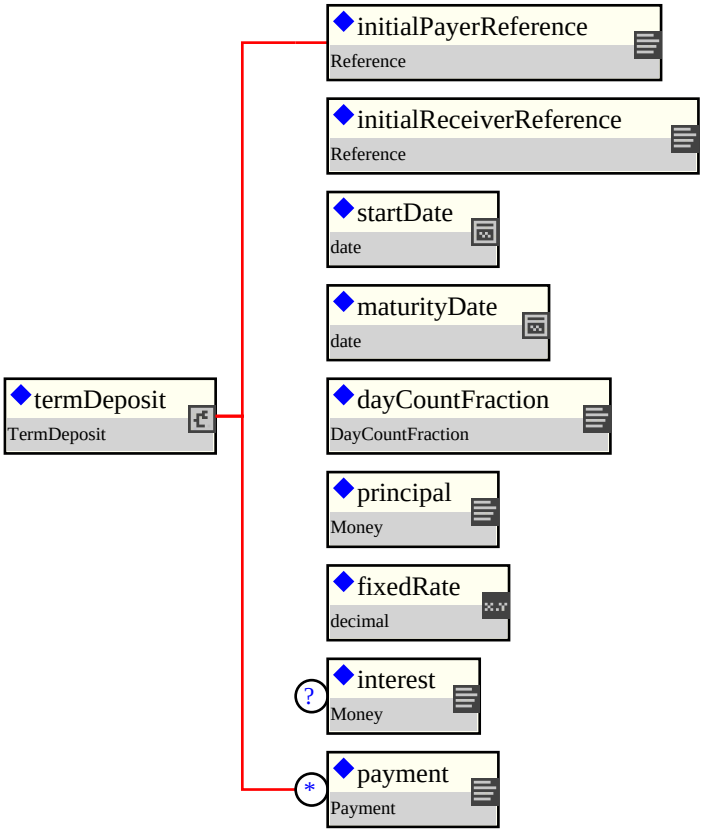
1.7.2 Contents:

Element termDeposit is defined by the complex type TermDeposit

1.7.3 Used by:

1.7.4 Substituted by:

1.7.5 Figure:



1.7.6 Schema Fragment:

```
<xsd:element name="termDeposit" type="TermDeposit" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A term deposit product definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

2 Global Complex Types

2.1 CutName

2.1.1 Description:

Allows for an expiryDateTime cut to be described by name.

2.1.2 Contents:

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

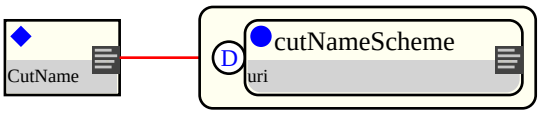
•

2.1.3 Used by:

- Complex type: ExpiryDateTime

2.1.4 Derived Types:

2.1.5 Figure:



2.1.6 Schema Fragment:

```
<xsd:complexType name="CutName">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Allows for an expiryDateTime cut to be described by name.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="cutNameScheme" type="xsd:anyURI" default="http://www.fpml.org/coding
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

2.2 ExchangeRate

2.2.1 Description:

A type that is used for describing the exchange rate for a particular transaction.

2.2.2 Contents:

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

- A type describing the rate of a currency conversion: pair of currency, quotation mode and exchange rate.

spotRate (zero or one occurrence; of the type xsd:decimal) An optional element used for FX forwards and certain types of FX OTC options. For deals consumated in the FX Forwards Market, this represents the current market rate for a particular currency pair. For barrier and digital/binary options, it can be useful to include the spot rate at the time the option was executed to make it easier to know whether the option needs to move "up" or "down" to be triggered.

forwardPoints (zero or one occurrence; of the type xsd:decimal) An optional element used for deals consumated in the FX Forwards market. Forward points represent the interest rate differential between the two currencies traded and are quoted as a preminum or a discount. Forward points are added to, or subtracted from, the spot rate to create the rate of the forward trade.

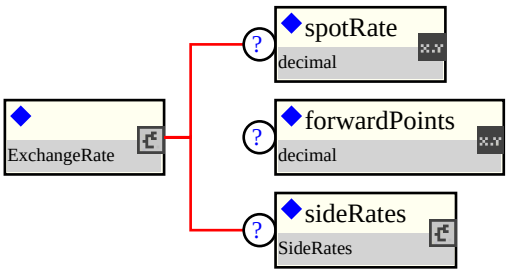
sideRates (zero or one occurrence; of the type SideRates) An optional element that allow for definition of rates against base currency for non-base currency FX contracts.

2.2.3 Used by:

- Complex type: FxLeg

2.2.4 Derived Types:

2.2.5 Figure:



2.2.6 Schema Fragment:

```
<xsd:complexType name="ExchangeRate">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used for describing the exchange rate for a
      particular transaction.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="FxRate">
      <xsd:sequence>
        <xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              An optional element used for FX forwards and certain
              types of FX OTC options. For deals consumated in the FX
              Forwards Market, this represents the current market rate
```

```
            for a particular currency pair. For barrier and
            digital/binary options, it can be useful to include the
            spot rate at the time the option was executed to make it
            easier to know whether the option needs to move "up" or
            "down" to be triggered.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="forwardPoints" type="xsd:decimal" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            An optional element used for deals consumated in the FX
            Forwards market. Forward points represent the interest
            rate differential between the two currencies traded and
            are quoted as a preminum or a discount. Forward points
            are added to, or subtracted from, the spot rate to create
            the rate of the forward trade.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="sideRates" type="SideRates" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            An optional element that allow for definition of rates
            against base currency for non-base currency FX contracts.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
```

2.3 ExpiryDateTime

2.3.1 Description:

A type that describes the date and time in a location of the option expiry. In the case of American options this is the latest possible expiry date and time.

2.3.2 Contents:

expiryDate (exactly one occurrence; of the type xsd:date) Represents a standard expiry date as defined for an FX OTC option.

expiryTime (exactly one occurrence; of the type BusinessCenterTime)

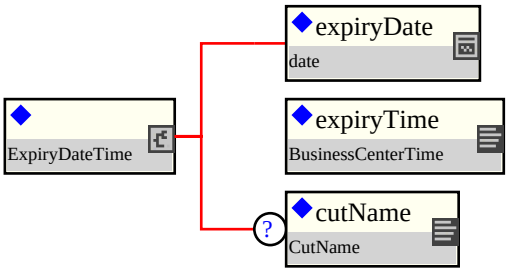
cutName (zero or one occurrence; of the type CutName)

2.3.3 Used by:

- Complex type: FxAverageRateOption
- Complex type: FxDigitalOption
- Complex type: FxOptionLeg

2.3.4 Derived Types:

2.3.5 Figure:



2.3.6 Schema Fragment:

```
<xsd:complexType name="ExpiryDateTime">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes the date and time in a location of the
      option expiry. In the case of American options this is the latest
      possible expiry date and time.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="expiryDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Represents a standard expiry date as defined for an FX OTC
          option.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="expiryTime" type="BusinessCenterTime"/>
    <xsd:element name="cutName" type="CutName" minOccurs="0"/>
  </xsd:sequence>
</xsd:complexType>
```

2.4 FxAmericanTrigger

2.4.1 Description:

A tyoe that defines a particular type of payout in an FX OTC exotic option. An American trigger occurs if the trigger criteria are met at any time from the initiation to the maturity of the option.

2.4.2 Contents:

touchCondition (exactly one occurrence; of the type TouchConditionEnum) The binary condition that applies to an American-style trigger. There can only be two domain values for this element: "touch" or "no touch".

quotedCurrencyPair (exactly one occurrence; of the type QuotedCurrencyPair) Defines the two currencies for an FX trade and the quotation relationship between the two currencies.

triggerRate (exactly one occurrence; of the type xsd:decimal) The market rate is observed relative to the trigger rate, and if it is found to be on the predefined side of (above or below) the trigger rate, a trigger event is deemed to have occurred.

informationSource (one 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.

observationStartDate (zero or one occurrence; of the type xsd:date) The start of the period over which observations are made to determine whether a trigger has occurred.

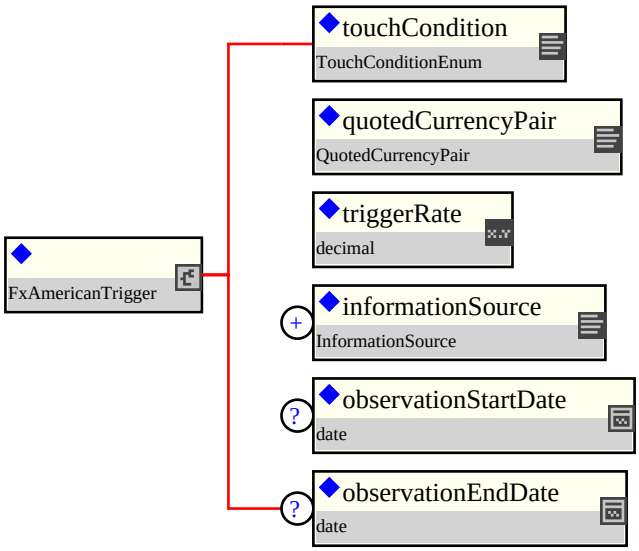
observationEndDate (zero or one occurrence; of the type xsd:date) The end of the period over which observations are made to determine whether a trigger event has occurred.

2.4.3 Used by:

- Complex type: FxDigitalOption

2.4.4 Derived Types:

2.4.5 Figure:



2.4.6 Schema Fragment:

```
<xsd:complexType name="FxAmericanTrigger">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A tyoe that defines a particular type of payout in an FX OTC
```

```
      exotic option. An American trigger occurs if the trigger criteria
      are met at any time from the initiation to the maturity of the
      option.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="touchCondition" type="TouchConditionEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The binary condition that applies to an American-style
          trigger. There can only be two domain values for this
          element: "touch" or "no touch".
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Defines the two currencies for an FX trade and the quotation
          relationship between the two currencies.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="triggerRate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The market rate is observed relative to the trigger rate, and
          if it is found to be on the predefined side of (above or
          below) the trigger rate, a trigger event is deemed to have
          occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="informationSource" type="InformationSource" 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="observationStartDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The start of the period over which observations are made to
          determine whether a trigger has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observationEndDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The end of the period over which observations are made to
          determine whether a trigger event has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.5 FxAverageRateObservationDate

2.5.1 Description:

A type that, for average rate options, is used to describe each specific observation date, as opposed to a parametric frequency of rate observations.

2.5.2 Contents:

observationDate (exactly one occurrence; of the type xsd:date) A specific date for which an observation against a particular rate will be made and will be used for subsequent computations.

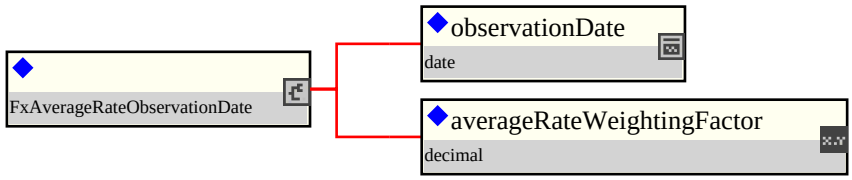
averageRateWeightingFactor (exactly one occurrence; of the type xsd:decimal) An optional factor that can be used for weighting certain observation dates. Typically, firms will weight each date with a factor of 1 if there are standard, unweighted adjustments.

2.5.3 Used by:

- Complex type: FxAverageRateOption

2.5.4 Derived Types:

2.5.5 Figure:



2.5.6 Schema Fragment:

```
<xsd:complexType name="FxAverageRateObservationDate">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that, for average rate options, is used to describe each
      specific observation date, as opposed to a parametric frequency
      of rate observations.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="observationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A specific date for which an observation against a particular
          rate will be made and will be used for subsequent
          computations.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="averageRateWeightingFactor" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An optional factor that can be used for weighting certain
          observation dates. Typically, firms will weight each date
          with a factor of 1 if there are standard, unweighted
          adjustments.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.6 FxAverageRateObservationSchedule

2.6.1 Description:

A type that describes average rate options rate observations. This is used to describe a parametric frequency of rate observations against a particular rate. Typical frequencies might include daily, every Friday, etc.

