FpML - Interest Rate Derivative Component Definitions

Version: 4.3

This Version:

http://www.fpml.org/spec/fpml-4-3-10-rec-1

Latest Version:

http://www.fpml.org/spec/fpml-4-3-10-rec-1

Previous Version:

http://www.fpml.org/spec/fpml-4-3-9-tr-1/

Errata For This Version:

http://www.fpml.org/spec/fpml-4-3-10-rec-1/html/fpml-4-3-errata.html

Document built

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1 Global Complex Types

1.1 BondReference

1.1.1 Description:

A type including a reference to a bond to support the representation of an asset swap or Condition Precedent Bond.

1.1.2 Contents:

bond (exactly one occurrence; of the type Bond) Defines the underlying asset when it is a bond.

conditionPrecedentBond (exactly one occurrence; of the type xsd:boolean) To indicate whether the Condition Precedent Bond is applicable. The swap contract is only valid if the bond is issued and if there is any dispute over the terms of fixed stream then the bond terms would be used.

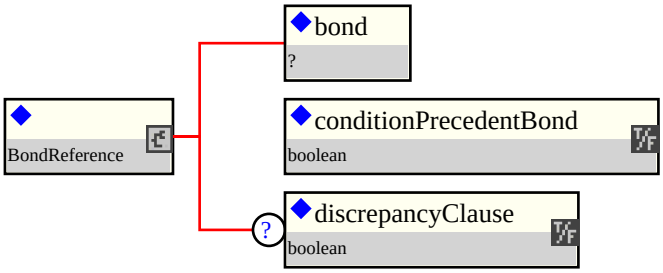
discrepancyClause (zero or one occurrence; of the type xsd:boolean) To indicate whether the Discrepancy Clause is applicable.

1.1.3 Used by:

- Complex type: SwapAdditionalTerms

1.1.4 Derived Types:

1.1.5 Figure:



1.1.6 Schema Fragment:

```
<xsd:complexType name="BondReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type including a reference to a bond to support the
      representation of an asset swap or Condition Precedent Bond.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="bond">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Reference to a bond underlyer.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="conditionPrecedentBond" type="xsd:boolean">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          To indicate whether the Condition Precedent Bond is
          applicable. The swap contract is only valid if the bond is
          issued and if there is any dispute over the terms of fixed
          stream then the bond terms would be used.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="discrepancyClause" type="xsd:boolean" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
```

```
          To indicate whether the Discrepancy Clause is applicable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.2 BulletPayment

1.2.1 Description:

A product to represent a single cashflow.

1.2.2 Contents:

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

- The base type which all FpML products extend.

payment (exactly one occurrence; of the type Payment) A known payment between two parties.

1.2.3 Used by:

- Element: bulletPayment

1.2.4 Derived Types:

1.2.5 Figure:

1.2.6 Schema Fragment:

```
<xsd:complexType name="BulletPayment">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A product to represent a single cashflow.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element name="payment" type="Payment">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A known payment between two parties.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.3 Calculation

1.3.1 Description:

A type definining the parameters used in the calculation of fixed or floating calculation period amounts.

1.3.2 Contents:

Either

notionalSchedule (exactly one occurrence; of the type Notional) The notional amount or notional amount schedule.

Or

fxLinkedNotionalSchedule (exactly one occurrence; of the type FxLinkedNotionalSchedule) A notional amount schedule where each notional that applied to a calculation period is calculated with reference to a notional amount or notional amount schedule in a different currency by means of a spot currency exchange rate which is normally observed at the beginning of each period.

Either

fixedRateSchedule (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

rateCalculation (exactly one occurrence; of the type Rate) The base element for the floating rate calculation definitions.

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

discounting (zero or one occurrence; of the type Discounting) The parameters specifying any discounting conventions that may apply. This element must only be included if discounting applies.

