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1 Global Complex Types

1.1 AllegedCashflow

1.1.1 Description:

1.1.2 Contents:

1.1.3 Used by:

- Complex type: TradeCashflowsMatchResult

1.1.4 Derived Types:

1.1.5 Figure:

1.1.6 Schema Fragment:

```
<xsd:complexType name="AllegedCashflow">  
  <xsd:sequence>  
    <xsd:group ref="DefinitionAndCashflows.model"/>  
  </xsd:sequence>  
</xsd:complexType>
```

1.2 AssertedCashflow

1.2.1 Description:

A type that defines a cashflow (or set of cashflows for cross-currency swap) asserted by one of the parties.

1.2.2 Contents:

1.2.3 Used by:

- Complex type: TradeCashflowsMatchResult

1.2.4 Derived Types:

1.2.5 Figure:

1.2.6 Schema Fragment:

```
<xsd:complexType name="AssertedCashflow">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that defines a cashflow (or set of cashflows for
      cross-currency swap) asserted by one of the parties.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="DefinitionAndCashflows.model"/>
  </xsd:sequence>
</xsd:complexType>
```

1.3 CalculationDetails

1.3.1 Description:

A cashflow component with optional calculation details that explain how the cashflow amount was computed.

1.3.2 Contents:

grossCashflow (zero or one occurrence; of the type GrossCashflow) Payment details of this cash flow component, including currency, amount and payer/payee.

observationElements (zero or more occurrences; of the type CashflowObservation) The underlyer rate or price observation(s) used to compute the amount of this cashflow component.

calculationElements (zero or one occurrence; of the type CashflowCalculationElements)

1.3.3 Used by:

- Complex type: PaymentMatching

1.3.4 Derived Types:

1.3.5 Figure:

1.3.6 Schema Fragment:

```
<xsd:complexType name="CalculationDetails">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A cashflow component with optional calculation details that
      explain how the cashflow amount was computed.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="grossCashflow" type="GrossCashflow" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Payment details of this cash flow component, including
          currency, amount and payer/payee.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observationElements" type="CashflowObservation" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The underlyer rate or price observation(s) used to compute
          the amount of this cashflow component.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationElements" type="CashflowCalculationElements" minOccurs="0"/>
  </xsd:sequence>
</xsd:complexType>
```

1.4 CancelTradeCashflows

1.4.1 Description:

Message for cancellation of payments to be reconciled. A message sent to indicate that previously asserted TradeCashFlows are no longer in effect. For example, this may be caused by a trade's being terminated or assigned after a TradeCashflowsAsserted message has been sent but before the payment date.

1.4.2 Contents:

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

- A type defining the basic content for a message sent to inform another system that some 'business event' has occurred. Notifications are not expected to be replied to.

tradeCashflowsId (exactly one occurrence; of the type TradeCashflowsId) Unique identifier assigned by either party to a set of cashflows.

matchId (zero or one occurrence; of the type MatchId) A unique identifier assigned by matching service to each set of matched cashflows.

party (one or more occurrences; of the type Party) One party element for each of the principal parties and any other party that is referenced.

1.4.3 Used by:

1.4.4 Derived Types:

1.4.5 Figure:

1.4.6 Schema Fragment:

```
<xsd:complexType name="CancelTradeCashflows">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Message for cancellation of payments to be reconciled. A message
      sent to indicate that previously asserted TradeCashFlows are no
      longer in effect. For example, this may be caused by a trade's
      being terminated or assigned after a TradeCashflowsAsserted
      message has been sent but before the payment date.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="NotificationMessage">
      <xsd:sequence>
        <xsd:group ref="IdAndTradeCashflows.model"/>
        <xsd:element name="matchId" type="MatchId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A unique identifier assigned by matching service to each
              set of matched cashflows.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="party" type="Party" minOccurs="2" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              One party element for each of the principal parties and
              any other party that is referenced.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.5 CashflowCalculationElements

1.5.1 Description:

1.5.2 Contents:

numberOfUnits (zero or one occurrence; of the type UnderlyerReferenceUnits)

notional (zero or one occurrence; of the type CashflowNotional) Identifies the notional in effect for this calculation period.

underlyer (zero or more occurrences; of the type TradeUnderlyer) The underlyer(s) used to calculate the amount of this cashflow component. The underlyer(s) will remain unaltered from the values specified in the underlying transaction (i.e. the Fixed Rate on a Credit Default Swap).

calculatedRate (zero or more occurrences; of the type CashflowFixing) The computed rate(s) or price(s) used to calculate the amount of this cashflow component. These computed rates or prices may include averaging and/or various types of rate treatment rules.

calculationPeriod (zero or more occurrences; of the type CashflowCalculationPeriod) The period details for calculation/accrual periods that comprise this cashflow component.

1.5.3 Used by:

- Complex type: CalculationDetails

1.5.4 Derived Types:

1.5.5 Figure:

1.5.6 Schema Fragment:

```
<xsd:complexType name="CashflowCalculationElements">
  <xsd:sequence>
    <xsd:element name="numberOfUnits" type="UnderlyerReferenceUnits" minOccurs="0"/>
    <xsd:element name="notional" type="CashflowNotional" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Identifies the notional in effect for this calculation
          period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="underlyer" type="TradeUnderlyer" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The underlyer(s) used to calculate the amount of this
          cashflow component. The underlyer(s) will remain unaltered
          from the values specified in the underlying transaction (i.e.
          the Fixed Rate on a Credit Default Swap).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculatedRate" type="CashflowFixing" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The computed rate(s) or price(s) used to calculate the amount
          of this cashflow component. These computed rates or prices
          may include averaging and/or various types of rate treatment
          rules.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationPeriod" type="CashflowCalculationPeriod" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The period details for calculation/accrual periods that
          comprise this cashflow component.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.6 CashflowCalculationPeriod

1.6.1 Description:

The period calculation details for a calculation/accrual period. This will include information about the dates and duration of the accrual period, the rate fixing(s), the notional in effect, and the amount of the accrual.

1.6.2 Contents:

calculatedRateReference (zero or more occurrences; of the type CashflowFixingReference) Reference to the fixing details defined somewhere in the document.

adjustedStartDate (zero or one occurrence; of the type xsd:date) Date that defines the beginning of the calculation period.

adjustedEndDate (zero or one occurrence; of the type xsd:date) Date that defines the end of the calculation period.

numberOfDays (zero or one occurrence; of the type xsd:positiveInteger) The number of days from the adjusted effective / start date to the adjusted termination / end date calculated in accordance with the applicable day count fraction.

fixedRateStepReference (zero or one occurrence; of the type StepReference) Reference to the fixed rate schedule's step in order to identify the calculation period fixed rate.

dayCountFraction (zero or one occurrence; of the type DayCountFraction) The specification for how the number of days between two dates is calculated for purposes of calculation of a fixed or floating payment amount and the basis for how many days are assumed to be in a year. Day Count Fraction is an ISDA term. The equivalent AFB (Association Francaise de Banques) term is Calculation Basis.

dayCountYearFraction (zero or one occurrence; of the type xsd:decimal) The year fraction value of the calculation period, result of applying the ISDA rules for day count fraction defined in the ISDA Annex.

compoundingMethod (zero or one occurrence; of the type CompoundingMethodEnum) If more than one calculation period contributes to a single payment amount this element specifies whether compounding is applicable, and if so, what compounding method is to be used. This element must only be included when more than one calculation period contributes to a single payment amount.

accruedAmount (zero or one occurrence; of the type xsd:decimal) The amount of payment accrued during this accrual period. This is required only when there are multiple calculation periods within the same cashflow component, for example when the calculation period is shorter than the payment period.