2.6.2 Contents:

observationStartDate (exactly one occurrence; of the type xsd:date) The start of the period over which observations are made to determine whether a trigger has occurred.

observationEndDate (exactly one occurrence; of the type xsd:date) The end of the period over which observations are made to determine whether a trigger event has occurred.

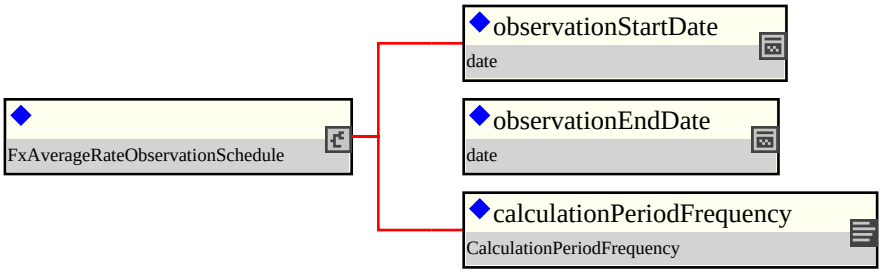
calculationPeriodFrequency (exactly one occurrence; of the type CalculationPeriodFrequency) The frequency at which calculation period end dates occur with the regular part of the calculation period schedule and their roll date convention.

2.6.3 Used by:

- Complex type: FxAverageRateOption

2.6.4 Derived Types:

2.6.5 Figure:



2.6.6 Schema Fragment:

```
<xsd:complexType name="FxAverageRateObservationSchedule">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes average rate options rate observations.
      This is used to describe a parametric frequency of rate
      observations against a particular rate. Typical frequencies might
      include daily, every Friday, etc.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="observationStartDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The start of the period over which observations are made to
          determine whether a trigger has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observationEndDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The end of the period over which observations are made to
          determine whether a trigger event has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationPeriodFrequency" type="CalculationPeriodFrequency">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency at which calculation period end dates occur
          with the regular part of the calculation period schedule and
          their roll date convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.7 FxAverageRateOption

2.7.1 Description:

A type that is used for an option whose payout is based on the average of the price of the underlying over a specific period of time. The payout is the difference between the predetermined, fixed strike price and the average of spot rates observed and is used for hedging against prevailing spot rates over a given time period.

2.7.2 Contents:

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

- The base type which all FpML products extend.

buyerPartyReference (exactly one occurrence; of the type Reference) A reference to the party that buys this instrument, ie. pays for this instrument and receives the rights defined by it. See 2000 ISDA definitions Article 11.1 (b). In the case of FRAs this the fixed rate payer.

sellerPartyReference (exactly one occurrence; of the type Reference) A reference to the party that sells ("writes") this instrument, i.e. that grants the rights defined by this instrument and in return receives a payment for it. See 2000 ISDA definitions Article 11.1 (a). In the case of FRAs this is the floating rate payer.

expiryDateTime (exactly one occurrence; of the type ExpiryDateTime) The date and time in a location of the option expiry. In the case of american options this is the latest possible expiry date and time.

exerciseStyle (exactly one occurrence; of the type ExerciseStyleEnum) The manner in which the option can be exercised.

fxOptionPremium (zero or more occurrences; of the type FxOptionPremium) Premium amount or premium installment amount for an option.

valueDate (exactly one occurrence; of the type xsd:date) The date on which both currencies traded will settle.

putCurrencyAmount (exactly one occurrence; of the type Money) The currency amount that the option gives the right to sell.

callCurrencyAmount (exactly one occurrence; of the type Money) The currency amount that the option gives the right to buy.

fxStrikePrice (exactly one occurrence; of the type FxStrikePrice) TBA

spotRate (zero or one occurrence; of the type xsd:decimal) An optional element used for FX forwards and certain types of FX OTC options. For deals consumated in the FX Forwards Market, this represents the current market rate for a particular currency pair. For barrier and digital/binary options, it can be useful to include the spot rate at the time the option was executed to make it easier to know whether the option needs to move "up" or "down" to be triggered.

payoutCurrency (exactly one occurrence; of the type Currency) The ISO code of the currency in which a payout (if any) is to be made when a trigger is hit on a digital or barrier option.

averageRateQuoteBasis (exactly one occurrence; of the type StrikeQuoteBasisEnum) The method by which the average rate that is being observed is quoted.

precision (zero or one occurrence; of the type xsd:nonNegativeInteger) Specifies the rounding precision in terms of a number of decimal places. Note how a percentage rate rounding of 5 decimal places is expressed as a rounding precision of 7 in the FpML document since the percentage is expressed as a decimal, e.g. 9.876543% (or 0.09876543) being rounded to the nearest 5 decimal places is 9.87654% (or 0.0987654).

payoutFormula (zero or one occurrence; of the type xsd:string) The description of the mathematical computation for how the payout is computed.

primaryRateSource (exactly one occurrence; of the type InformationSource) The primary source for where the rate observation will occur. Will typically be either a page or a reference bank published rate.

secondaryRateSource (zero or one occurrence; of the type InformationSource) An alternative, or secondary, source for where the rate observation will occur. Will typically be either a page or a reference bank published rate.

fixingTime (exactly one occurrence; of the type BusinessCenterTime) The time at which the spot currency exchange rate will be observed. It is specified as a time in a specific business center, e.g. 11:00am London time.

Either

averageRateObservationSchedule (exactly one occurrence; of the type

FxAverageRateObservationSchedule) Parametric schedule of rate observations.

Or

averageRateObservationDate (one or more occurrences; of the type FxAverageRateObservationDate) One of more specific rate observation dates.

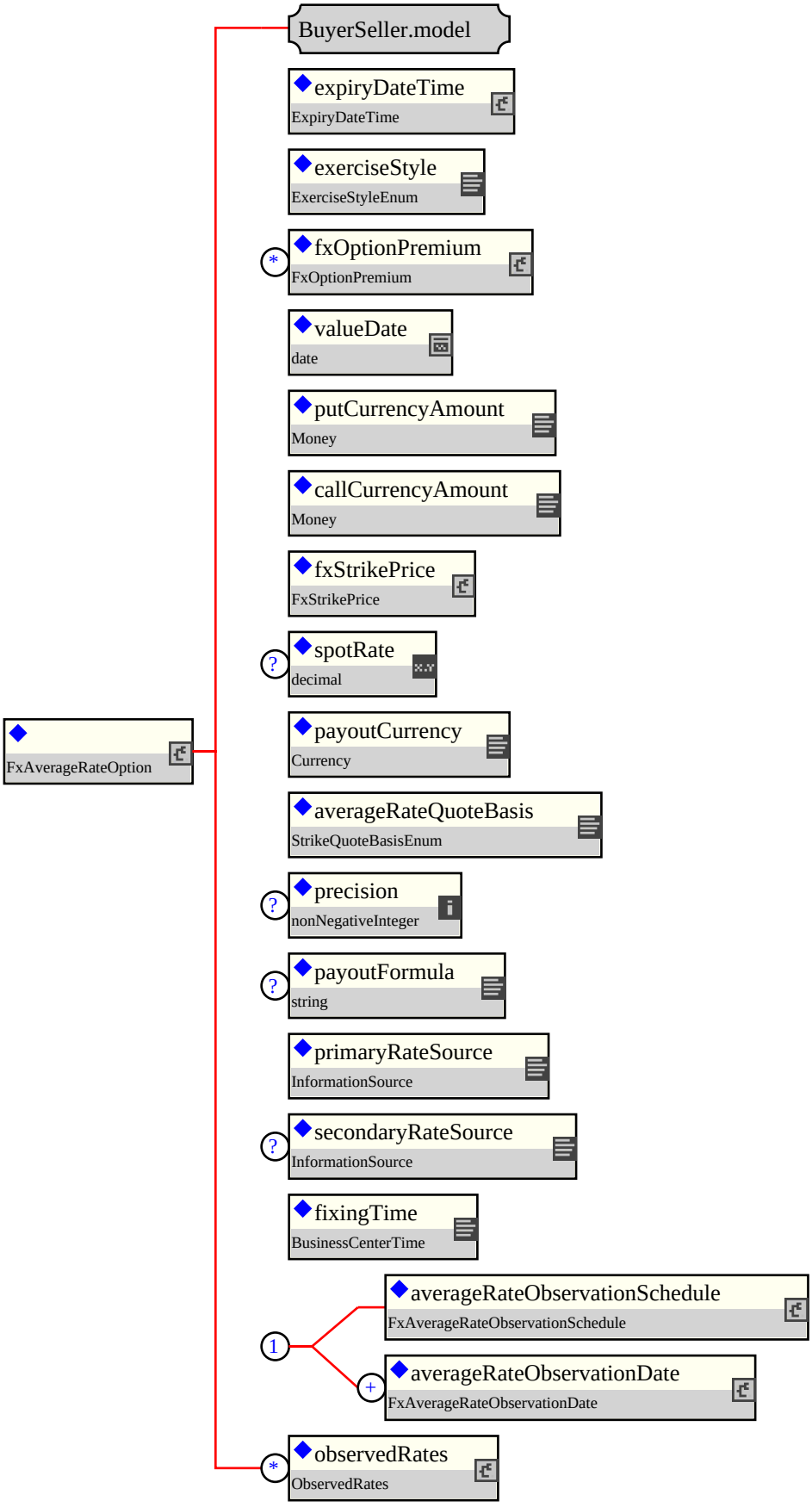
observedRates (zero or more occurrences; of the type ObservedRates) Describes prior rate observations within average rate options. Periodically, an average rate option agreement will be struck whereby some rates have already been observed in the past but will become part of computation of the average rate of the option. This structure provides for these previously observed rates to be included in the description of the trade.

2.7.3 Used by:

- Element: fxAverageRateOption

2.7.4 Derived Types:

2.7.5 Figure:


BuyerSeller.model
FxAverageRateOption
expiryDateTime
ExpiryDateTime
exerciseStyle
ExerciseStyleEnum
fxOptionPremium
FxOptionPremium
valueDate
date
putCurrencyAmount
Money
callCurrencyAmount
Money
fxStrikePrice
FxStrikePrice
spotRate
decimal
payoutCurrency
Currency
averageRateQuoteBasis
StrikeQuoteBasisEnum
precision
nonNegativeInteger
payoutFormula
string
primaryRateSource
InformationSource
secondaryRateSource
InformationSource
fixingTime
BusinessCenterTime
averageRateObservationSchedule
FxAverageRateObservationSchedule
averageRateObservationDate
FxAverageRateObservationDate
observedRates
ObservedRates

2.7.6 Schema Fragment:

```
<xsd:complexType name="FxAverageRateOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used for an option whose payout is based on the
      average of the price of the underlying over a specific period of
      time. The payout is the difference between the predetermined,
      fixed strike price and the average of spot rates observed and is
      used for hedging against prevailing spot rates over a given time
      period.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:group ref="BuyerSeller.model"/>
        <xsd:element name="expiryDateTime" type="ExpiryDateTime">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date and time in a location of the option expiry. In
              the case of american options this is the latest possible
              expiry date and time.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="exerciseStyle" type="ExerciseStyleEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The manner in which the option can be exercised.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxOptionPremium" type="FxOptionPremium" minOccurs="0" maxOccurs="unb
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Premium amount or premium installment amount for an
              option.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="valueDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date on which both currencies traded will settle.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="putCurrencyAmount" type="Money">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The currency amount that the option gives the right to
              sell.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="callCurrencyAmount" type="Money">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The currency amount that the option gives the right to
              buy.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxStrikePrice" type="FxStrikePrice">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              TBA
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              An optional element used for FX forwards and certain
              types of FX OTC options. For deals consumated in the FX
              Forwards Market, this represents the current market rate
              for a particular currency pair. For barrier and
              digital/binary options, it can be useful to include the
              spot rate at the time the option was executed to make it
              easier to know whether the option needs to move "up" or
              "down" to be triggered.
            </xsd:documentation>
```

```
  </xsd:annotation>
</xsd:element>
<xsd:element name="payoutCurrency" type="Currency">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The ISO code of the currency in which a payout (if any)
      is to be made when a trigger is hit on a digital or
      barrier option.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="averageRateQuoteBasis" type="StrikeQuoteBasisEnum">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The method by which the average rate that is being
      observed is quoted.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="precision" type="xsd:nonNegativeInteger" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Specifies the rounding precision in terms of a number of
      decimal places. Note how a percentage rate rounding of 5
      decimal places is expressed as a rounding precision of 7
      in the FpML document since the percentage is expressed as
      a decimal, e.g. 9.876543% (or 0.09876543) being rounded
      to the nearest 5 decimal places is 9.87654% (or
      0.0987654).
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="payoutFormula" type="xsd:string" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The description of the mathematical computation for how
      the payout is computed.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="primaryRateSource" type="InformationSource">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The primary source for where the rate observation will
      occur. Will typically be either a page or a reference
      bank published rate.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="secondaryRateSource" type="InformationSource" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An alternative, or secondary, source for where the rate
      observation will occur. Will typically be either a page
      or a reference bank published rate.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="fixingTime" type="BusinessCenterTime">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The time at which the spot currency exchange rate will be
      observed. It is specified as a time in a specific
      business center, e.g. 11:00am London time.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:choice>
  <xsd:element name="averageRateObservationSchedule" type="FxAverageRateObservationSche
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        Parametric schedule of rate observations.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="averageRateObservationDate" type="FxAverageRateObservationDate" ma
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        One of more specific rate observation dates.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:choice>
```

```
        <xsd:element name="observedRates" type="ObservedRates" minOccurs="0" maxOccurs="unbound
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Describes prior rate observations within average rate
              options. Periodically, an average rate option agreement
              will be struck whereby some rates have already been
              observed in the past but will become part of computation
              of the average rate of the option. This structure
              provides for these previously observed rates to be
              included in the description of the trade.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.8 FxBarrier

2.8.1 Description:

A type that is used within the FX barrier option definition to define one or more barrier levels that determine whether the option will be knocked-in or knocked-out.

2.8.2 Contents:

fxBarrierType (zero or one occurrence; of the type FxBarrierTypeEnum) This specifies whether the option becomes effective ("knock-in") or is annulled ("knock-out") when the respective trigger event occurs.

quotedCurrencyPair (exactly one occurrence; of the type QuotedCurrencyPair) Defines the two currencies for an FX trade and the quotation relationship between the two currencies.

triggerRate (exactly one occurrence; of the type xsd:decimal) The market rate is observed relative to the trigger rate, and if it is found to be on the predefined side of (above or below) the trigger rate, a trigger event is deemed to have occurred.

informationSource (one 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.

observationStartDate (zero or one occurrence; of the type xsd:date) The start of the period over which observations are made to determine whether a trigger has occurred.

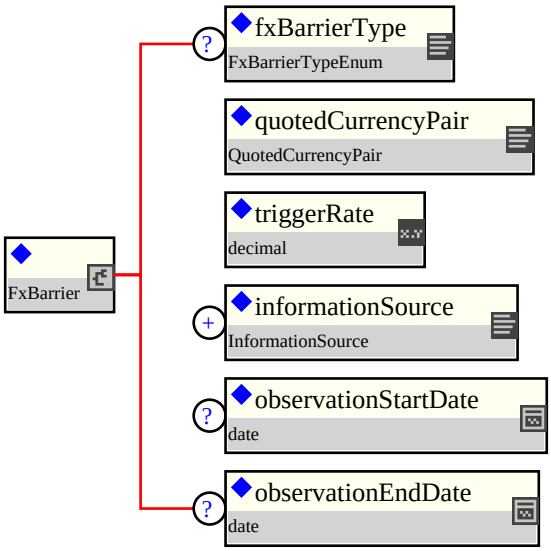
observationEndDate (zero or one occurrence; of the type xsd:date) The end of the period over which observations are made to determine whether a trigger event has occurred.

2.8.3 Used by:

- Complex type: FxBarrierOption

2.8.4 Derived Types:

2.8.5 Figure:



2.8.6 Schema Fragment:

```
<xsd:complexType name="FxBarrier">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used within the FX barrier option definition to
```

```
      define one or more barrier levels that determine whether the
      option will be knocked-in or knocked-out.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="fxBarrierType" type="FxBarrierTypeEnum" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          This specifies whether the option becomes effective
          ("knock-in") or is annulled ("knock-out") when the respective
          trigger event occurs.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Defines the two currencies for an FX trade and the quotation
          relationship between the two currencies.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="triggerRate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The market rate is observed relative to the trigger rate, and
          if it is found to be on the predefined side of (above or
          below) the trigger rate, a trigger event is deemed to have
          occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="informationSource" type="InformationSource" 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="observationStartDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The start of the period over which observations are made to
          determine whether a trigger has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observationEndDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The end of the period over which observations are made to
          determine whether a trigger event has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.9 FxBarrierOption

2.9.1 Description:

A type that describes an option with a put/call component, but also one or more associated barrier rates. If the market rate moves to reach a barrier rate a trigger event occurs. The trigger event may for example be necessary to enable the option, or may annul the option contract. [Since the barriers reduce the probability of exercise, the premium for an option with barriers is likely to be cheaper than one without].

2.9.2 Contents:

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

- A type that is used for describing a standard FX OTC option (European or American) which may be a complete trade in its own right or part of a trade strategy.

spotRate (zero or one occurrence; of the type xsd:decimal) An optional element used for FX forwards and certain types of FX OTC options. For deals consumated in the FX Forwards Market, this represents the current market rate for a particular currency pair. For barrier and digital/binary options, it can be useful to include the spot rate at the time the option was executed to make it easier to know whether the option needs to move "up" or "down" to be triggered.

fxBarrier (one or more occurrences; of the type FxBarrier) Information about a barrier rate in a Barrier Option - specifying the exact criteria for a trigger event to occur.

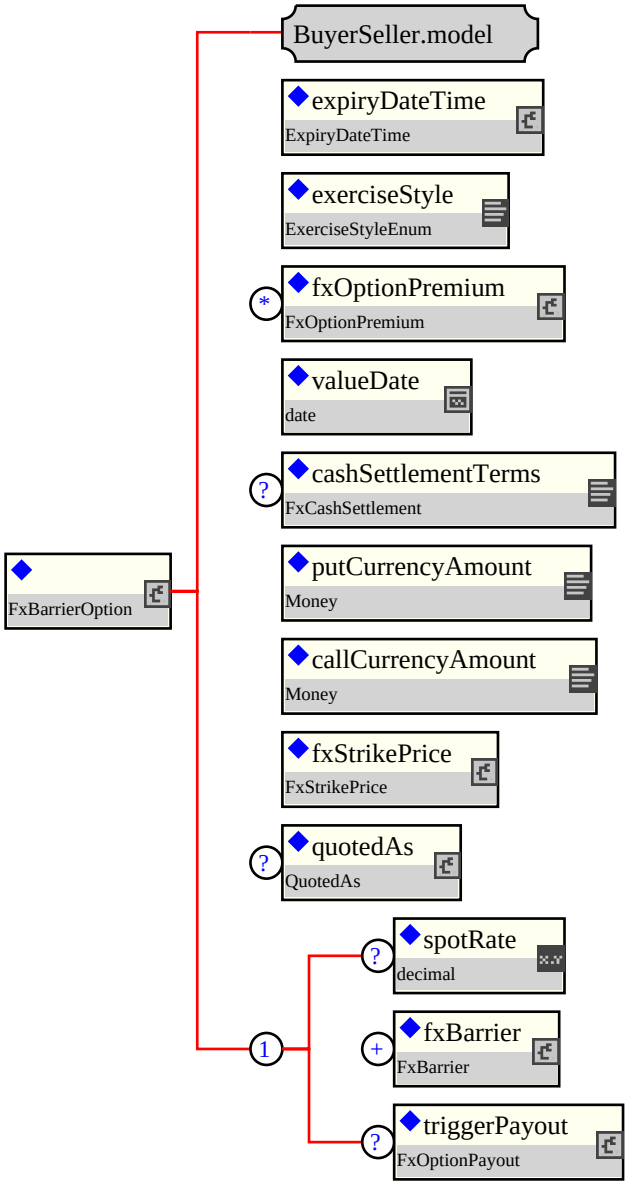
triggerPayout (zero or one occurrence; of the type FxOptionPayout) The amount of currency which becomes payable if and when a trigger event occurs.

2.9.3 Used by:

- Element: fxBarrierOption

2.9.4 Derived Types:

2.9.5 Figure:



2.9.6 Schema Fragment:

```
<xsd:complexType name="FxBarrierOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes an option with a put/call component, but
      also one or more associated barrier rates. If the market rate
      moves to reach a barrier rate a trigger event occurs. The trigger
      event may for example be necessary to enable the option, or may
      annul the option contract. [Since the barriers reduce the
      probability of exercise, the premium for an option with barriers
      is likely to be cheaper than one without].
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="FxOptionLeg">
      <xsd:sequence>
        <xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              An optional element used for FX forwards and certain
              types of FX OTC options. For deals consumated in the FX
              Forwards Market, this represents the current market rate
```