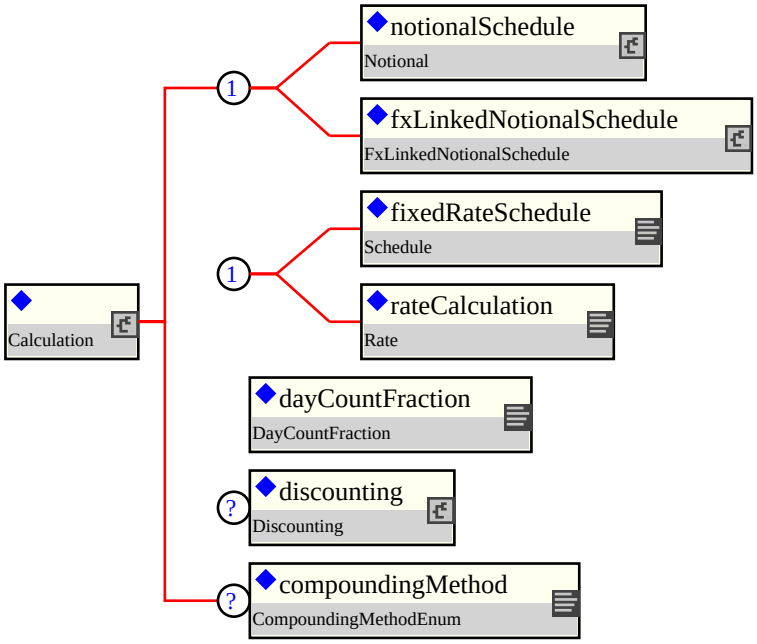
compoundingMethod (zero or one occurrence; of the type CompoundingMethodEnum) If more that one calculation period contributes to a single payment amount this element specifies whether compounding is applicable, and if so, what compounding method is to be used. This element must only be included when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

1.3.3 Used by:

- Complex type: CalculationPeriodAmount

1.3.4 Derived Types:

1.3.5 Figure:



1.3.6 Schema Fragment:

```
<xsd:complexType name="Calculation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used in the calculation of fixed
      or floating calculation period amounts.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="notionalSchedule" type="Notional">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The notional amount or notional amount schedule.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fxLinkedNotionalSchedule" type="FxLinkedNotionalSchedule">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A notional amount schedule where each notional that applied
            to a calculation period is calculated with reference to a
            notional amount or notional amount schedule in a different
            currency by means of a spot currency exchange rate which is
            normally observed at the beginning of each period.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:choice>
      <xsd:element name="fixedRateSchedule" 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="rateCalculation">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            This element is the head of a substitution group. It is
            substituted by the floatingRateCalculation element for
            standard Floating Rate legs, or the
            inflationRateCalculation element for inflation swaps.
          </xsd:documentation>
```

```
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:element name="dayCountFraction" type="DayCountFraction">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The day count fraction.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="discounting" type="Discounting" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The parameters specifying any discounting conventions that
          may apply. This element must only be included if discounting
          applies.
        </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:sequence>
</xsd:complexType>
```

1.4 CalculationPeriod

1.4.1 Description:

A type defining the parameters used in the calculation of a fixed or floating rate calculation period amount. This type forms part of cashflows representation of a swap stream.

1.4.2 Contents:

unadjustedStartDate (zero or one occurrence; of the type xsd:date)

unadjustedEndDate (zero or one occurrence; of the type xsd:date)

adjustedStartDate (zero or one occurrence; of the type xsd:date) The calculation period start date, adjusted according to any relevant business day convention.

adjustedEndDate (zero or one occurrence; of the type xsd:date) The calculation period end date, adjusted according to any relevant business day convention.

calculationPeriodNumberOfDays (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.

Either

notionalAmount (exactly one occurrence; of the type xsd:decimal) The amount that a cashflow will accrue interest on.

Or

fxLinkedNotionalAmount (exactly one occurrence; of the type FxLinkedNotionalAmount) The amount that a cashflow will accrue interest on. This is the calculated amount of the fx linked - ie the other currency notional amount multiplied by the appropriate fx spot rate.

Either

floatingRateDefinition (exactly one occurrence; of the type FloatingRateDefinition) The floating rate reset information for the calculation period.

Or

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

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.

forecastAmount (zero or one occurrence; of the type Money) The amount representing the forecast of the accrued value of the calculation period. An intermediate value used to generate the forecastPaymentAmount in the PaymentCalculationPeriod.