1.6.3 Used by:

- Complex type: CashflowCalculationElements

1.6.4 Derived Types:

1.6.5 Figure:

1.6.6 Schema Fragment:

```
<xsd:complexType name="CashflowCalculationPeriod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The period calculation details for a calculation/accrual period.
      This will include information about the dates and duration of the
      accrual period, the rate fixing(s), the notional in effect, and
      the amount of the accrual.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculatedRateReference" type="CashflowFixingReference" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Reference to the fixing details defined somewhere in the
          document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedStartDate" type="xsd:date" minOccurs="0" maxOccurs="1">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
```

```

        Date that defines the beginning of the calculation period.
    </xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="adjustedEndDate" type="xsd:date" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            Date that defines the end of the calculation period.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="numberOfDays" type="xsd:positiveInteger" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The number of days from the adjusted effective / start date
            to the adjusted termination / end date calculated in
            accordance with the applicable day count fraction.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="fixedRateStepReference" type="StepReference" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            Reference to the fixed rate schedule's step in order to
            identify the calculation period fixed rate.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The specification for how the number of days between two
            dates is calculated for purposes of calculation of a fixed or
            floating payment amount and the basis for how many days are
            assumed to be in a year. Day Count Fraction is an ISDA term.
            The equivalent AFB (Association Francaise de Banques) term is
            Calculation Basis.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="dayCountYearFraction" type="xsd:decimal" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The year fraction value of the calculation period, result of
            applying the ISDA rules for day count fraction defined in the
            ISDA Annex.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="compoundingMethod" type="CompoundingMethodEnum" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            If more that one calculation period contributes to a single
            payment amount this element specifies whether compounding is
            applicable, and if so, what compounding method is to be used.
            This element must only be included when more that one
            calculation period contributes to a single payment amount.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="accruedAmount" type="xsd:decimal" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The amount of payment accrued during this accrual period.
            This is required only when there are multiple calculation
            periods within the same cashflow component, for example when
            the calculation period is shorter than the payment period.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
</xsd:sequence>
</xsd:complexType>

```

1.7 CashflowFixing

1.7.1 Description:

Details of the computation of a computed rate or price used to calculate the amount of a cashflow component. This computed rate or price may include averaging and/or various types of rate treatment rules. The details include all of the observations, the calculation parameters, and the resulting value.

1.7.2 Contents:

observationReference (one or more occurrences; of the type CashflowObservationReference) Reference to the observation details of a particular rate observation.

calculatedValue (zero or one occurrence; of the type xsd:decimal) The value computed based on averaging the underlying observation and applying any spreads, multipliers, and cap and floors values. average or treated value computed based on the underlying observations, following the calculation rules.

multiplier (zero or one occurrence; of the type xsd:decimal) A rate multiplier to apply to the floating rate. The multiplier can be a positive or negative decimal. This element should only be included if the multiplier is not equal to 1 (one).

spread (zero or one occurrence; of the type xsd:decimal) The ISDA Spread, if any, which applies for the calculation period. It also defines spread as price. The spread is a per annum rate, expressed as a decimal. For purposes of determining a calculation period amount, if positive the spread will be added to the floating rate and if negative the spread will be subtracted from the floating rate. A positive 10 basis point (0.1%) spread would be represented as 0.001.

capValue (zero or more occurrences; of the type Strike) The cap rate or price, if any, which applies to the floating rate for the calculation period. The cap rate (strike) is only required where the floating rate on a swap stream is capped at a certain strike level. The cap rate is assumed to be exclusive of any spread and is a per annum rate, expressed as a decimal. A cap rate of 5% would be represented as 0.05.

floorValue (zero or more occurrences; of the type Strike) The floor rate or price, if any, which applies to the floating rate for the calculation period. The floor rate (strike) is only required where the floating rate on a swap stream is floored at a certain strike level. The floor rate is assumed to be exclusive of any spread and is a per annum rate, expressed as a decimal. The floor rate of 5% would be represented as 0.05.

1.7.3 Used by:

- Complex type: CashflowCalculationElements

1.7.4 Derived Types:

1.7.5 Figure:

1.7.6 Schema Fragment:

```
<xsd:complexType name="CashflowFixing">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Details of the computation of a computed rate or price used to
      calculate the amount of a cashflow component. This computed rate
      or price may include averaging and/or various types of rate
      treatment rules. The details include all of the observations, the
      calculation parameters, and the resulting value.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="observationReference" type="CashflowObservationReference" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Reference to the observation details of a particular rate
          observation.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculatedValue" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The value computed based on averaging the underlying
          observation and applying any spreads, multipliers, and cap
          and floors values. average or treated value computed based on
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```



```

        the underlying observations, following the calculation rules.
    </xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="multiplier" type="xsd:decimal" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            A rate multiplier to apply to the floating rate. The
            multiplier can be a positive or negative decimal. This
            element should only be included if the multiplier is not
            equal to 1 (one).
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="spread" type="xsd:decimal" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The ISDA Spread, if any, which applies for the calculation
            period. It also defines spread as price. The spread is a per
            annum rate, expressed as a decimal. For purposes of
            determining a calculation period amount, if positive the
            spread will be added to the floating rate and if negative the
            spread will be subtracted from the floating rate. A positive
            10 basis point (0.1%) spread would be represented as 0.001.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="capValue" type="Strike" minOccurs="0" maxOccurs="unbounded">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The cap rate or price, if any, which applies to the floating
            rate for the calculation period. The cap rate (strike) is
            only required where the floating rate on a swap stream is
            capped at a certain strike level. The cap rate is assumed to
            be exclusive of any spread and is a per annum rate, expressed
            as a decimal. A cap rate of 5% would be represented as 0.05.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="floorValue" type="Strike" minOccurs="0" maxOccurs="unbounded">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The floor rate or price, if any, which applies to the
            floating rate for the calculation period. The floor rate
            (strike) is only required where the floating rate on a swap
            stream is floored at a certain strike level. The floor rate
            is assumed to be exclusive of any spread and is a per annum
            rate, expressed as a decimal. The floor rate of 5% would be
            represented as 0.05.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>

```

1.8 CashflowFixingReference

1.8.1 Description:

A type defining a reference to a cash flow fixing component defined somewhere in the document.

1.8.2 Contents:

1.8.3 Used by:

- Complex type: CashflowCalculationPeriod

1.8.4 Derived Types:

1.8.5 Figure:

1.8.6 Schema Fragment:

```
<xsd:complexType name="CashflowFixingReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining a reference to a cash flow fixing component
      defined somewhere in the document.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="CashflowFixing"/>
</xsd:complexType>
```

1.9 CashflowId

1.9.1 Description:

An identifier used to identify a single component cashflow.

1.9.2 Contents:

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

•

1.9.3 Used by:

- Complex type: GrossCashflow

1.9.4 Derived Types:

1.9.5 Figure:

1.9.6 Schema Fragment:

```
<xsd:complexType name="CashflowId">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An identifier used to identify a single component cashflow.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="cashflowIdScheme" type="xsd:anyURI" />
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

1.10 CashflowNotional

1.10.1 Description:

The notional/principal value/quantity/volume used to compute the cashflow.

1.10.2 Contents:

Either

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

Or

units (exactly one occurrence; of the type xsd:normalizedString) The units in which an amount (not monetary) is denominated.

amount (exactly one occurrence; of the type xsd:decimal) The quantity of notional (in currency or other units).