```
            for a particular currency pair. For barrier and
            digital/binary options, it can be useful to include the
            spot rate at the time the option was executed to make it
            easier to know whether the option needs to move "up" or
            "down" to be triggered.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fxBarrier" type="FxBarrier" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Information about a barrier rate in a Barrier Option -
            specifying the exact criteria for a trigger event to
            occur.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="triggerPayout" type="FxOptionPayout" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The amount of currency which becomes payable if and when
            a trigger event occurs.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:extension>
 </xsd:complexContent>
</xsd:complexType>
```

2.10 FxDigitalOption

2.10.1 Description:

A type that describes an option without a put/call component (and so no associated exercise), but with one or more trigger rates) Examples are "one-touch", "no-touch", and "double-no-touch" options. For a specified period the market rate is observed relative to the trigger rates, and on a trigger event a fixed payout may become due to the buyer of the option, or alternatively the option contract may be annulled.

2.10.2 Contents:

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

- The base type which all FpML products extend.

buyerPartyReference (exactly one occurrence; of the type Reference) A reference to the party that buys this instrument, ie. pays for this instrument and receives the rights defined by it. See 2000 ISDA definitions Article 11.1 (b). In the case of FRAs this the fixed rate payer.

sellerPartyReference (exactly one occurrence; of the type Reference) A reference to the party that sells ("writes") this instrument, i.e. that grants the rights defined by this instrument and in return receives a payment for it. See 2000 ISDA definitions Article 11.1 (a). In the case of FRAs this is the floating rate payer.

expiryDateTime (exactly one occurrence; of the type ExpiryDateTime) The date and time in a location of the option expiry. In the case of american options this is the latest possible expiry date and time.

fxOptionPremium (zero or more occurrences; of the type FxOptionPremium) Premium amount or premium installment amount for an option.

valueDate (exactly one occurrence; of the type xsd:date) The date on which both currencies traded will settle.

quotedCurrencyPair (exactly one occurrence; of the type QuotedCurrencyPair) Defines the two currencies for an FX trade and the quotation relationship between the two currencies.

spotRate (zero or one occurrence; of the type xsd:decimal) An optional element used for FX forwards and certain types of FX OTC options. For deals consumated in the FX Forwards Market, this represents the current market rate for a particular currency pair. For barrier and digital/binary options, it can be useful to include the spot rate at the time the option was executed to make it easier to know whether the option needs to move "up" or "down" to be triggered.

Either

fxEuropeanTrigger (one or more occurrences; of the type FxEuropeanTrigger) A European trigger occurs if the trigger criteria are met, but these are valid (and an observation is made) only at the maturity of the option.

Or

fxAmericanTrigger (one or more occurrences; of the type FxAmericanTrigger) An American trigger occurs if the trigger criteria are met at any time from the initiation to the maturity of the option.

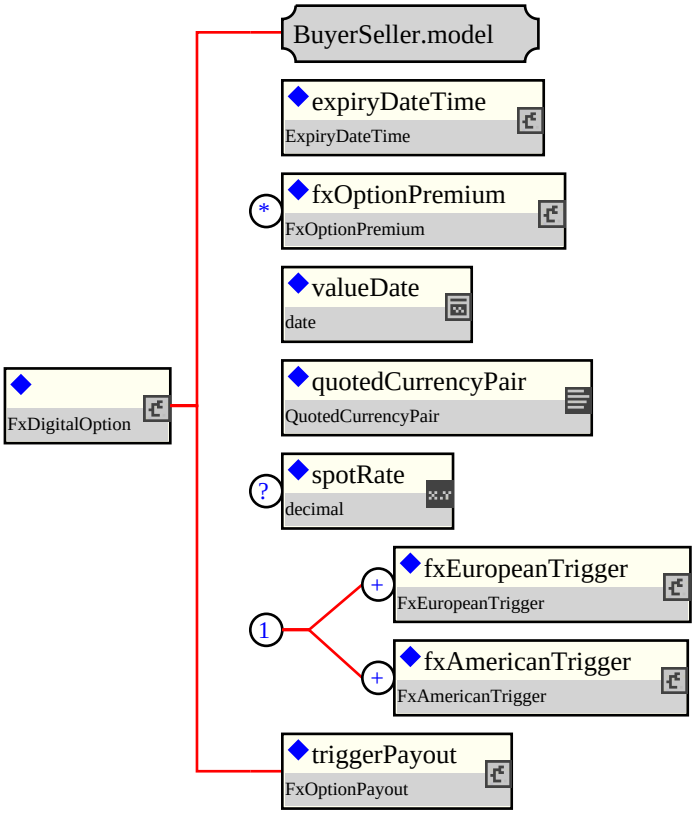
triggerPayout (exactly one occurrence; of the type FxOptionPayout) The amount of currency which becomes payable if and when a trigger event occurs.

2.10.3 Used by:

- Element: fxDigitalOption

2.10.4 Derived Types:

2.10.5 Figure:



2.10.6 Schema Fragment:

```
<xsd:complexType name="FxDigitalOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes an option without a put/call component (and
      so no associated exercise), but with one or more trigger rates)
      Examples are "one-touch", "no-touch", and "double-no-touch"
      options. For a specified period the market rate is observed
      relative to the trigger rates, and on a trigger event a fixed
      payout may become due to the buyer of the option, or
      alternatively the option contract may be annulled.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:group ref="BuyerSeller.model"/>
        <xsd:element name="expiryDateTime" type="ExpiryDateTime">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date and time in a location of the option expiry. In
              the case of american options this is the latest possible
              expiry date and time.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxOptionPremium" type="FxOptionPremium" minOccurs="0" maxOccurs="unb
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Premium amount or premium installment amount for an
              option.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="valueDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date on which both currencies traded will settle.
            </xsd:documentation>
          </xsd:annotation>
```

```
        </xsd:element>
        <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Defines the two currencies for an FX trade and the
              quotation relationship between the two currencies.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              An optional element used for FX forwards and certain
              types of FX OTC options. For deals consumated in the FX
              Forwards Market, this represents the current market rate
              for a particular currency pair. For barrier and
              digital/binary options, it can be useful to include the
              spot rate at the time the option was executed to make it
              easier to know whether the option needs to move "up" or
              "down" to be triggered.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:choice>
          <xsd:element name="fxEuropeanTrigger" type="FxEuropeanTrigger" maxOccurs="unbounded">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                A European trigger occurs if the trigger criteria are
                met, but these are valid (and an observation is made)
                only at the maturity of the option.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
          <xsd:element name="fxAmericanTrigger" type="FxAmericanTrigger" maxOccurs="unbounded">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                An American trigger occurs if the trigger criteria are
                met at any time from the initiation to the maturity of
                the option.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
        </xsd:choice>
        <xsd:element name="triggerPayout" type="FxOptionPayout">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The amount of currency which becomes payable if and when
              a trigger event occurs.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.11 FxEuropeanTrigger

2.11.1 Description:

A type that defines a particular type of payout in an FX OTC exotic option. A European trigger occurs if the trigger criteria are met, but these are valid (and an observation is made) only at the maturity of the option.

2.11.2 Contents:

triggerCondition (exactly one occurrence; of the type TriggerConditionEnum) The binary condition that applies to a European-style trigger, determining where the spot rate must be relative to the triggerRate for the option to be exercisable. There can only be two domain values for this element: "aboveTrigger" or "belowTrigger".

quotedCurrencyPair (exactly one occurrence; of the type QuotedCurrencyPair) Defines the two currencies for an FX trade and the quotation relationship between the two currencies.

triggerRate (exactly one occurrence; of the type xsd:decimal) The market rate is observed relative to the trigger rate, and if it is found to be on the predefined side of (above or below) the trigger rate, a trigger event is deemed to have occurred.

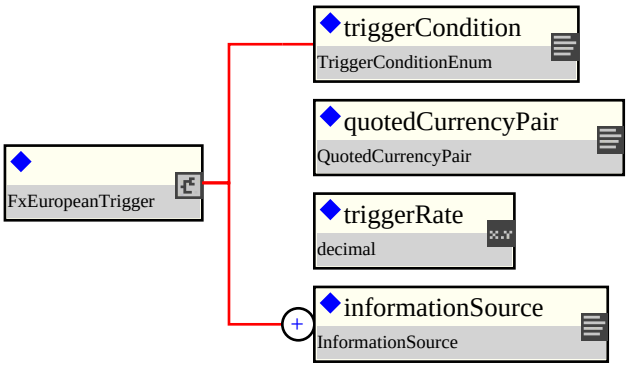
informationSource (one or more occurrences; of the type InformationSource) The information source where a published or displayed market rate will be obtained, e.g. Telerate Page 3750.

2.11.3 Used by:

- Complex type: FxDigitalOption

2.11.4 Derived Types:

2.11.5 Figure:



2.11.6 Schema Fragment:

```
<xsd:complexType name="FxEuropeanTrigger">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that defines a particular type of payout in an FX OTC
      exotic option. A European trigger occurs if the trigger criteria
      are met, but these are valid (and an observation is made) only at
      the maturity of the option.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="triggerCondition" type="TriggerConditionEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The binary condition that applies to a European-style
          trigger, determining where the spot rate must be relative to
          the triggerRate for the option to be exercisable. There can
```

```
          only be two domain values for this element: "aboveTrigger" or
          "belowTrigger".
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Defines the two currencies for an FX trade and the quotation
          relationship between the two currencies.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="triggerRate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The market rate is observed relative to the trigger rate, and
          if it is found to be on the predefined side of (above or
          below) the trigger rate, a trigger event is deemed to have
          occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="informationSource" type="InformationSource" 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:sequence>
</xsd:complexType>
```

2.12 FxLeg

2.12.1 Description:

A type that represents a single exchange of one currency for another. This is used for representing FX spot, forward, and swap transactions.

2.12.2 Contents:

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

- The base type which all FpML products extend.

exchangedCurrency1 (exactly one occurrence; of the type Payment) This is the first of the two currency flows that define a single leg of a standard foreign exchange transaction.

exchangedCurrency2 (exactly one occurrence; of the type Payment) This is the second of the two currency flows that define a single leg of a standard foreign exchange transaction.

Either

valueDate (exactly one occurrence; of the type xsd:date) The date on which both currencies traded will settle.

exchangeRate (exactly one occurrence; of the type ExchangeRate) The rate of exchange between the two currencies.

nonDeliverableForward (zero or one occurrence; of the type FxCashSettlement) Used to describe a particular type of FX forward transaction that is settled in a single currency.

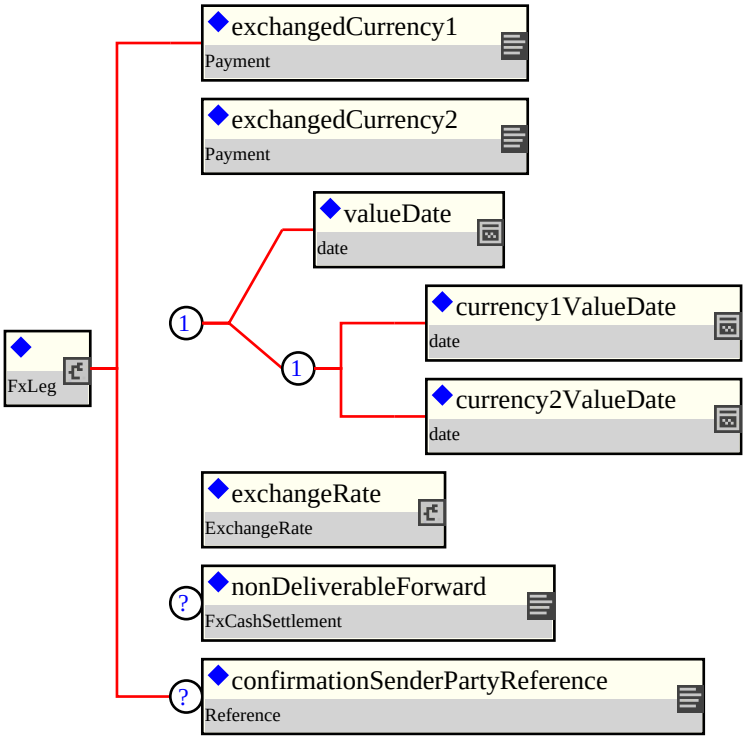
confirmationSenderPartyReference (zero or one occurrence; of the type Reference) A reference to the party that is sending the current document as a confirmation of the trade.