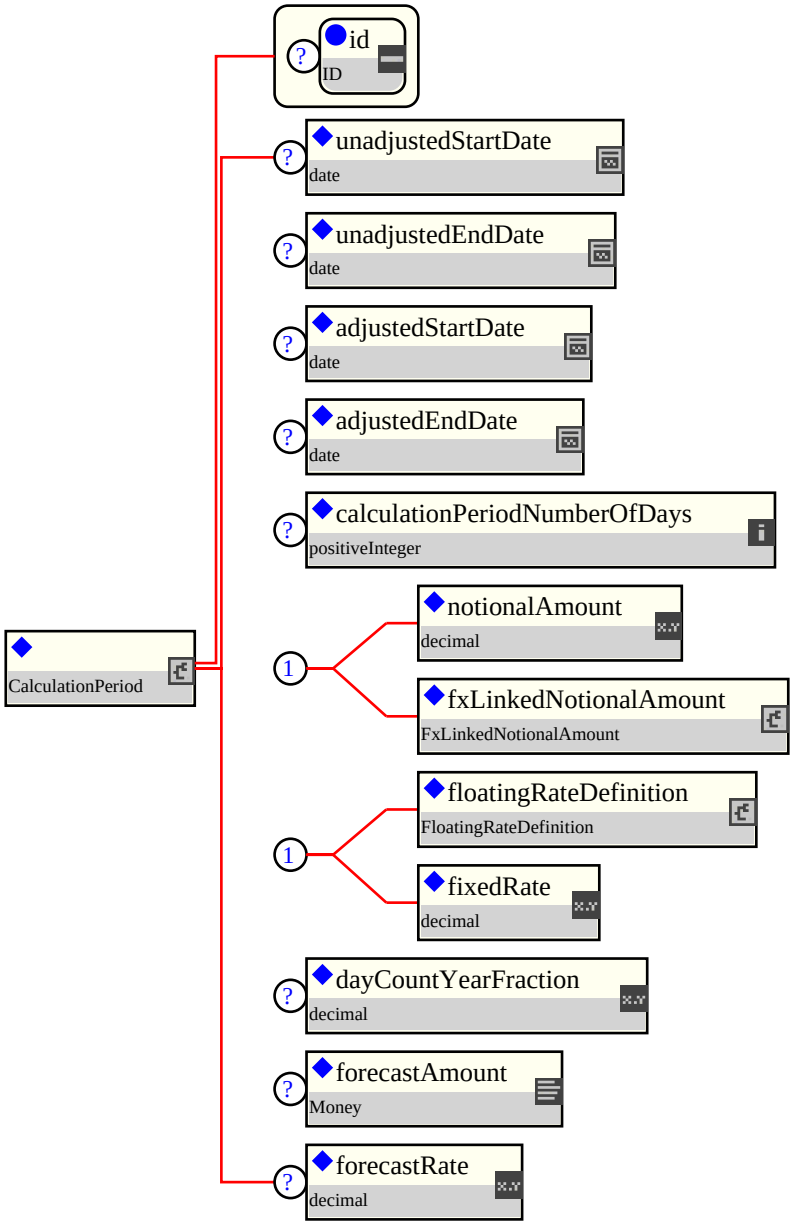
forecastRate (zero or one occurrence; of the type xsd:decimal) A value representing the forecast rate used to calculate the forecast future value of the accrual period. This is a calculated rate determined based on averaging the rates in the rateObservation elements, and incorporates all of the rate treatment and averaging rules. A value of 1% should be represented as 0.01

1.4.3 Used by:

- Complex type: PaymentCalculationPeriod

1.4.4 Derived Types:

1.4.5 Figure:



1.4.6 Schema Fragment:

```
<xsd:complexType name="CalculationPeriod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used in the calculation of a fixed
      or floating rate calculation period amount. This type forms part
      of cashflows representation of a swap stream.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="unadjustedStartDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="unadjustedEndDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="adjustedStartDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The calculation period start date, adjusted according to any
          relevant business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