1.10.3 Used by:

- Complex type: CashflowCalculationElements
- Complex type: TradeDetails

1.10.4 Derived Types:

1.10.5 Figure:

1.10.6 Schema Fragment:

```
<xsd:complexType name="CashflowNotional">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The notional/principal value/quantity/volume used to compute the
      cashflow.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:choice>
      <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="units" type="xsd:normalizedString">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The units in which an amount (not monetary) is denominated.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:element name="amount" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The quantity of notional (in currency or other units).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.11 CashflowObservation

1.11.1 Description:

An observation of a rate or a price of an underlying used in the computation of a cash flow amount.

1.11.2 Contents:

underlyerReference (exactly one occurrence; of the type TradeUnderlyerReference) The underlyer whose rate or price is observed. Reference to an underlyer defined within the calculationElements structure.

underlyingAsset (zero or one occurrence; of the type Asset) Define the underlying asset when it is a listed security.

observationDate (exactly one occurrence; of the type xsd:date) The date when the rate is observed. Corresponds to adjustedFixingDate on the Interest Rate Derivatives subschema.

observedValue (zero or one occurrence; of the type BasicQuotation) The observed rate or price, together with descriptive information such as units.

weight (zero or one occurrence; of the type xsd:decimal) The factor used to weight the observation in computing a weighted average. This is typically based on the number of days weighting to be associated with the rate observation, i.e. the number of days such rate is in effect. This is applicable in the case of a weighted average method of calculation where more than one observe date is established for a single calculation period. If omitted all observations are weighted equally. For Equity Derivatives Products it defines the basket percentage.

1.11.3 Used by:

- Complex type: CalculationDetails

1.11.4 Derived Types:

1.11.5 Figure:

1.11.6 Schema Fragment:

```
<xsd:complexType name="CashflowObservation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An observation of a rate or a price of an underlyer used in the
      computation of a cash flow amount.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="underlyerReference" type="TradeUnderlyerReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The underlyer whose rate or price is observed. Reference to
          an underlyer defined within the calculationElements
          structure.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element ref="underlyingAsset" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          In cases where the underlying index is observed by observing
          the value of a specific security different from the index
          (typically a futures price), the specific security whose
          price was observed. For example, the underlying index might
          be NYMEX Crude Oil, and the underlying asset whose price is
          observed on a particular day might be CLU7. The index is
          specified via the underlyerReference, while the specific
          asset is specified via the underlyingAsset.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date when the rate is observed. Corresponds to
          adjustedFixingDate on the Interest Rate Derivatives
          subschema.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

```

    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="observedValue" type="BasicQuotation" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The observed rate or price, together with descriptive
      information such as units.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="weight" type="xsd:decimal" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The factor used to weight the observation in computing a
      weighted average. This is typically based on the number of
      days weighting to be associated with the rate observation,
      i.e. the number of days such rate is in effect. This is
      applicable in the case of a weighted average method of
      calculation where more than one observe date is established
      for a single calculation period. If omitted all observations
      are weighted equally. For Equity Derivatives Products it
      defines the basket percentage.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="id" type="xsd:ID" use="optional"/>
</xsd:complexType>

```

1.12 CashflowObservationReference

1.12.1 Description:

Reference to a cash flow observation component.

1.12.2 Contents:

1.12.3 Used by:

- Complex type: CashflowFixing

1.12.4 Derived Types:

1.12.5 Figure:

1.12.6 Schema Fragment:

```
<xsd:complexType name="CashflowObservationReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a cash flow observation component.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="CashflowObservati
</xsd:complexType>
```

1.13 GrossCashflow

1.13.1 Description:

A payment component owed from one party to the other for the cash flow date. This payment component should be of only a single type, e.g. a fee or a cashflow from a cashflow stream.

1.13.2 Contents:

cashflowType (zero or one occurrence; of the type CashflowType) Defines the type of cash flow. For instance, a type of fee, premium, principal exchange, leg fee.

1.13.3 Used by:

- Complex type: CalculationDetails

1.13.4 Derived Types:

1.13.5 Figure:

1.13.6 Schema Fragment:

```
<xsd:complexType name="GrossCashflow">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A payment component owed from one party to the other for the cash
      flow date. This payment component should be of only a single
      type, e.g. a fee or a cashflow from a cashflow stream.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:sequence minOccurs="0">
      <xsd:element name="cashflowId" type="CashflowId">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Unique identifier for a cash flow.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:group ref="PayerReceiver.model"/>
      <xsd:element name="cashflowAmount" type="Money">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Cash flow amount in a given currency to be paid/received.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
    <xsd:element name="cashflowType" type="CashflowType" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Defines the type of cash flow. For instance, a type of fee,
          premium, principal exchange, leg fee.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```


1.14 MatchId

1.14.1 Description:

An identifier used to identify matched cashflows.

1.14.2 Contents:

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

•

1.14.3 Used by:

- Complex type: CancelTradeCashflows
- Complex type: TradeCashflowsAsserted
- Complex type: TradeCashflowsProposedMatch

1.14.4 Derived Types:

1.14.5 Figure:

1.14.6 Schema Fragment:

```
<xsd:complexType name="MatchId">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An identifier used to identify matched cashflows.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="matchIdScheme" type="xsd:anyURI"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

1.15 PaymentId

1.15.1 Description:

An identifier used to identify a matchable payment.

1.15.2 Contents:

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

•

1.15.3 Used by:

- Complex type: PaymentMatching

1.15.4 Derived Types:

1.15.5 Figure:

1.15.6 Schema Fragment:

```
<xsd:complexType name="PaymentId">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An identifier used to identify a matchable payment.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="paymentIdScheme" type="xsd:anyURI" />
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

1.16 PaymentMatching

1.16.1 Description:

A global type describing the payment exposed to the matching process, along with its gross component(s) and calculation details.

1.16.2 Contents:

identifier (exactly one occurrence; of the type PaymentId) Unique identifier assigned by either party or matching service, as agreed, to a payment.

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

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

paymentAmount (exactly one occurrence; of the type Money) Payment amount in a given currency to be paid/received.

calculationDetails (zero or more occurrences; of the type CalculationDetails) The set of cash flow components with calculations that comprise this payment.

1.16.3 Used by:

1.16.4 Derived Types:

1.16.5 Figure:

1.16.6 Schema Fragment:

```
<xsd:complexType name="PaymentMatching">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A global type describing the payment exposed to the matching
      process, along with its gross component(s) and calculation
      details.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="identifier" type="PaymentId">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Unique identifier assigned by either party or matching
          service, as agreed, to a payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:group ref="PayerReceiver.model"/>
    <xsd:element name="paymentAmount" type="Money">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Payment amount in a given currency to be paid/received.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationDetails" type="CalculationDetails" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The set of cash flow components with calculations that
          comprise this payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.17 StepReference

1.17.1 Description:

Reference to a Schedule's Step.

1.17.2 Contents:

1.17.3 Used by:

- Complex type: CashflowCalculationPeriod

1.17.4 Derived Types:

1.17.5 Figure:

1.17.6 Schema Fragment:

```
<xsd:complexType name="StepReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a Schedule's Step.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="Step"/>
</xsd:complexType>
```

1.18 TradeCashflowsAsserted

1.18.1 Description:

Message for assertion of payments to be reconciled. Notification message that submits cashflows that need to be reconciled per payment date at the trade level.