2.12.3 Used by:

- Element: fxSingleLeg

2.12.4 Derived Types:

2.12.5 Figure:



2.12.6 Schema Fragment:

```
<xsd:complexType name="FxLeg">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that represents a single exchange of one currency for
      another. This is used for representing FX spot, forward, and swap
      transactions.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element name="exchangedCurrency1" type="Payment">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              This is the first of the two currency flows that define a
              single leg of a standard foreign exchange transaction.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="exchangedCurrency2" type="Payment">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              This is the second of the two currency flows that define
              a single leg of a standard foreign exchange transaction.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:choice>
          <xsd:element name="valueDate" type="xsd:date">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                The date on which both currencies traded will settle.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
          <xsd:sequence>
            <xsd:element name="currency1ValueDate" type="xsd:date">
              <xsd:annotation>
                <xsd:documentation xml:lang="en">
                  The date on which the currency1 amount will be
                  settled. To be used in a split value date scenario.
                </xsd:documentation>
              </xsd:annotation>
```

```
            </xsd:element>
            <xsd:element name="currency2ValueDate" type="xsd:date">
              <xsd:annotation>
                <xsd:documentation xml:lang="en">
                  The date on which the currency2 amount will be
                  settled. To be used in a split value date scenario.
                </xsd:documentation>
              </xsd:annotation>
            </xsd:element>
          </xsd:sequence>
        </xsd:choice>
        <xsd:element name="exchangeRate" type="ExchangeRate">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The rate of exchange between the two currencies.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="nonDeliverableForward" type="FxCashSettlement" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Used to describe a particular type of FX forward
              transaction that is settled in a single currency.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="confirmationSenderPartyReference" type="Reference" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A reference to the party that is sending the current
              document as a confirmation of the trade.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.13 FxOptionLeg

2.13.1 Description:

A type that is used for describing a standard FX OTC option (European or American) which may be a complete trade in its own right or part of a trade strategy.

2.13.2 Contents:

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

- The base type which all FpML products extend.

buyerPartyReference (exactly one occurrence; of the type Reference) A reference to the party that buys this instrument, ie. pays for this instrument and receives the rights defined by it. See 2000 ISDA definitions Article 11.1 (b). In the case of FRAs this the fixed rate payer.

sellerPartyReference (exactly one occurrence; of the type Reference) A reference to the party that sells ("writes") this instrument, i.e. that grants the rights defined by this instrument and in return receives a payment for it. See 2000 ISDA definitions Article 11.1 (a). In the case of FRAs this is the floating rate payer.

expiryDateTime (exactly one occurrence; of the type ExpiryDateTime) The date and time in a location of the option expiry. In the case of american options this is the latest possible expiry date and time.

exerciseStyle (exactly one occurrence; of the type ExerciseStyleEnum) The manner in which the option can be exercised.

fxOptionPremium (zero or more occurrences; of the type FxOptionPremium) Premium amount or premium installment amount for an option.

valueDate (exactly one occurrence; of the type xsd:date) The date on which both currencies traded will settle.

cashSettlementTerms (zero or one occurrence; of the type FxCashSettlement) This optional element is only used if an option has been specified at execution time to be settled into a single cash payment. This would be used for a non-deliverable option.

putCurrencyAmount (exactly one occurrence; of the type Money) The currency amount that the option gives the right to sell.

callCurrencyAmount (exactly one occurrence; of the type Money) The currency amount that the option gives the right to buy.

fxStrikePrice (exactly one occurrence; of the type FxStrikePrice) TBA

quotedAs (zero or one occurrence; of the type QuotedAs) Describes how the option was quoted.

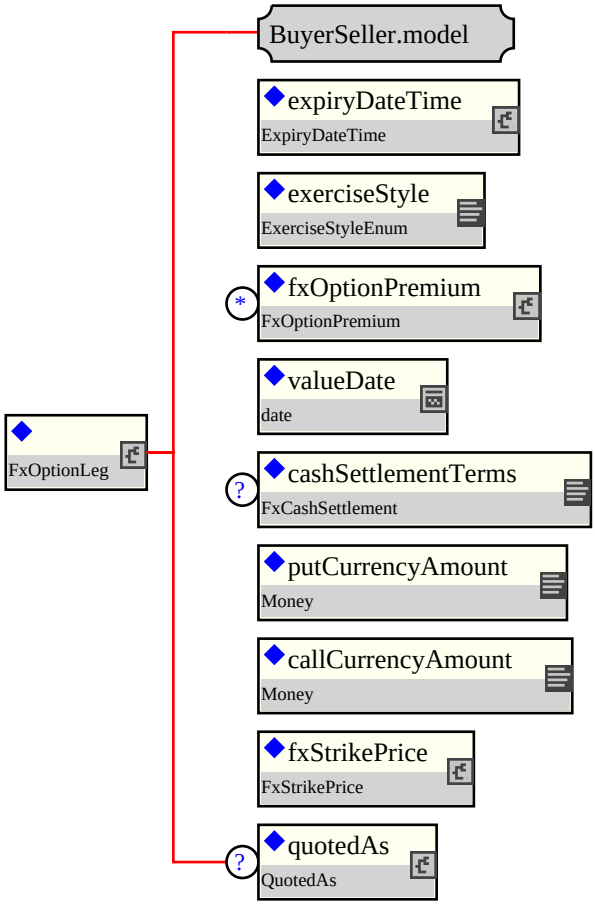
2.13.3 Used by:

- Element: fxSimpleOption
- Complex type: FxBarrierOption

2.13.4 Derived Types:

- Complex type: FxBarrierOption

2.13.5 Figure:



2.13.6 Schema Fragment:

```
<xsd:complexType name="FxOptionLeg">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used for describing a standard FX OTC option
      (European or American) which may be a complete trade in its own
      right or part of a trade strategy.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:group ref="BuyerSeller.model"/>
        <xsd:element name="expiryDateTime" type="ExpiryDateTime">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date and time in a location of the option expiry. In
              the case of american options this is the latest possible
              expiry date and time.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="exerciseStyle" type="ExerciseStyleEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The manner in which the option can be exercised.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxOptionPremium" type="FxOptionPremium" minOccurs="0" maxOccurs="unb
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Premium amount or premium installment amount for an
              option.
            </xsd:documentation>
          </xsd:annotation>
```

```
        </xsd:element>
        <xsd:element name="valueDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date on which both currencies traded will settle.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="cashSettlementTerms" type="FxCashSettlement" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              This optional element is only used if an option has been
              specified at execution time to be settled into a single
              cash payment. This would be used for a non-deliverable
              option.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="putCurrencyAmount" type="Money">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The currency amount that the option gives the right to
              sell.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="callCurrencyAmount" type="Money">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The currency amount that the option gives the right to
              buy.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxStrikePrice" type="FxStrikePrice">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              TBA
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="quotedAs" type="QuotedAs" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Describes how the option was quoted.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.14 FxOptionPayout

2.14.1 Description:

A type that contains full details of a predefined fixed payout which may occur (or not) in a Barrier Option or Digital Option when a trigger event occurs (or not).

2.14.2 Contents:

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

- A type defining a currency amount.

payoutStyle (exactly one occurrence; of the type PayoutEnum) The trigger event and payout may be asynchonous. A payout may become due on the trigger event, or the payout may (by agreeement at initiation) be deferred (for example) to the maturity date.

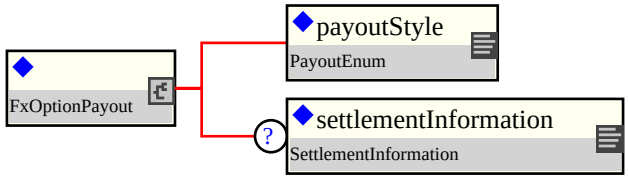
settlementInformation (zero or one occurrence; of the type SettlementInformation) The information required to settle a currency payment that results from a trade.

2.14.3 Used by:

- Complex type: FxBarrierOption
- Complex type: FxDigitalOption

2.14.4 Derived Types:

2.14.5 Figure:



2.14.6 Schema Fragment:

```
<xsd:complexType name="FxOptionPayout">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that contains full details of a predefined fixed payout
      which may occur (or not) in a Barrier Option or Digital Option
      when a trigger event occurs (or not).
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Money">
      <xsd:sequence>
        <xsd:element name="payoutStyle" type="PayoutEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The trigger event and payout may be asynchonous. A payout
              may become due on the trigger event, or the payout may
              (by agreeement at initiation) be deferred (for example)
              to the maturity date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="settlementInformation" type="SettlementInformation" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The information required to settle a currency payment
              that results from a trade.
            </xsd:documentation>
          </xsd:annotation>
```

```
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.15 FxOptionPremium

2.15.1 Description:

A type that specifies the premium exchanged for a single option trade or option strategy.

2.15.2 Contents:

payerPartyReference (exactly one occurrence; of the type Reference) A reference to the party responsible for making the payments defined by this structure.

receiverPartyReference (exactly one occurrence; of the type Reference) A reference to the party that receives the payments corresponding to this structure.

premiumAmount (exactly one occurrence; of the type Money) The specific currency and amount of the option premium.

premiumSettlementDate (exactly one occurrence; of the type xsd:date) The agreed-upon date when the option premium will be settled.

settlementInformation (zero or one occurrence; of the type SettlementInformation) The information required to settle a currency payment that results from a trade.

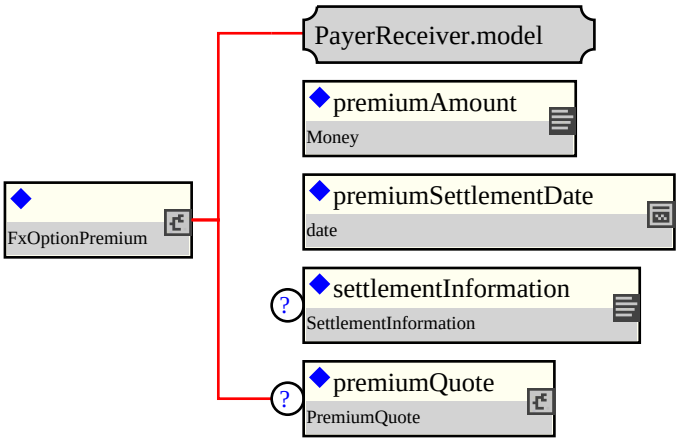
premiumQuote (zero or one occurrence; of the type PremiumQuote) This is the option premium as quoted. It is expected to be consistent with the premiumAmount and is for information only.

2.15.3 Used by:

- Complex type: FxAverageRateOption
- Complex type: FxDigitalOption
- Complex type: FxOptionLeg

2.15.4 Derived Types:

2.15.5 Figure:



2.15.6 Schema Fragment:

```
<xsd:complexType name="FxOptionPremium">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that specifies the premium exchanged for a single option
      trade or option strategy.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
```

```
    <xsd:group ref="PayerReceiver.model"/>
    <xsd:element name="premiumAmount" type="Money">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The specific currency and amount of the option premium.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="premiumSettlementDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The agreed-upon date when the option premium will be settled.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="settlementInformation" type="SettlementInformation" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The information required to settle a currency payment that
          results from a trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="premiumQuote" type="PremiumQuote" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          This is the option premium as quoted. It is expected to be
          consistent with the premiumAmount and is for information
          only.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.16 FxStrikePrice

2.16.1 Description:

A type that describes the rate of exchange at which the option has been struck.

2.16.2 Contents:

rate (exactly one occurrence; of the type xsd:decimal) The rate of exchange between the two currencies of the leg of a deal. Must be specified with a quote basis.

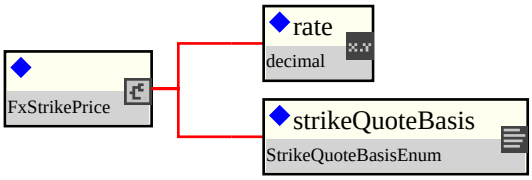
strikeQuoteBasis (exactly one occurrence; of the type StrikeQuoteBasisEnum) The method by which the strike rate is quoted.