```
<xsd:element name="adjustedEndDate" type="xsd:date" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The calculation period end date, adjusted according to any
      relevant business day convention.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="calculationPeriodNumberOfDays" 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:choice>
  <xsd:element name="notionalAmount" type="xsd:decimal">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The amount that a cashflow will accrue interest on.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="fxLinkedNotionalAmount" type="FxLinkedNotionalAmount">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The amount that a cashflow will accrue interest on. This is
        the calculated amount of the fx linked - ie the other
        currency notional amount multiplied by the appropriate fx
        spot rate.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:choice>
<xsd:choice>
  <xsd:element name="floatingRateDefinition" type="FloatingRateDefinition">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The floating rate reset information for the calculation
        period.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="fixedRate" type="xsd:decimal">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The calculation period fixed rate. A per annum rate,
        expressed as a decimal. A fixed rate of 5% would be
        represented as 0.05.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:choice>
<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="forecastAmount" type="Money" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The amount representing the forecast of the accrued value of
      the calculation period. An intermediate value used to
      generate the forecastPaymentAmount in the
      PaymentCalculationPeriod.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="forecastRate" type="xsd:decimal" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A value representing the forecast rate used to calculate the
      forecast future value of the accrual period. This is a
      calculated rate determined based on averaging the rates in
      the rateObservation elements, and incorporates all of the
      rate treatment and averaging rules. A value of 1% should be
      represented as 0.01
```

```
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.5 CalculationPeriodAmount

1.5.1 Description:

A type defining the parameters used in the calculation of fixed or floating rate calculation period amounts or for specifying a known calculation period amount or known amount schedule.

1.5.2 Contents:

Either

calculation (exactly one occurrence; of the type Calculation) The parameters used in the calculation of fixed or floaring rate calculation period amounts.

Or

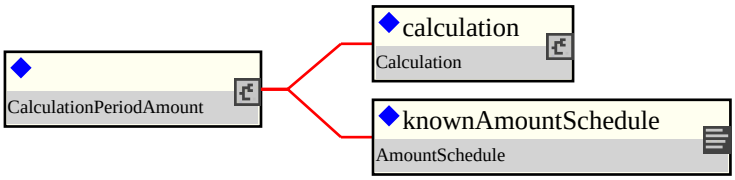
knownAmountSchedule (exactly one occurrence; of the type AmountSchedule) The known calculation period amount or a known amount schedule expressed as explicit known amounts and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments.

1.5.3 Used by:

- Complex type: InterestRateStream

1.5.4 Derived Types:

1.5.5 Figure:



1.5.6 Schema Fragment:

```
<xsd:complexType name="CalculationPeriodAmount">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used in the calculation of fixed
      or floating rate calculation period amounts or for specifying a
      known calculation period amount or known amount schedule.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="calculation" type="Calculation">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The parameters used in the calculation of fixed or floaring
          rate calculation period amounts.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="knownAmountSchedule" type="AmountSchedule">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The known calculation period amount or a known amount
          schedule expressed as explicit known amounts 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:choice>
```

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

1.6 CalculationPeriodDates

1.6.1 Description:

A type defining the parameters used to generate the calculation period dates schedule, including the specification of any initial or final stub calculation periods. A calculation perod schedule consists of an optional initial stub calculation period, one or more regular calculation periods and an optional final stub calculation period. In the absence of any initial or final stub calculation periods, the regular part of the calculation period schedule is assumed to be between the effective date and the termination date. No implicit stubs are allowed, i.e. stubs must be explicitly specified using an appropriate combination of firstPeriodStateDate, firstRegularPeriodStartDate and lastRegularPeriodEndDate.

1.6.2 Contents:

Either

effectiveDate (exactly one occurrence; of the type AdjustableDate) The first day of the term of the trade. This day may be subject to adjustment in accordance with a business day convention.

Or

relativeEffectiveDate (exactly one occurrence; of the type AdjustedRelativeDateOffset) Defines the effective date.

Either

terminationDate (exactly one occurrence; of the type AdjustableDate) The last day of the term of the trade. This day may be subject to adjustment in accordance with a business day convention.

Or

relativeTerminationDate (exactly one occurrence; of the type RelativeDateOffset) The term/maturity of the swap, express as a tenor (typically in years).

calculationPeriodDatesAdjustments (exactly one occurrence; of the type BusinessDayAdjustments) The business day convention to apply to each calculation period end date if it would otherwise fall on a day that is not a business day in the specified financial business centers.

firstPeriodStartDate (zero or one occurrence; of the type AdjustableDate) The start date of the calculation period if the date falls before the effective date. It must only be specified if it is not equal to the effective date. This date may be subject to adjustment in accordance with a business day convention.

firstRegularPeriodStartDate (zero or one occurrence; of the type xsd:date) The start date of the regular part of the calculation period schedule. It must only be specified if there is an initial stub calculation period. This day may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments.

firstCompoundingPeriodEndDate (zero or one occurrence; of the type xsd:date) The end date of the initial compounding period when compounding is applicable. It must only be specified when the compoundingMethod element is present and not equal to a value of None. This date may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments.

lastRegularPeriodEndDate (zero or one occurrence; of the type xsd:date) The end date of the regular part of the calculation period schedule. It must only be specified if there is a final stub calculation period. This day may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments.

stubPeriodType (zero or one occurrence; of the type StubPeriodTypeEnum) Method to allocate any irregular period remaining after regular periods have been allocated between the effective and termination date.