1.18.2 Contents:

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

- A type defining the basic content for a message sent to inform another system that some 'business event' has occurred. Notifications are not expected to be replied to.

asOfDate (zero or one occurrence; of the type xsd:dateTime) The date and time at which the set of cashflows was defined.

tradeCashflowsId (exactly one occurrence; of the type TradeCashflowsId) Unique identifier assigned by the party asserting the set of cashflows to be reconciled.

tradeIdentifyingItems (exactly one occurrence; of the type TradeIdentifyingItems) Structure that holds reference to the trade through the tradeId and optionally some trade-specific elements for identifying the trade in the case of trades that have not been negotiated through electronic platforms and for which the counterparty's trade ID has not been captured.

adjustedPaymentDate (exactly one occurrence; of the type xsd:date) The adjusted date in which the payments are being paid/received.

payment (one or more occurrences; of the type PaymentMatching) Specifies the payment that is exposed to the matching process. Usually there will be a single payment but for cross-currency swaps a different payment per currency shall be provided.

matchId (zero or one occurrence; of the type MatchId) A unique identifier assigned by either party, or matching service, as agreed, to each set of matched cashflows.

party (one or more occurrences; of the type Party) One party element for each of the principal parties and any other party that is referenced.

1.18.3 Used by:

1.18.4 Derived Types:

1.18.5 Figure:

1.18.6 Schema Fragment:

```
<xsd:complexType name="TradeCashflowsAsserted">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Message for assertion of payments to be reconciled. Notification
      message that submits cashflows that need to be reconciled per
      payment date at the trade level.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="NotificationMessage">
      <xsd:sequence>
        <xsd:group ref="TradeCashflowsDefinition.model"/>
        <xsd:group ref="TradeCashflows.model"/>
        <xsd:element name="matchId" type="MatchId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A unique identifier assigned by either party, or matching
              service, as agreed, to each set of matched cashflows.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="party" type="Party" minOccurs="2" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              One party element for each of the principal parties and
              any other party that is referenced.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

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

1.19 TradeCashflowsId

1.19.1 Description:

An identifier used to identify the collection of cashflows for a particular trade on a particular day.

1.19.2 Contents:

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

•

1.19.3 Used by:

1.19.4 Derived Types:

1.19.5 Figure:

1.19.6 Schema Fragment:

```
<xsd:complexType name="TradeCashflowsId">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An identifier used to identify the collection of cashflows for a
      particular trade on a particular day.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="tradeCashflowsIdScheme" type="xsd:anyURI" />
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

1.20 TradeCashflowsMatchResult

1.20.1 Description:

Message for sending match results. Response message that returns the status of the set of cashflows (more than one in the case of cross-currency swaps) that have been reconciled.

1.20.2 Contents:

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

- A type refining the generic message content model to make it specific to response messages.

status (exactly one occurrence; of the type TradeCashflowsStatus) Reconciliation status of the set of cashflows.

Either

allegedCashflow (exactly one occurrence; of the type AllegedCashflow) Cashflow (or set of cashflows for cross-currency swap) asserted by the "other side's" party.

party (one or more occurrences; of the type Party) One party element for each of the principal parties and any other party that is referenced.

1.20.3 Used by:

1.20.4 Derived Types:

1.20.5 Figure:

1.20.6 Schema Fragment:

```
<xsd:complexType name="TradeCashflowsMatchResult">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Message for sending match results. Response message that returns
      the status of the set of cashflows (more than one in the case of
      cross-currency swaps) that have been reconciled.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="ResponseMessage">
      <xsd:sequence>
        <xsd:element name="status" type="TradeCashflowsStatus">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Reconciliation status of the set of cashflows.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:choice>
          <xsd:sequence>
            <xsd:element name="assertedCashflow" type="AssertedCashflow">
              <xsd:annotation>
                <xsd:documentation xml:lang="en">
                  Cashflow (or set of cashflows for cross-currency
                  swap) asserted by one of the parties.
                </xsd:documentation>
              </xsd:annotation>
            </xsd:element>
            <xsd:element name="proposedMatch" type="TradeCashflowsProposedMatch" minOccurs="0">
              <xsd:annotation>
                <xsd:documentation xml:lang="en">
                  "Other side's" cashflow that meets the minimum
                  matching criteria and is proposed as match to the
                  cashflow that is being asserted.
                </xsd:documentation>
              </xsd:annotation>
            </xsd:element>
          </xsd:sequence>
        </xsd:choice>
        <xsd:element name="allegedCashflow" type="AllegedCashflow">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Cashflow (or set of cashflows for cross-currency swap)
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```



```
        asserted by the "other side's" party.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:choice>
<xsd:element name="party" type="Party" minOccurs="2" maxOccurs="unbounded">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      One party element for each of the principal parties and
      any other party that is referenced.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:sequence>
</xsd:extension>
</xsd:complexContent>
</xsd:complexType>
```

1.21 TradeCashflowsProposedMatch

1.21.1 Description:

"Other side's" cashflow that meets the minimum matching criteria and is proposed as match to the cash flow that is being asserted.

1.21.2 Contents:

tradeCashflowsId (exactly one occurrence; of the type TradeCashflowsId) Unique identifier assigned by either party to a set of cashflows.

matchId (exactly one occurrence; of the type MatchId) A unique identifier assigned by the matching service to each set of matched cashflows.

difference (zero or more occurrences; of the type TradeDifference) A type used to record the details of a difference between two sides of a payment.

1.21.3 Used by:

- Complex type: TradeCashflowsMatchResult

1.21.4 Derived Types:

1.21.5 Figure:

1.21.6 Schema Fragment:

```
<xsd:complexType name="TradeCashflowsProposedMatch">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      "Other side's" cashflow that meets the minimum matching
      criteria and is proposed as match to the cash flow that is being
      asserted.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="IdAndTradeCashflows.model"/>
    <xsd:element name="matchId" type="MatchId">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A unique identifier assigned by the matching service to each
          set of matched cashflows.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="difference" type="TradeDifference" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A type used to record the details of a difference between two
          sides of a payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.22 TradeCashflowsStatus

1.22.1 Description:

An coding scheme used to describe the matching status of a TradeCashFlows element.

1.22.2 Contents:

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

-

1.22.3 Used by:

- Complex type: TradeCashflowsMatchResult

1.22.4 Derived Types:

1.22.5 Figure:

1.22.6 Schema Fragment:

```
<xsd:complexType name="TradeCashflowsStatus">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An coding scheme used to describe the matching status of a
      TradeCashFlows element.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="tradeCashflowsStatusScheme" type="xsd:anyURI" default="http://www.fpr
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

1.23 TradeDetails

1.23.1 Description:

Summary trade economic details used to help identify a trade where no shared trade ID is available.

1.23.2 Contents:

tradeDate (exactly one occurrence; of the type IdentifiedDate) The trade date.

effectiveDate (exactly one occurrence; of the type AdjustableDate2) The earliest of all the effective dates of all constituent streams.

terminationDate (exactly one occurrence; of the type AdjustableDate2) The latest of all of the termination dates of the constituent streams.

productType (zero or one occurrence; of the type ProductType) A classification of the type of product. FpML does not define domain values for this element.

underlyer (zero or more occurrences; of the type TradeUnderlyer) The set of underlyers to the trade that can be used in computing the trade's cashflows. If this information is needed to identify the trade, all of the trade's underlyers should be specified, whether or not they figure into the cashflow calculation. Otherwise, only those underlyers used to compute this particular cashflow need be supplied.

notional (zero or more occurrences; of the type CashflowNotional) The notional or notionals in effect on the last day of the last calculation period in each stream.

1.23.3 Used by:

- Complex type: TradeIdentifyingItems

1.23.4 Derived Types:

1.23.5 Figure:

1.23.6 Schema Fragment:

```
<xsd:complexType name="TradeDetails">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Summary trade economic details used to help identify a trade
      where no shared trade ID is available.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="tradeDate" type="IdentifiedDate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The trade date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="effectiveDate" type="AdjustableDate2">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The earliest of all the effective dates of all constituent
          streams.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="terminationDate" type="AdjustableDate2">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The latest of all of the termination dates of the constituent
          streams.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="productType" type="ProductType" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A classification of the type of product. FpML does not define
          domain values for this element.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

```

</xsd:element>
<xsd:element name="underlyer" type="TradeUnderlyer" minOccurs="0" maxOccurs="unbounded">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The set of underlyers to the trade that can be used in
      computing the trade's cashflows. If this information is
      needed to identify the trade, all of the trade's underlyers
      should be specified, whether or not they figure into the
      cashflow calculation. Otherwise, only those underlyers used
      to compute this particular cashflow need be supplied.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="notional" type="CashflowNotional" minOccurs="0" maxOccurs="unbounded">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The notional or notionals in effect on the last day of the
      last calculation period in each stream.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:sequence>
</xsd:complexType>

```

1.24 TradeIdentifyingItems

1.24.1 Description:

Data elements that can be used to identify the trade for which cashflows are being communicated. This includes both explicit trade identifiers and summary economic details.