2.16.3 Used by:

- Complex type: FxAverageRateOption
- Complex type: FxOptionLeg

2.16.4 Derived Types:

2.16.5 Figure:



2.16.6 Schema Fragment:

```
<xsd:complexType name="FxStrikePrice">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes the rate of exchange at which the option
      has been struck.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="rate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The rate of exchange between the two currencies of the leg of
          a deal. Must be specified with a quote basis.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="strikeQuoteBasis" type="StrikeQuoteBasisEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The method by which the strike rate is quoted.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.17 FxSwap

2.17.1 Description:

A type that describes an FX swap. This is similar to FpML_FXLeg, but contains multiple legs for a particular trade.

2.17.2 Contents:

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

- The base type which all FpML products extend.

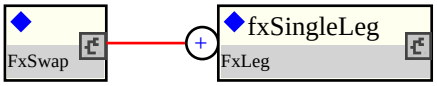
fxSingleLeg (one or more occurrences; of the type FxLeg) A single-legged FX transaction definition (e.g., spot or forward).

2.17.3 Used by:

- Element: fxSwap

2.17.4 Derived Types:

2.17.5 Figure:



2.17.6 Schema Fragment:

```
<xsd:complexType name="FxSwap">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes an FX swap. This is similar to FpML_FXLeg,
      but contains multiple legs for a particular trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element ref="fxSingleLeg" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.18 ObservedRates

2.18.1 Description:

A type that describes prior rate observations within average rate options. Periodically, an average rate option agreement will be struck whereby some rates have already been observed in the past but will become part of computation of the average rate of the option. This structure provides for these previously observed rates to be included in the description of the trade.

2.18.2 Contents:

observationDate (exactly one occurrence; of the type xsd:date) A specific date for which an observation against a particular rate will be made and will be used for subsequent computations.

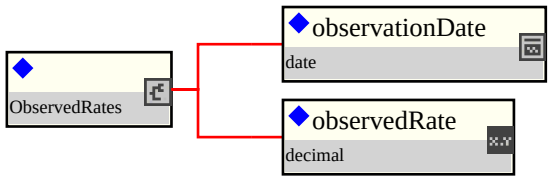
observedRate (exactly one occurrence; of the type xsd:decimal) The actual observed rate before any required rate treatment is applied, e.g. before converting a rate quoted on a discount basis to an equivalent yield. An observed rate of 5% would be represented as 0.05.

2.18.3 Used by:

- Complex type: FxAverageRateOption

2.18.4 Derived Types:

2.18.5 Figure:



2.18.6 Schema Fragment:

```
<xsd:complexType name="ObservedRates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes prior rate observations within average rate
      options. Periodically, an average rate option agreement will be
      struck whereby some rates have already been observed in the past
      but will become part of computation of the average rate of the
      option. This structure provides for these previously observed
      rates to be included in the description of the trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="observationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A specific date for which an observation against a particular
          rate will be made and will be used for subsequent
          computations.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observedRate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The actual observed rate before any required rate treatment
          is applied, e.g. before converting a rate quoted on a
          discount basis to an equivalent yield. An observed rate of 5%
          would be represented as 0.05.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
```

```
</xsd:complexType>
```

2.19 PremiumQuote

2.19.1 Description:

A type that describes the option premium as quoted.

2.19.2 Contents:

premiumValue (exactly one occurrence; of the type xsd:decimal) The value of the premium quote. In general this will be either a percentage or an explicit amount.

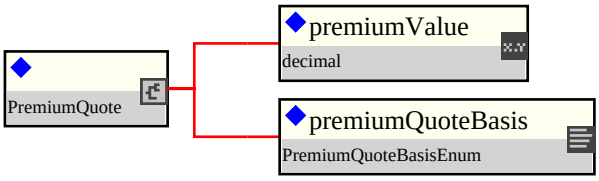
premiumQuoteBasis (exactly one occurrence; of the type PremiumQuoteBasisEnum) The method by which the option premium was quoted.

2.19.3 Used by:

- Complex type: FxOptionPremium

2.19.4 Derived Types:

2.19.5 Figure:



2.19.6 Schema Fragment:

```
<xsd:complexType name="PremiumQuote">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes the option premium as quoted.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="premiumValue" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The value of the premium quote. In general this will be
          either a percentage or an explicit amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="premiumQuoteBasis" type="PremiumQuoteBasisEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The method by which the option premium was quoted.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.20 QuotedAs

2.20.1 Description:

A type that describes how the option was quoted.

2.20.2 Contents:

optionOnCurrency (exactly one occurrence; of the type Currency) Either the callCurrencyAmount or the putCurrencyAmount defined elsewhere in the document. The currency reference denotes the option currency as the option was quoted (as opposed to the face currency).

faceOnCurrency (exactly one occurrence; of the type Currency) Either the callCurrencyAmount or the putCurrencyAmount defined elsewhere in the document.The currency reference denotes the face currency as the option was quoted (as opposed to the option currency).

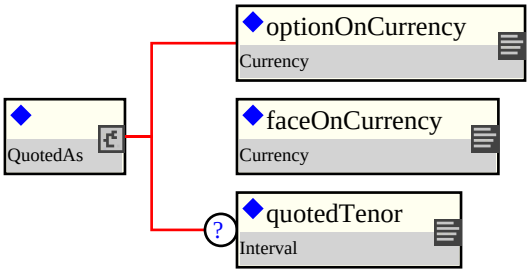
quotedTenor (zero or one occurrence; of the type Interval) Code denoting the tenor of the option leg.

2.20.3 Used by:

- Complex type: FxOptionLeg

2.20.4 Derived Types:

2.20.5 Figure:



2.20.6 Schema Fragment:

```
<xsd:complexType name="QuotedAs">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes how the option was quoted.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="optionOnCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Either the callCurrencyAmount or the putCurrencyAmount
          defined elsewhere in the document. The currency reference
          denotes the option currency as the option was quoted (as
          opposed to the face currency).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="faceOnCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Either the callCurrencyAmount or the putCurrencyAmount
          defined elsewhere in the document.The currency reference
          denotes the face currency as the option was quoted (as
          opposed to the option currency).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotedTenor" type="Interval" minOccurs="0">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Code denoting the tenor of the option leg.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.21 SideRate

2.21.1 Description:

A type that is used for describing a particular rate against base currency. Exists within SideRates.

2.21.2 Contents:

currency (exactly one occurrence; of the type Currency) The currency in which an amount is denominated.

sideRateBasis (exactly one occurrence; of the type SideRateBasisEnum) The method by which the exchange rate against base currency is quoted.

rate (exactly one occurrence; of the type xsd:decimal) The rate of exchange between the two currencies of the leg of a deal. Must be specified with a quote basis.

spotRate (zero or one occurrence; of the type xsd:decimal) An optional element used for FX forwards and certain types of FX OTC options. For deals consumated in the FX Forwards Market, this represents the current market rate for a particular currency pair. For barrier and digital/binary options, it can be useful to include the spot rate at the time the option was executed to make it easier to know whether the option needs to move "up" or "down" to be triggered.

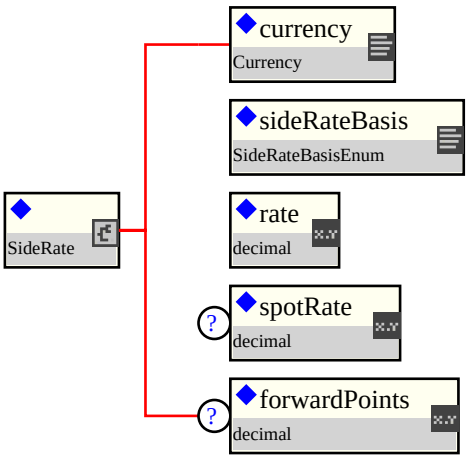
forwardPoints (zero or one occurrence; of the type xsd:decimal) An optional element used for deals consumated in the FX Forwards market. Forward points represent the interest rate differential between the two currencies traded and are quoted as a preminum or a discount. Forward points are added to, or subtracted from, the spot rate to create the rate of the forward trade.

2.21.3 Used by:

- Complex type: SideRates

2.21.4 Derived Types:

2.21.5 Figure:



2.21.6 Schema Fragment:

```
<xsd:complexType name="SideRate">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used for describing a particular rate against base
      currency. Exists within SideRates.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="currency" type="Currency">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which an amount is denominated.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="sideRateBasis" type="SideRateBasisEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The method by which the exchange rate against base currency
          is quoted.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="rate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The rate of exchange between the two currencies of the leg of
          a deal. Must be specified with a quote basis.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An optional element used for FX forwards and certain types of
          FX OTC options. For deals consumated in the FX Forwards
          Market, this represents the current market rate for a
          particular currency pair. For barrier and digital/binary
          options, it can be useful to include the spot rate at the
          time the option was executed to make it easier to know
          whether the option needs to move "up" or "down" to be
          triggered.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="forwardPoints" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An optional element used for deals consumated in the FX
          Forwards market. Forward points represent the interest rate
          differential between the two currencies traded and are quoted
          as a preminum or a discount. Forward points are added to, or
          subtracted from, the spot rate to create the rate of the
          forward trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.22 SideRates

2.22.1 Description:

A type that is used for including rates against base currency for non-base currency FX contracts.

2.22.2 Contents:

baseCurrency (exactly one occurrence; of the type Currency) The currency that is used as the basis for the side rates when calculating a cross rate.

currency1SideRate (zero or one occurrence; of the type SideRate) The exchange rate for the first currency of the trade against base currency.

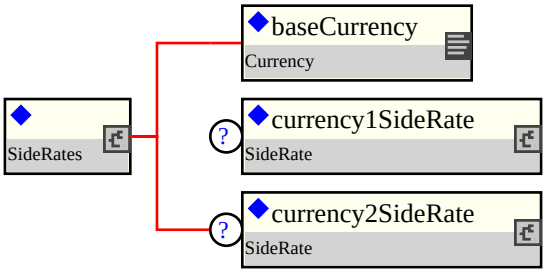
currency2SideRate (zero or one occurrence; of the type SideRate) The exchange rate for the second currency of the trade against base currency.

2.22.3 Used by:

- Complex type: ExchangeRate

2.22.4 Derived Types:

2.22.5 Figure:



2.22.6 Schema Fragment:

```
<xsd:complexType name="SideRates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used for including rates against base currency for
      non-base currency FX contracts.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="baseCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency that is used as the basis for the side rates
          when calculating a cross rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="currency1SideRate" type="SideRate" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The exchange rate for the first currency of the trade against
          base currency.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="currency2SideRate" type="SideRate" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The exchange rate for the second currency of the trade
          against base currency.
```

```
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.23 TermDeposit

2.23.1 Description:

A class defining the content model for a term deposit product.

2.23.2 Contents:

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

- The base type which all FpML products extend.

initialPayerReference (exactly one occurrence; of the type Reference) A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the payer of the initial principal of the deposit on the start date.

initialReceiverReference (exactly one occurrence; of the type Reference) A pointer style reference to a party identifier defined elsewhere in the document. The party is the receiver of the initial principal of the deposit on the start date.

startDate (exactly one occurrence; of the type xsd:date) The averaging period start date.

maturityDate (exactly one occurrence; of the type xsd:date) The end date of the calculation period. This date should already be adjusted for any applicable business day convention.

dayCountFraction (exactly one occurrence; of the type DayCountFraction) The day count fraction.

principal (exactly one occurrence; of the type Money) The principal amount of the trade.

fixedRate (exactly one occurrence; of the type xsd:decimal) The calculation period fixed rate. A per annum rate, expressed as a decimal. A fixed rate of 5% would be represented as 0.05.

interest (zero or one occurrence; of the type Money) The total interest of at maturity of the trade.