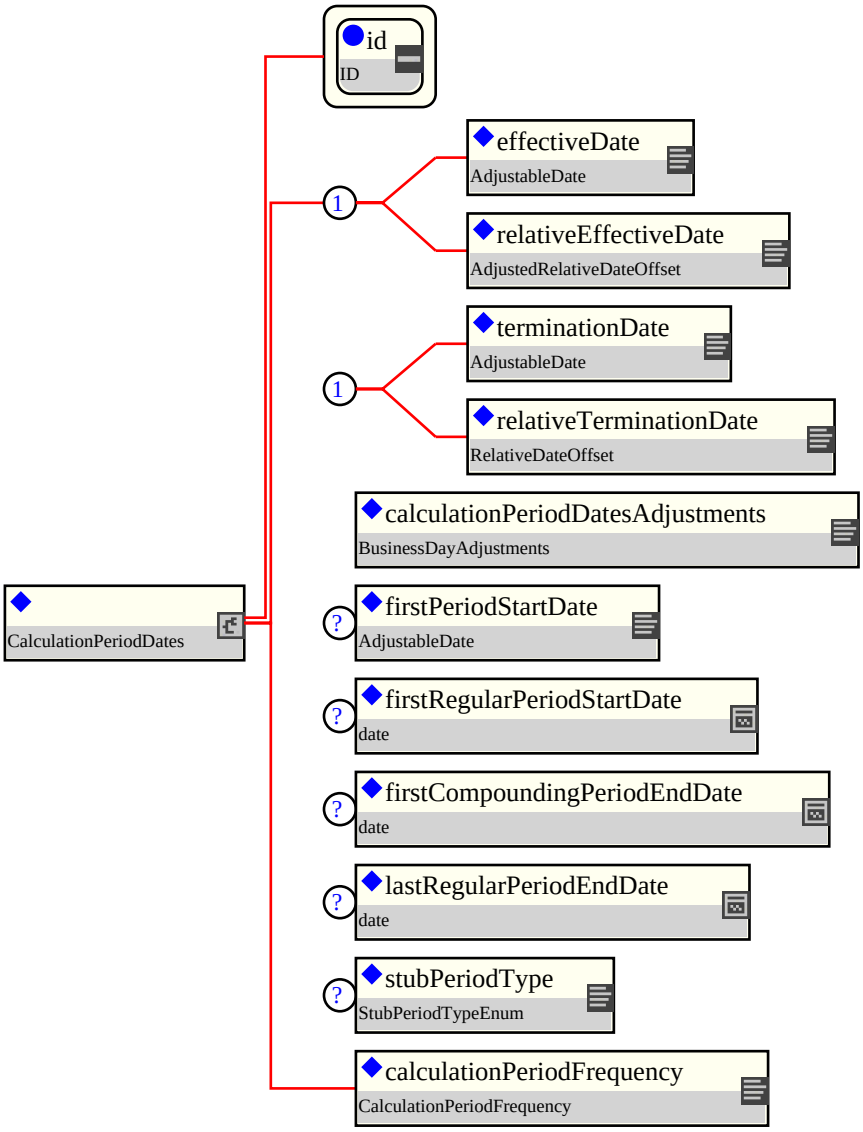
calculationPeriodFrequency (exactly one occurrence; of the type CalculationPeriodFrequency) The frequency at which calculation period end dates occur with the regular part of the calculation period schedule and their roll date convention.