1.24.2 Contents:

partyTradeIdentifier (one or more occurrences; of the type PartyTradeIdentifier) Structure defining one or more trade identifiers allocated to the trade by a party. It is expected that for external communication of trade there will be only one tradeId sent in the document per party.

tradeDetails (zero or one occurrence; of the type TradeDetails) Structure that holds some trade-specific elements for identifying the trade only in the case of trades that have not been negotiated through electronic platforms and for which the counterparty's trade ID has not been captured.

1.24.3 Used by:

1.24.4 Derived Types:

1.24.5 Figure:

1.24.6 Schema Fragment:

```
<xsd:complexType name="TradeIdentifyingItems">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Data elements that can be used to identify the trade for which
      cashflows are being communicated. This includes both explicit
      trade identifiers and summary economic details.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="partyTradeIdentifier" type="PartyTradeIdentifier" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Structure defining one or more trade identifiers allocated to
          the trade by a party. It is expected that for external
          communication of trade there will be only one tradeId sent in
          the document per party.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="tradeDetails" type="TradeDetails" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Structure that holds some trade-specific elements for
          identifying the trade only in the case of trades that have
          not been negotiated through electronic platforms and for
          which the counterparty's trade ID has not been captured.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.25 TradeUnderlyer

1.25.1 Description:

The underlying asset/index/reference price etc. whose rate/price may be observed to compute the value of the cashflow. It can be an index, fixed rate, listed security, quoted currency pair, or a reference entity (for credit derivatives).

1.25.2 Contents:

Either

floatingRate (exactly one occurrence; of the type FloatingRate) A floating rate.

Or

fixedRate (exactly one occurrence; of the type Schedule) The fixed rate or fixed rate schedule expressed as explicit fixed rates and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments.

Or

underlyingAsset (exactly one occurrence; of the type Asset) Define the underlying asset when it is a listed security.

Or

referenceEntity (exactly one occurrence; of the type LegalEntity) The corporate or sovereign entity on which you are buying or selling protection and any successor that assumes all or substantially all of its contractual and other obligations. It is vital to use the correct legal name of the entity and to be careful not to choose a subsidiary if you really want to trade protection on a parent company. Please note, Reference Entities cannot be senior or subordinated. It is the obligations of the Reference Entities that can be senior or subordinated. ISDA 2003 Term: Reference Entity

1.25.3 Used by:

- Complex type: CashflowCalculationElements
- Complex type: TradeDetails

1.25.4 Derived Types:

1.25.5 Figure:

1.25.6 Schema Fragment:

```
<xsd:complexType name="TradeUnderlyer">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The underlying asset/index/reference price etc. whose rate/price
      may be observed to compute the value of the cashflow. It can be
      an index, fixed rate, listed security, quoted currency pair, or a
      reference entity (for credit derivatives).
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="floatingRate" type="FloatingRate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A floating rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fixedRate" type="Schedule">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The fixed rate or fixed rate schedule expressed as explicit
          fixed rates and dates. In the case of a schedule, the step
          dates may be subject to adjustment in accordance with any
          adjustments specified in calculationPeriodDatesAdjustments.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element ref="underlyingAsset">

```

```
<xsd:annotation>
  <xsd:documentation xml:lang="en">
    Define the underlying asset when it is a listed security.
  </xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="referenceEntity" type="LegalEntity">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The corporate or sovereign entity on which you are buying or
      selling protection and any successor that assumes all or
      substantially all of its contractual and other obligations.
      It is vital to use the correct legal name of the entity and
      to be careful not to choose a subsidiary if you really want
      to trade protection on a parent company. Please note,
      Reference Entities cannot be senior or subordinated. It is
      the obligations of the Reference Entities that can be senior
      or subordinated. ISDA 2003 Term: Reference Entity
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:choice>
<xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```


1.26 TradeUnderlyerReference

1.26.1 Description:

Reference to a trade underlyer component.

1.26.2 Contents:

1.26.3 Used by:

- Complex type: CashflowObservation
- Complex type: UnderlyerReferenceUnits

1.26.4 Derived Types:

1.26.5 Figure:

1.26.6 Schema Fragment:

```
<xsd:complexType name="TradeUnderlyerReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a trade underlyer component.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="TradeUnderlyer"/>
</xsd:complexType>
```

1.27 UnderlyerReferenceUnits

1.27.1 Description:

1.27.2 Contents:

underlyerReference (exactly one occurrence; of the type TradeUnderlyerReference) Reference to the underlyer defined within the calculationElements structure.

quantity (exactly one occurrence; of the type xsd:decimal) Amount of units.

1.27.3 Used by:

- Complex type: CashflowCalculationElements

1.27.4 Derived Types:

1.27.5 Figure:

1.27.6 Schema Fragment:

```
<xsd:complexType name="UnderlyerReferenceUnits">
  <xsd:sequence>
    <xsd:element name="underlyerReference" type="TradeUnderlyerReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Reference to the underlyer defined within the
          calculationElements structure.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quantity" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Amount of units.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2 Groups

2.1 DefinitionAndCashflows.model

2.1.1 Description:

2.1.2 Contents:

asOfDate (zero or one occurrence; of the type xsd:dateTime) The date and time at which the set of cashflows was defined.

tradeCashflowsId (exactly one occurrence; of the type TradeCashflowsId) Unique identifier assigned by the party asserting the set of cashflows to be reconciled.

tradeIdentifyingItems (exactly one occurrence; of the type TradeIdentifyingItems) Structure that holds reference to the trade through the tradeId and optionally some trade-specific elements for identifying the trade in the case of trades that have not been negotiated through electronic platforms and for which the counterparty's trade ID has not been captured.

adjustedPaymentDate (exactly one occurrence; of the type xsd:date) The adjusted date in which the payments are being paid/received.

payment (one or more occurrences; of the type PaymentMatching) Specifies the payment that is exposed to the matching process. Usually there will be a single payment but for cross-currency swaps a different payment per currency shall be provided.

2.1.3 Used by:

- Complex type: AllegedCashflow
- Complex type: AssertedCashflow

2.1.4 Figure:

2.1.5 Schema Fragment:

```
<xsd:group name="DefinitionAndCashflows.model">
  <xsd:sequence>
    <xsd:group ref="TradeCashflowsDefinition.model"/>
    <xsd:group ref="TradeCashflows.model" minOccurs="0"/>
  </xsd:sequence>
</xsd:group>
```

2.2 IdAndTradeCashflows.model

2.2.1 Description:

2.2.2 Contents:

tradeCashflowsId (exactly one occurrence; of the type TradeCashflowsId) Unique identifier assigned by either party to a set of cashflows.

tradeIdentifyingItems (exactly one occurrence; of the type TradeIdentifyingItems) Structure that holds reference to the trade through the tradeId and optionally some trade-specific elements for identifying the trade in the case of trades that have not been negotiated through electronic platforms and for which the counterparty's trade ID has not been captured.

adjustedPaymentDate (exactly one occurrence; of the type xsd:date) The adjusted date in which the payments are being paid/received.

payment (one or more occurrences; of the type PaymentMatching) Specifies the payment that is exposed to the matching process. Usually there will be a single payment but for cross-currency swaps a different payment per currency shall be provided.

2.2.3 Used by:

- Complex type: CancelTradeCashflows
- Complex type: TradeCashflowsProposedMatch

2.2.4 Figure:

2.2.5 Schema Fragment:

```
<xsd:group name="IdAndTradeCashflows.model">
  <xsd:sequence>
    <xsd:element name="tradeCashflowsId" type="TradeCashflowsId">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Unique identifier assigned by either party to a set of
          cashflows.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:group ref="TradeCashflows.model" minOccurs="0"/>
  </xsd:sequence>
</xsd:group>
```

2.3 TradeCashflows.model

2.3.1 Description:

A group describing the cashflows owing on a particular adjustedPaymentDate for a specific trade.

2.3.2 Contents:

tradeIdentifyingItems (exactly one occurrence; of the type TradeIdentifyingItems) Structure that holds reference to the trade through the tradeId and optionally some trade-specific elements for identifying the trade in the case of trades that have not been negotiated through electronic platforms and for which the counterparty's trade ID has not been captured.

adjustedPaymentDate (exactly one occurrence; of the type xsd:date) The adjusted date in which the payments are being paid/received.

payment (one or more occurrences; of the type PaymentMatching) Specifies the payment that is exposed to the matching process. Usually there will be a single payment but for cross-currency swaps a different payment per currency shall be provided.

2.3.3 Used by:

- Complex type: TradeCashflowsAsserted

2.3.4 Figure:

2.3.5 Schema Fragment:

```
<xsd:group name="TradeCashflows.model">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A group describing the cashflows owing on a particular
      adjustedPaymentDate for a specific trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="tradeIdentifyingItems" type="TradeIdentifyingItems">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Structure that holds reference to the trade through the
          tradeId and optionally some trade-specific elements for
          identifying the trade in the case of trades that have not
          been negotiated through electronic platforms and for which
          the counterparty's trade ID has not been captured.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedPaymentDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted date in which the payments are being
          paid/received.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="payment" type="PaymentMatching" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the payment that is exposed to the matching
          process. Usually there will be a single payment but for
          cross-currency swaps a different payment per currency shall
          be provided.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:group>
```

2.4 TradeCashflowsDefinition.model

2.4.1 Description:

2.4.2 Contents:

asOfDate (zero or one occurrence; of the type xsd:dateTime) The date and time at which the set of cashflows was defined.

tradeCashflowsId (exactly one occurrence; of the type TradeCashflowsId) Unique identifier assigned by the party asserting the set of cashflows to be reconciled.

2.4.3 Used by:

- Complex type: TradeCashflowsAsserted

2.4.4 Figure:

2.4.5 Schema Fragment:

```
<xsd:group name="TradeCashflowsDefinition.model">
  <xsd:sequence>
    <xsd:element name="asOfDate" type="xsd:dateTime" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date and time at which the set of cashflows was defined.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="tradeCashflowsId" type="TradeCashflowsId">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Unique identifier assigned by the party asserting the set of
          cashflows to be reconciled.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:group>
```

3 Schema listing

```
<xsd:schema ecore:nsPrefix="fpml" ecore:package="org.fpml" ecore:documentRoot="FpML" targetNameSpace="http://www.fpml.org/FpML-4" >
  <xsd:include schemaLocation="fpml-msg-4-3.xsd"/>
  <xsd:include schemaLocation="fpml-ird-4-3.xsd"/>
  <xsd:include schemaLocation="fpml-valuation-base-4-3.xsd"/>
  <xsd:include schemaLocation="fpml-tradeexec-4-3.xsd"/>
  <xsd:complexType name="AllegedCashflow">
    <xsd:sequence>
      <xsd:group ref="DefinitionAndCashflows.model"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="AssertedCashflow">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A type that defines a cashflow (or set of cashflows for
        cross-currency swap) asserted by one of the parties.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
      <xsd:group ref="DefinitionAndCashflows.model"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CancelTradeCashflows">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        Message for cancellation of payments to be reconciled. A
        message sent to indicate that previously asserted
        TradeCashFlows are no longer in effect. For example, this may
        be caused by a trade's being terminated or assigned after a
        TradeCashflowsAsserted message has been sent but before the
        payment date.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="NotificationMessage">
        <xsd:sequence>
          <xsd:group ref="IdAndTradeCashflows.model"/>
          <xsd:element name="matchId" type="MatchId" minOccurs="0">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                A unique identifier assigned by matching service to
                each set of matched cashflows.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
          <xsd:element name="party" type="Party" minOccurs="2" maxOccurs="unbounded">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                One party element for each of the principal parties and
                any other party that is referenced.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="CalculationDetails">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A cashflow component with optional calculation details that
        explain how the cashflow amount was computed.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
      <xsd:element name="grossCashflow" type="GrossCashflow" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Payment details of this cash flow component, including
            currency, amount and payer/payee.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="observationElements" type="CashflowObservation" minOccurs="0" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The underlying rate or price observation(s) used to compute
            the amount of this cashflow component.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>
```



```

    </xsd:element>
    <xsd:element name="calculationElements" type="CashflowCalculationElements" minOccurs="0"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CashflowCalculationElements">
  <xsd:sequence>
    <xsd:element name="numberOfUnits" type="UnderlyerReferenceUnits" minOccurs="0"/>
    <xsd:element name="notional" type="CashflowNotional" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Identifies the notional in effect for this calculation
          period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="underlyer" type="TradeUnderlyer" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The underlyer(s) used to calculate the amount of this
          cashflow component. The underlyer(s) will remain unaltered
          from the values specified in the underlying transaction
          (i.e. the Fixed Rate on a Credit Default Swap).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculatedRate" type="CashflowFixing" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The computed rate(s) or price(s) used to calculate the
          amount of this cashflow component. These computed rates or
          prices may include averaging and/or various types of rate
          treatment rules.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationPeriod" type="CashflowCalculationPeriod" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The period details for calculation/accrual periods that
          comprise this cashflow component.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CashflowCalculationPeriod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The period calculation details for a calculation/accrual
      period. This will include information about the dates and
      duration of the accrual period, the rate fixing(s), the
      notional in effect, and the amount of the accrual.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculatedRateReference" type="CashflowFixingReference" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Reference to the fixing details defined somewhere in the
          document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedStartDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Date that defines the beginning of the calculation period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedEndDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Date that defines the end of the calculation period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="numberOfDays" type="xsd:positiveInteger" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The number of days from the adjusted effective / start date
          to the adjusted termination / end date calculated in
          accordance with the applicable day count fraction.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>

```