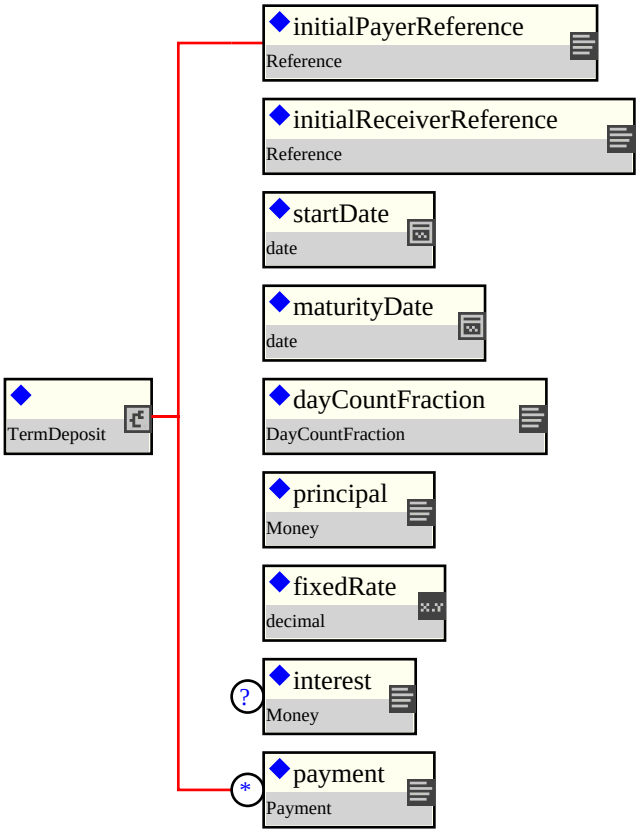
payment (zero or more occurrences; of the type Payment) A known payment between two parties.

2.23.3 Used by:

- Element: termDeposit

2.23.4 Derived Types:

2.23.5 Figure:



2.23.6 Schema Fragment:

```
<xsd:complexType name="TermDeposit">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A class defining the content model for a term deposit product.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element name="initialPayerReference" type="Reference">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A pointer style reference to a party identifier defined
              elsewhere in the document. The party referenced is the
              payer of the initial principal of the deposit on the
              start date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="initialReceiverReference" type="Reference">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A pointer style reference to a party identifier defined
              elsewhere in the document. The party is the receiver of
              the initial principal of the deposit on the start date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="startDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The averaging period start date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="maturityDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
```

```
            The end date of the calculation period. This date should
            already be adjusted for any applicable business day
            convention.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="dayCountFraction" type="DayCountFraction">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The day count fraction.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="principal" type="Money">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The principal amount of the trade.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fixedRate" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The calculation period fixed rate. A per annum rate,
            expressed as a decimal. A fixed rate of 5% would be
            represented as 0.05.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="interest" type="Money" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The total interest of at maturity of the trade.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="payment" type="Payment" minOccurs="0" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A known payment between two parties.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
```

3 Schema listing

```
<xsd:schema targetNamespace="http://www.fpml.org/2005/FpML-4-2" elementFormDefault="qualified"
  <xsd:include schemaLocation="fpml-shared-4-2.xsd"/>
  <xsd:complexType name="CutName">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        Allows for an expiryDateTime cut to be described by name.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:simpleContent>
      <xsd:extension base="xsd:normalizedString">
        <xsd:attribute name="cutNameScheme" type="xsd:anyURI" default="http://www.fpml.org/codi
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
  <xsd:complexType name="ExchangeRate">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A type that is used for describing the exchange rate for a
        particular transaction.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="FxRate">
        <xsd:sequence>
          <xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                An optional element used for FX forwards and certain
                types of FX OTC options. For deals consumated in the FX
                Forwards Market, this represents the current market
                rate for a particular currency pair. For barrier and
                digital/binary options, it can be useful to include the
                spot rate at the time the option was executed to make
                it easier to know whether the option needs to move "up"
                or "down" to be triggered.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
          <xsd:element name="forwardPoints" type="xsd:decimal" minOccurs="0">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                An optional element used for deals consumated in the FX
                Forwards market. Forward points represent the interest
                rate differential between the two currencies traded and
                are quoted as a preminum or a discount. Forward points
                are added to, or subtracted from, the spot rate to
                create the rate of the forward trade.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
          <xsd:element name="sideRates" type="SideRates" minOccurs="0">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                An optional element that allow for definition of rates
                against base currency for non-base currency FX
                contracts.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="ExpiryDateTime">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A type that describes the date and time in a location of the
        option expiry. In the case of American options this is the
        latest possible expiry date and time.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
      <xsd:element name="expiryDate" type="xsd:date">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Represents a standard expiry date as defined for an FX OTC
            option.
          </xsd:documentation>
        </xsd:annotation>
```

```
    </xsd:element>
    <xsd:element name="expiryTime" type="BusinessCenterTime"/>
    <xsd:element name="cutName" type="CutName" minOccurs="0"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FxAmericanTrigger">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that defines a particular type of payout in an FX OTC
      exotic option. An American trigger occurs if the trigger
      criteria are met at any time from the initiation to the
      maturity of the option.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="touchCondition" type="TouchConditionEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The binary condition that applies to an American-style
          trigger. There can only be two domain values for this
          element: "touch" or "no touch".
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Defines the two currencies for an FX trade and the
          quotation relationship between the two currencies.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="triggerRate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The market rate is observed relative to the trigger rate,
          and if it is found to be on the predefined side of (above
          or below) the trigger rate, a trigger event is deemed to
          have occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="informationSource" type="InformationSource" 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="observationStartDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The start of the period over which observations are made to
          determine whether a trigger has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observationEndDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The end of the period over which observations are made to
          determine whether a trigger event has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FxAverageRateObservationDate">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that, for average rate options, is used to describe each
      specific observation date, as opposed to a parametric frequency
      of rate observations.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="observationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A specific date for which an observation against a
          particular rate will be made and will be used for
          subsequent computations.
```

```
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="averageRateWeightingFactor" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An optional factor that can be used for weighting certain
          observation dates. Typically, firms will weight each date
          with a factor of 1 if there are standard, unweighted
          adjustments.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FxAverageRateObservationSchedule">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes average rate options rate observations.
      This is used to describe a parametric frequency of rate
      observations against a particular rate. Typical frequencies
      might include daily, every Friday, etc.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="observationStartDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The start of the period over which observations are made to
          determine whether a trigger has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observationEndDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The end of the period over which observations are made to
          determine whether a trigger event has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationPeriodFrequency" type="CalculationPeriodFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency at which calculation period end dates occur
          with the regular part of the calculation period schedule
          and their roll date convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FxAverageRateOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used for an option whose payout is based on the
      average of the price of the underlying over a specific period
      of time. The payout is the difference between the
      predetermined, fixed strike price and the average of spot rates
      observed and is used for hedging against prevailing spot rates
      over a given time period.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:group ref="BuyerSeller.model"/>
        <xsd:element name="expiryDateTime" type="ExpiryDateTime">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date and time in a location of the option expiry.
              In the case of american options this is the latest
              possible expiry date and time.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="exerciseStyle" type="ExerciseStyleEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The manner in which the option can be exercised.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
```

```
<xsd:element name="fxOptionPremium" type="FxOptionPremium" minOccurs="0" maxOccurs="u
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Premium amount or premium installment amount for an
      option.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="valueDate" type="xsd:date">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The date on which both currencies traded will settle.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="putCurrencyAmount" type="Money">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The currency amount that the option gives the right to
      sell.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="callCurrencyAmount" type="Money">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The currency amount that the option gives the right to
      buy.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="fxStrikePrice" type="FxStrikePrice">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      TBA
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An optional element used for FX forwards and certain
      types of FX OTC options. For deals consumated in the FX
      Forwards Market, this represents the current market
      rate for a particular currency pair. For barrier and
      digital/binary options, it can be useful to include the
      spot rate at the time the option was executed to make
      it easier to know whether the option needs to move "up"
      or "down" to be triggered.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="payoutCurrency" type="Currency">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The ISO code of the currency in which a payout (if any)
      is to be made when a trigger is hit on a digital or
      barrier option.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="averageRateQuoteBasis" type="StrikeQuoteBasisEnum">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The method by which the average rate that is being
      observed is quoted.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="precision" type="xsd:nonNegativeInteger" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Specifies the rounding precision in terms of a number
      of decimal places. Note how a percentage rate rounding
      of 5 decimal places is expressed as a rounding
      precision of 7 in the FpML document since the
      percentage is expressed as a decimal, e.g. 9.876543%
      (or 0.09876543) being rounded to the nearest 5 decimal
      places is 9.87654% (or 0.0987654).
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="payoutFormula" type="xsd:string" minOccurs="0">
```

```
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The description of the mathematical computation for how
              the payout is computed.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="primaryRateSource" type="InformationSource">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The primary source for where the rate observation will
              occur. Will typically be either a page or a reference
              bank published rate.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="secondaryRateSource" type="InformationSource" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              An alternative, or secondary, source for where the rate
              observation will occur. Will typically be either a page
              or a reference bank published rate.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fixingTime" type="BusinessCenterTime">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The time at which the spot currency exchange rate will
              be observed. It is specified as a time in a specific
              business center, e.g. 11:00am London time.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:choice>
          <xsd:element name="averageRateObservationSchedule" type="FxAverageRateObservationSc
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                Parametric schedule of rate observations.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
          <xsd:element name="averageRateObservationDate" type="FxAverageRateObservationDate"
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                One of more specific rate observation dates.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
        </xsd:choice>
        <xsd:element name="observedRates" type="ObservedRates" minOccurs="0" maxOccurs="unbou
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Describes prior rate observations within average rate
              options. Periodically, an average rate option agreement
              will be struck whereby some rates have already been
              observed in the past but will become part of
              computation of the average rate of the option. This
              structure provides for these previously observed rates
              to be included in the description of the trade.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FxBarrier">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used within the FX barrier option definition to
      define one or more barrier levels that determine whether the
      option will be knocked-in or knocked-out.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="fxBarrierType" type="FxBarrierTypeEnum" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          This specifies whether the option becomes effective
          ("knock-in") or is annulled ("knock-out") when the
          respective trigger event occurs.
        </xsd:documentation>
```

```
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Defines the two currencies for an FX trade and the
          quotation relationship between the two currencies.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="triggerRate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The market rate is observed relative to the trigger rate,
          and if it is found to be on the predefined side of (above
          or below) the trigger rate, a trigger event is deemed to
          have occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="informationSource" type="InformationSource" 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="observationStartDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The start of the period over which observations are made to
          determine whether a trigger has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observationEndDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The end of the period over which observations are made to
          determine whether a trigger event has occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FxBarrierOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes an option with a put/call component, but
      also one or more associated barrier rates. If the market rate
      moves to reach a barrier rate a trigger event occurs. The
      trigger event may for example be necessary to enable the
      option, or may annul the option contract. [Since the barriers
      reduce the probability of exercise, the premium for an option
      with barriers is likely to be cheaper than one without].
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="FxOptionLeg">
      <xsd:sequence>
        <xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              An optional element used for FX forwards and certain
              types of FX OTC options. For deals consumated in the FX
              Forwards Market, this represents the current market
              rate for a particular currency pair. For barrier and
              digital/binary options, it can be useful to include the
              spot rate at the time the option was executed to make
              it easier to know whether the option needs to move "up"
              or "down" to be triggered.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxBarrier" type="FxBarrier" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Information about a barrier rate in a Barrier Option -
              specifying the exact criteria for a trigger event to
              occur.
            </xsd:documentation>
          </xsd:annotation>
```

```
        </xsd:element>
        <xsd:element name="triggerPayout" type="FxOptionPayout" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The amount of currency which becomes payable if and
              when a trigger event occurs.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FxDigitalOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes an option without a put/call component
      (and so no associated exercise), but with one or more trigger
      rates) Examples are "one-touch", "no-touch", and
      "double-no-touch" options. For a specified period the market
      rate is observed relative to the trigger rates, and on a
      trigger event a fixed payout may become due to the buyer of the
      option, or alternatively the option contract may be annulled.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:group ref="BuyerSeller.model"/>
        <xsd:element name="expiryDateTime" type="ExpiryDateTime">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date and time in a location of the option expiry.
              In the case of american options this is the latest
              possible expiry date and time.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxOptionPremium" type="FxOptionPremium" minOccurs="0" maxOccurs="u
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Premium amount or premium installment amount for an
              option.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="valueDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date on which both currencies traded will settle.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Defines the two currencies for an FX trade and the
              quotation relationship between the two currencies.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              An optional element used for FX forwards and certain
              types of FX OTC options. For deals consumated in the FX
              Forwards Market, this represents the current market
              rate for a particular currency pair. For barrier and
              digital/binary options, it can be useful to include the
              spot rate at the time the option was executed to make
              it easier to know whether the option needs to move "up"
              or "down" to be triggered.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:choice>
          <xsd:element name="fxEuropeanTrigger" type="FxEuropeanTrigger" maxOccurs="unbounded
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                A European trigger occurs if the trigger criteria are
                met, but these are valid (and an observation is made)
                only at the maturity of the option.
              </xsd:documentation>
```

```
            </xsd:annotation>
          </xsd:element>
          <xsd:element name="fxAmericanTrigger" type="FxAmericanTrigger" maxOccurs="unbounded
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                An American trigger occurs if the trigger criteria
                are met at any time from the initiation to the
                maturity of the option.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
        </xsd:choice>
        <xsd:element name="triggerPayout" type="FxOptionPayout">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The amount of currency which becomes payable if and
              when a trigger event occurs.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FxEuropeanTrigger">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that defines a particular type of payout in an FX OTC
      exotic option. A European trigger occurs if the trigger
      criteria are met, but these are valid (and an observation is
      made) only at the maturity of the option.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="triggerCondition" type="TriggerConditionEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The binary condition that applies to a European-style
          trigger, determining where the spot rate must be relative
          to the triggerRate for the option to be exercisable. There
          can only be two domain values for this element:
          "aboveTrigger" or "belowTrigger".
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Defines the two currencies for an FX trade and the
          quotation relationship between the two currencies.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="triggerRate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The market rate is observed relative to the trigger rate,
          and if it is found to be on the predefined side of (above
          or below) the trigger rate, a trigger event is deemed to
          have occurred.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="informationSource" type="InformationSource" 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:sequence>
</xsd:complexType>
<xsd:complexType name="FxLeg">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that represents a single exchange of one currency for
      another. This is used for representing FX spot, forward, and
      swap transactions.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
```

```
      <xsd:sequence>
        <xsd:element name="exchangedCurrency1" type="Payment">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              This is the first of the two currency flows that define
              a single leg of a standard foreign exchange
              transaction.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="exchangedCurrency2" type="Payment">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              This is the second of the two currency flows that
              define a single leg of a standard foreign exchange
              transaction.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:choice>
          <xsd:element name="valueDate" type="xsd:date">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                The date on which both currencies traded will settle.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
          <xsd:sequence>
            <xsd:element name="currency1ValueDate" type="xsd:date">
              <xsd:annotation>
                <xsd:documentation xml:lang="en">
                  The date on which the currency1 amount will be
                  settled. To be used in a split value date scenario.
                </xsd:documentation>
              </xsd:annotation>
            </xsd:element>
            <xsd:element name="currency2ValueDate" type="xsd:date">
              <xsd:annotation>
                <xsd:documentation xml:lang="en">
                  The date on which the currency2 amount will be
                  settled. To be used in a split value date scenario.
                </xsd:documentation>
              </xsd:annotation>
            </xsd:element>
          </xsd:sequence>
        </xsd:choice>
        <xsd:element name="exchangeRate" type="ExchangeRate">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The rate of exchange between the two currencies.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="nonDeliverableForward" type="FxCashSettlement" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Used to describe a particular type of FX forward
              transaction that is settled in a single currency.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="confirmationSenderPartyReference" type="Reference" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A reference to the party that is sending the current
              document as a confirmation of the trade.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FxOptionLeg">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used for describing a standard FX OTC option
      (European or American) which may be a complete trade in its own
      right or part of a trade strategy.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
```

```
      <xsd:sequence>
        <xsd:group ref="BuyerSeller.model"/>
        <xsd:element name="expiryDateTime" type="ExpiryDateTime">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date and time in a location of the option expiry.
              In the case of american options this is the latest
              possible expiry date and time.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="exerciseStyle" type="ExerciseStyleEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The manner in which the option can be exercised.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxOptionPremium" type="FxOptionPremium" minOccurs="0" maxOccurs="u
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Premium amount or premium installment amount for an
              option.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="valueDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date on which both currencies traded will settle.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="cashSettlementTerms" type="FxCashSettlement" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              This optional element is only used if an option has
              been specified at execution time to be settled into a
              single cash payment. This would be used for a
              non-deliverable option.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="putCurrencyAmount" type="Money">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The currency amount that the option gives the right to
              sell.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="callCurrencyAmount" type="Money">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The currency amount that the option gives the right to
              buy.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxStrikePrice" type="FxStrikePrice">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              TBA
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="quotedAs" type="QuotedAs" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Describes how the option was quoted.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FxOptionPayout">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that contains full details of a predefined fixed payout
      which may occur (or not) in a Barrier Option or Digital Option
      when a trigger event occurs (or not).
```

```
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Money">
      <xsd:sequence>
        <xsd:element name="payoutStyle" type="PayoutEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The trigger event and payout may be asynchonous. A
              payout may become due on the trigger event, or the
              payout may (by agreeement at initiation) be deferred
              (for example) to the maturity date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="settlementInformation" type="SettlementInformation" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The information required to settle a currency payment
              that results from a trade.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FxOptionPremium">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that specifies the premium exchanged for a single option
      trade or option strategy.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="PayerReceiver.model"/>
    <xsd:element name="premiumAmount" type="Money">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The specific currency and amount of the option premium.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="premiumSettlementDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The agreed-upon date when the option premium will be
          settled.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="settlementInformation" type="SettlementInformation" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The information required to settle a currency payment that
          results from a trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="premiumQuote" type="PremiumQuote" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          This is the option premium as quoted. It is expected to be
          consistent with the premiumAmount and is for information
          only.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FxStrikePrice">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes the rate of exchange at which the option
      has been struck.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="rate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The rate of exchange between the two currencies of the leg
          of a deal. Must be specified with a quote basis.
```

```
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="strikeQuoteBasis" type="StrikeQuoteBasisEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The method by which the strike rate is quoted.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FxSwap">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes an FX swap. This is similar to
      FpML_FXLeg, but contains multiple legs for a particular trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element ref="fxSingleLeg" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="ObservedRates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes prior rate observations within average
      rate options. Periodically, an average rate option agreement
      will be struck whereby some rates have already been observed in
      the past but will become part of computation of the average
      rate of the option. This structure provides for these
      previously observed rates to be included in the description of
      the trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="observationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A specific date for which an observation against a
          particular rate will be made and will be used for
          subsequent computations.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observedRate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The actual observed rate before any required rate treatment
          is applied, e.g. before converting a rate quoted on a
          discount basis to an equivalent yield. An observed rate of
          5% would be represented as 0.05.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="PremiumQuote">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes the option premium as quoted.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="premiumValue" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The value of the premium quote. In general this will be
          either a percentage or an explicit amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="premiumQuoteBasis" type="PremiumQuoteBasisEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The method by which the option premium was quoted.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