```

    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="fixedRateStepReference" type="StepReference" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to the fixed rate schedule's step in order to
      identify the calculation period fixed rate.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The specification for how the number of days between two
      dates is calculated for purposes of calculation of a fixed
      or floating payment amount and the basis for how many days
      are assumed to be in a year. Day Count Fraction is an ISDA
      term. The equivalent AFB (Association Francaise de Banques)
      term is Calculation Basis.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="dayCountYearFraction" type="xsd:decimal" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The year fraction value of the calculation period, result
      of applying the ISDA rules for day count fraction defined
      in the ISDA Annex.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="compoundingMethod" type="CompoundingMethodEnum" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      If more than one calculation period contributes to a single
      payment amount this element specifies whether compounding
      is applicable, and if so, what compounding method is to be
      used. This element must only be included when more than one
      calculation period contributes to a single payment amount.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="accruedAmount" type="xsd:decimal" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The amount of payment accrued during this accrual period.
      This is required only when there are multiple calculation
      periods within the same cashflow component, for example
      when the calculation period is shorter than the payment
      period.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CashflowFixing">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Details of the computation of a computed rate or price used to
      calculate the amount of a cashflow component. This computed
      rate or price may include averaging and/or various types of
      rate treatment rules. The details include all of the
      observations, the calculation parameters, and the resulting
      value.
    </xsd:documentation>
  </xsd:annotation>
</xsd:sequence>
<xsd:element name="observationReference" type="CashflowObservationReference" maxOccurs="unbounded">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to the observation details of a particular rate
      observation.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="calculatedValue" type="xsd:decimal" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The value computed based on averaging the underlying
      observation and applying any spreads, multipliers, and cap
      and floors values. average or treated value computed based
      on the underlying observations, following the calculation
    </xsd:documentation>
  </xsd:annotation>

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        rules.
    </xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="multiplier" type="xsd:decimal" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            A rate multiplier to apply to the floating rate. The
            multiplier can be a positive or negative decimal. This
            element should only be included if the multiplier is not
            equal to 1 (one).
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="spread" type="xsd:decimal" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The ISDA Spread, if any, which applies for the calculation
            period. It also defines spread as price. The spread is a
            per annum rate, expressed as a decimal. For purposes of
            determining a calculation period amount, if positive the
            spread will be added to the floating rate and if negative
            the spread will be subtracted from the floating rate. A
            positive 10 basis point (0.1%) spread would be represented
            as 0.001.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="capValue" type="Strike" minOccurs="0" maxOccurs="unbounded">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The cap rate or price, if any, which applies to the
            floating rate for the calculation period. The cap rate
            (strike) is only required where the floating rate on a swap
            stream is capped at a certain strike level. The cap rate is
            assumed to be exclusive of any spread and is a per annum
            rate, expressed as a decimal. A cap rate of 5% would be
            represented as 0.05.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="floorValue" type="Strike" minOccurs="0" maxOccurs="unbounded">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The floor rate or price, if any, which applies to the
            floating rate for the calculation period. The floor rate
            (strike) is only required where the floating rate on a swap
            stream is floored at a certain strike level. The floor rate
            is assumed to be exclusive of any spread and is a per annum
            rate, expressed as a decimal. The floor rate of 5% would be
            represented as 0.05.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="CashflowFixingReference">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            A type defining a reference to a cash flow fixing component
            defined somewhere in the document.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="CashflowFixing">
    </xsd:complexType>
<xsd:complexType name="CashflowId">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            An identifier used to identify a single component cashflow.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:simpleContent>
        <xsd:extension base="xsd:normalizedString">
            <xsd:attribute name="cashflowIdScheme" type="xsd:anyURI"/>
        </xsd:extension>
    </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="CashflowNotional">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            The notional/principal value/quantity/volume used to compute
            the cashflow.

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</xsd:documentation>
</xsd:annotation>
<xsd:sequence>
  <xsd:choice>
    <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="units" type="xsd:normalizedString">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The units in which an amount (not monetary) is
          denominated.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
  <xsd:element name="amount" type="xsd:decimal">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The quantity of notional (in currency or other units).
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:sequence>
<xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="CashflowObservation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An observation of a rate or a price of an underlyer used in the
      computation of a cash flow amount.
    </xsd:documentation>
  </xsd:annotation>
</xsd:sequence>
  <xsd:element name="underlyerReference" type="TradeUnderlyerReference">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The underlyer whose rate or price is observed. Reference to
        an underlyer defined within the calculationElements
        structure.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element ref="underlyingAsset" minOccurs="0">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        In cases where the underlying index is observed by
        observing the value of a specific security different from
        the index (typically a futures price), the specific
        security whose price was observed. For example, the
        underlying index might be NYMEX Crude Oil, and the
        underlying asset whose price is observed on a particular
        day might be CLU7. The index is specified via the
        underlyerReference, while the specific asset is specified
        via the underlyingAsset.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="observationDate" type="xsd:date">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The date when the rate is observed. Corresponds to
        adjustedFixingDate on the Interest Rate Derivatives
        subschema.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="observedValue" type="BasicQuotation" minOccurs="0">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The observed rate or price, together with descriptive
        information such as units.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="weight" type="xsd:decimal" minOccurs="0">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The factor used to weight the observation in computing a

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        weighted average. This is typically based on the number of
        days weighting to be associated with the rate observation,
        i.e. the number of days such rate is in effect. This is
        applicable in the case of a weighted average method of
        calculation where more than one observe date is
        established for a single calculation period. If omitted all
        observations are weighted equally. For Equity Derivatives
        Products it defines the basket percentage.
    </xsd:documentation>
</xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="id" type="xsd:ID" use="optional"/>
</xsd:complexType>
<xsd:complexType name="CashflowObservationReference">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            Reference to a cash flow observation component.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="CashflowObservationReference"/>
</xsd:complexType>
<xsd:complexType name="GrossCashflow">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            A payment component owed from one party to the other for the
            cash flow date. This payment component should be of only a
            single type, e.g. a fee or a cashflow from a cashflow stream.
        </xsd:documentation>
    </xsd:annotation>
</xsd:sequence>
    <xsd:sequence minOccurs="0">
        <xsd:element name="cashflowId" type="CashflowId">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    Unique identifier for a cash flow.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:group ref="PayerReceiver.model"/>
        <xsd:element name="cashflowAmount" type="Money">
            <xsd:annotation>
                <xsd:documentation xml:lang="en">
                    Cash flow amount in a given currency to be paid/received.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
    </xsd:sequence>
    <xsd:element name="cashflowType" type="CashflowType" minOccurs="0">
        <xsd:annotation>
            <xsd:documentation xml:lang="en">
                Defines the type of cash flow. For instance, a type of fee,
                premium, principal exchange, leg fee.
            </xsd:documentation>
        </xsd:annotation>
    </xsd:element>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="MatchId">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            An identifier used to identify matched cashflows.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:simpleContent>
        <xsd:extension base="xsd:normalizedString">
            <xsd:attribute name="matchIdScheme" type="xsd:anyURI"/>
        </xsd:extension>
    </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="PaymentId">
    <xsd:annotation>
        <xsd:documentation xml:lang="en">
            An identifier used to identify a matchable payment.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:simpleContent>
        <xsd:extension base="xsd:normalizedString">
            <xsd:attribute name="paymentIdScheme" type="xsd:anyURI"/>
        </xsd:extension>
    </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="PaymentMatching">

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<xsd:annotation>
  <xsd:documentation xml:lang="en">
    A global type describing the payment exposed to the matching
    process, along with its gross component(s) and calculation
    details.
  </xsd:documentation>
</xsd:annotation>
<xsd:sequence>
  <xsd:element name="identifier" type="PaymentId">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        Unique identifier assigned by either party or matching
        service, as agreed, to a payment.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:group ref="PayerReceiver.model"/>
  <xsd:element name="paymentAmount" type="Money">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        Payment amount in a given currency to be paid/received.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="calculationDetails" type="CalculationDetails" minOccurs="0" maxOccurs="1">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The set of cash flow components with calculations that
        comprise this payment.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="StepReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a Schedule's Step.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="Step"/>
</xsd:complexType>
<xsd:complexType name="TradeCashflowsAsserted">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Message for assertion of payments to be reconciled.
      Notification message that submits cashflows that need to be
      reconciled per payment date at the trade level.
    </xsd:documentation>
  </xsd:annotation>
</xsd:complexType>
<xsd:extension base="NotificationMessage">
  <xsd:sequence>
    <xsd:group ref="TradeCashflowsDefinition.model"/>
    <xsd:group ref="TradeCashflows.model"/>
    <xsd:element name="matchId" type="MatchId" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A unique identifier assigned by either party, or
          matching service, as agreed, to each set of matched
          cashflows.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="party" type="Party" minOccurs="2" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          One party element for each of the principal parties and
          any other party that is referenced.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:extension>
</xsd:complexType>
<xsd:complexType name="TradeCashflowsId">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An identifier used to identify the collection of cashflows for
      a particular trade on a particular day.
    </xsd:documentation>
  </xsd:annotation>
</xsd:complexType>

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<xsd:simpleContent>
  <xsd:extension base="xsd:normalizedString">
    <xsd:attribute name="tradeCashflowsIdScheme" type="xsd:anyURI"/>
  </xsd:extension>
</xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="TradeCashflowsMatchResult">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Message for sending match results. Response message that
      returns the status of the set of cashflows (more than one in
      the case of cross-currency swaps) that have been reconciled.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="ResponseMessage">
      <xsd:sequence>
        <xsd:element name="status" type="TradeCashflowsStatus">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Reconciliation status of the set of cashflows.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:choice>
          <xsd:sequence>
            <xsd:element name="assertedCashflow" type="AssertedCashflow">
              <xsd:annotation>
                <xsd:documentation xml:lang="en">
                  Cashflow (or set of cashflows for cross-currency
                  swap) asserted by one of the parties.
                </xsd:documentation>
              </xsd:annotation>
            </xsd:element>
            <xsd:element name="proposedMatch" type="TradeCashflowsProposedMatch" minOccurs="0">
              <xsd:annotation>
                <xsd:documentation xml:lang="en">
                  "Other side's" cashflow that meets the minimum
                  matching criteria and is proposed as match to the
                  cashflow that is being asserted.
                </xsd:documentation>
              </xsd:annotation>
            </xsd:element>
          </xsd:sequence>
          <xsd:element name="allegedCashflow" type="AllegedCashflow">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                Cashflow (or set of cashflows for cross-currency
                swap) asserted by the "other side's" party.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
        </xsd:choice>
        <xsd:element name="party" type="Party" minOccurs="2" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              One party element for each of the principal parties and
              any other party that is referenced.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="TradeCashflowsProposedMatch">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      "Other side's" cashflow that meets the minimum matching
      criteria and is proposed as match to the cash flow that is
      being asserted.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="IdAndTradeCashflows.model"/>
    <xsd:element name="matchId" type="MatchId">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A unique identifier assigned by the matching service to
          each set of matched cashflows.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>

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<xsd:element name="difference" type="TradeDifference" minOccurs="0" maxOccurs="unbounded">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type used to record the details of a difference between
      two sides of a payment.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="TradeCashflowsStatus">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An coding scheme used to describe the matching status of a
      TradeCashFlows element.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="tradeCashflowsStatusScheme" type="xsd:anyURI" default="http://www.
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="TradeDetails">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Summary trade economic details used to help identify a trade
      where no shared trade ID is available.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="tradeDate" type="IdentifiedDate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The trade date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="effectiveDate" type="AdjustableDate2">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The earliest of all the effective dates of all constituent
          streams.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="terminationDate" type="AdjustableDate2">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The latest of all of the termination dates of the
          constituent streams.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="productType" type="ProductType" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A classification of the type of product. FpML does not
          define domain values for this element.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="underlyer" type="TradeUnderlyer" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The set of underlyers to the trade that can be used in
          computing the trade's cashflows. If this information is
          needed to identify the trade, all of the trade's underlyers
          should be specified, whether or not they figure into the
          cashflow calculation. Otherwise, only those underlyers used
          to compute this particular cashflow need be supplied.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="notional" type="CashflowNotional" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The notional or notionals in effect on the last day of the
          last calculation period in each stream.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>

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</xsd:complexType>
<xsd:complexType name="TradeIdentifyingItems">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Data elements that can be used to identify the trade for which
      cashflows are being communicated. This includes both explicit
      trade identifiers and summary economic details.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="partyTradeIdentifier" type="PartyTradeIdentifier" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Structure defining one or more trade identifiers allocated
          to the trade by a party. It is expected that for external
          communication of trade there will be only one tradeId sent
          in the document per party.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="tradeDetails" type="TradeDetails" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Structure that holds some trade-specific elements for
          identifying the trade only in the case of trades that have
          not been negotiated through electronic platforms and for
          which the counterparty's trade ID has not been captured.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="TradeUnderlyer">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The underlying asset/index/reference price etc. whose
      rate/price may be observed to compute the value of the
      cashflow. It can be an index, fixed rate, listed security,
      quoted currency pair, or a reference entity (for credit
      derivatives).
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="floatingRate" type="FloatingRate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A floating rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fixedRate" type="Schedule">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The fixed rate or fixed rate schedule expressed as explicit
          fixed rates and dates. In the case of a schedule, the step
          dates may be subject to adjustment in accordance with any
          adjustments specified in calculationPeriodDatesAdjustments.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element ref="underlyingAsset">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Define the underlying asset when it is a listed security.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="referenceEntity" type="LegalEntity">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The corporate or sovereign entity on which you are buying
          or selling protection and any successor that assumes all or
          substantially all of its contractual and other obligations.
          It is vital to use the correct legal name of the entity and
          to be careful not to choose a subsidiary if you really want
          to trade protection on a parent company. Please note,
          Reference Entities cannot be senior or subordinated. It is
          the obligations of the Reference Entities that can be
          senior or subordinated. ISDA 2003 Term: Reference Entity
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>

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<xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="TradeUnderlyerReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a trade underlyer component.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="TradeUnderlyer"/>
</xsd:complexType>
<xsd:complexType name="UnderlyerReferenceUnits">
  <xsd:sequence>
    <xsd:element name="underlyerReference" type="TradeUnderlyerReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Reference to the underlyer defined within the
          calculationElements structure.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quantity" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Amount of units.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:group name="DefinitionAndCashflows.model">
  <xsd:sequence>
    <xsd:group ref="TradeCashflowsDefinition.model"/>
    <xsd:group ref="TradeCashflows.model" minOccurs="0"/>
  </xsd:sequence>
</xsd:group>
<xsd:group name="IdAndTradeCashflows.model">
  <xsd:sequence>
    <xsd:element name="tradeCashflowsId" type="TradeCashflowsId">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Unique identifier assigned by either party to a set of
          cashflows.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:group ref="TradeCashflows.model" minOccurs="0"/>
  </xsd:sequence>
</xsd:group>
<xsd:group name="TradeCashflows.model">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A group describing the cashflows owing on a particular
      adjustedPaymentDate for a specific trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="tradeIdentifyingItems" type="TradeIdentifyingItems">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Structure that holds reference to the trade through the
          tradeId and optionally some trade-specific elements for
          identifying the trade in the case of trades that have not
          been negotiated through electronic platforms and for which
          the counterparty's trade ID has not been captured.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedPaymentDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted date in which the payments are being
          paid/received.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="payment" type="PaymentMatching" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the payment that is exposed to the matching
          process. Usually there will be a single payment but for
          cross-currency swaps a different payment per currency shall
          be provided.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>

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        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:group>
  <xsd:group name="TradeCashflowsDefinition.model">
    <xsd:sequence>
      <xsd:element name="asOfDate" type="xsd:dateTime" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The date and time at which the set of cashflows was
            defined.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="tradeCashflowsId" type="TradeCashflowsId">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Unique identifier assigned by the party asserting the set
            of cashflows to be reconciled.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:group>
</xsd:schema>
```