```
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="QuotedAs">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that describes how the option was quoted.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="optionOnCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Either the callCurrencyAmount or the putCurrencyAmount
          defined elsewhere in the document. The currency reference
          denotes the option currency as the option was quoted (as
          opposed to the face currency).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="faceOnCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Either the callCurrencyAmount or the putCurrencyAmount
          defined elsewhere in the document.The currency reference
          denotes the face currency as the option was quoted (as
          opposed to the option currency).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotedTenor" type="Interval" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Code denoting the tenor of the option leg.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="SideRate">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used for describing a particular rate against
      base currency. Exists within SideRates.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="currency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which an amount is denominated.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="sideRateBasis" type="SideRateBasisEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The method by which the exchange rate against base currency
          is quoted.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="rate" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The rate of exchange between the two currencies of the leg
          of a deal. Must be specified with a quote basis.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="spotRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An optional element used for FX forwards and certain types
          of FX OTC options. For deals consumated in the FX Forwards
          Market, this represents the current market rate for a
          particular currency pair. For barrier and digital/binary
          options, it can be useful to include the spot rate at the
          time the option was executed to make it easier to know
          whether the option needs to move "up" or "down" to be
          triggered.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

```
    <xsd:element name="forwardPoints" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An optional element used for deals consumated in the FX
          Forwards market. Forward points represent the interest rate
          differential between the two currencies traded and are
          quoted as a preminum or a discount. Forward points are
          added to, or subtracted from, the spot rate to create the
          rate of the forward trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="SideRates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is used for including rates against base currency
      for non-base currency FX contracts.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="baseCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency that is used as the basis for the side rates
          when calculating a cross rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="currency1SideRate" type="SideRate" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The exchange rate for the first currency of the trade
          against base currency.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="currency2SideRate" type="SideRate" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The exchange rate for the second currency of the trade
          against base currency.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="TermDeposit">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A class defining the content model for a term deposit product.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element name="initialPayerReference" type="Reference">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A pointer style reference to a party identifier defined
              elsewhere in the document. The party referenced is the
              payer of the initial principal of the deposit on the
              start date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="initialReceiverReference" type="Reference">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A pointer style reference to a party identifier defined
              elsewhere in the document. The party is the receiver of
              the initial principal of the deposit on the start date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="startDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The averaging period start date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
```

```
        <xsd:element name="maturityDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The end date of the calculation period. This date
              should already be adjusted for any applicable business
              day convention.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count fraction.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="principal" type="Money">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The principal amount of the trade.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fixedRate" type="xsd:decimal">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The calculation period fixed rate. A per annum rate,
              expressed as a decimal. A fixed rate of 5% would be
              represented as 0.05.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="interest" type="Money" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The total interest of at maturity of the trade.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="payment" type="Payment" minOccurs="0" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A known payment between two parties.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:element name="fxAverageRateOption" type="FxAverageRateOption" substitutionGroup="product
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A component describing an FX Average Rate Option product.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="fxBarrierOption" type="FxBarrierOption" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A component describing a FX Barrier Option product.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="fxDigitalOption" type="FxDigitalOption" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A component describing a FX Digital Option product.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="fxSimpleOption" type="FxOptionLeg" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A component describing a FX Simple Option product
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="fxSingleLeg" type="FxLeg" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A single-legged FX transaction definition (e.g., spot or
      forward).
```

```
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="fxSwap" type="FxSwap" substitutionGroup="product">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A component describing a FX Swap product.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="termDeposit" type="TermDeposit" substitutionGroup="product">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A term deposit product definition.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:schema>
```