1.6.3 Used by:

- Complex type: InterestRateStream

1.6.4 Derived Types:

1.6.5 Figure:



1.6.6 Schema Fragment:

```
<xsd:complexType name="CalculationPeriodDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used to generate the calculation
      period dates schedule, including the specification of any initial
      or final stub calculation periods. A calculation perod schedule
      consists of an optional initial stub calculation period, one or
      more regular calculation periods and an optional final stub
      calculation period. In the absence of any initial or final stub
      calculation periods, the regular part of the calculation period
      schedule is assumed to be between the effective date and the
      termination date. No implicit stubs are allowed, i.e. stubs must
      be explicitly specified using an appropriate combination of
      firstPeriodStateDate, firstRegularPeriodStartDate and
      lastRegularPeriodEndDate.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="effectiveDate" type="AdjustableDate">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The first day of the term of the trade. This day may be
            subject to adjustment in accordance with a business day
```

```
        convention.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="relativeEffectiveDate" type="AdjustedRelativeDateOffset">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        Defines the effective date.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:choice>
<xsd:choice>
  <xsd:element name="terminationDate" type="AdjustableDate">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The last day of the term of the trade. This day may be
        subject to adjustment in accordance with a business day
        convention.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="relativeTerminationDate" type="RelativeDateOffset">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The term/maturity of the swap, express as a tenor
        (typically in years).
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:choice>
<xsd:element name="calculationPeriodDatesAdjustments" type="BusinessDayAdjustments">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The business day convention to apply to each calculation
      period end date if it would otherwise fall on a day that is
      not a business day in the specified financial business
      centers.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="firstPeriodStartDate" type="AdjustableDate" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The start date of the calculation period if the date falls
      before the effective date. It must only be specified if it is
      not equal to the effective date. This date may be subject to
      adjustment in accordance with a business day convention.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="firstRegularPeriodStartDate" type="xsd:date" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The start date of the regular part of the calculation period
      schedule. It must only be specified if there is an initial
      stub calculation period. This day may be subject to
      adjustment in accordance with any adjustments specified in
      calculationPeriodDatesAdjustments.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="firstCompoundingPeriodEndDate" type="xsd:date" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The end date of the initial compounding period when
      compounding is applicable. It must only be specified when the
      compoundingMethod element is present and not equal to a value
      of None. This date may be subject to adjustment in accordance
      with any adjustments specified in
      calculationPeriodDatesAdjustments.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="lastRegularPeriodEndDate" type="xsd:date" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The end date of the regular part of the calculation period
      schedule. It must only be specified if there is a final stub
      calculation period. This day may be subject to adjustment in
      accordance with any adjustments specified in
      calculationPeriodDatesAdjustments.
    </xsd:documentation>
```

```
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="stubPeriodType" type="StubPeriodTypeEnum" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Method to allocate any irregular period remaining after
          regular periods have been allocated between the effective and
          termination date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationPeriodFrequency" type="CalculationPeriodFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency at which calculation period end dates occur
          with the regular part of the calculation period schedule and
          their roll date convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID" use="required"/>
</xsd:complexType>
```

1.7 CalculationPeriodDatesReference

1.7.1 Description:

Reference to a calculation period dates component.

1.7.2 Contents:

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

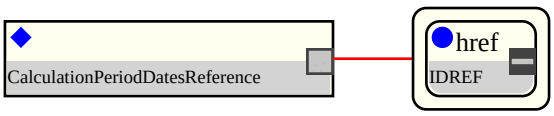
- The abstract base class for all types which define intra-document pointers.

1.7.3 Used by:

- Complex type: NotionalStepRule
- Complex type: PaymentDates
- Complex type: ResetDates
- Complex type: StubCalculationPeriodAmount

1.7.4 Derived Types:

1.7.5 Figure:



1.7.6 Schema Fragment:

```
<xsd:complexType name="CalculationPeriodDatesReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a calculation period dates component.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference">
      <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="CalculationPe
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.8 CancelableProvision

1.8.1 Description:

A type defining the right of a party to cancel a swap transaction on the specified exercise dates. The provision is for 'walkaway' cancellation (i.e. the fair value of the swap is not paid). A fee payable on exercise can be specified.

1.8.2 Contents:

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

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

exercise (exactly one occurrence; of the type Exercise) An placeholder for the actual option exercise definitions.

exerciseNotice (zero or one occurrence; of the type ExerciseNotice) Definition of the party to whom notice of exercise should be given.

followUpConfirmation (exactly one occurrence; of the type xsd:boolean) A flag to indicate whether follow-up confirmation of exercise (written or electronic) is required following telephonic notice by the buyer to the seller or seller's agent.

cancelableProvisionAdjustedDates (zero or one occurrence; of the type CancelableProvisionAdjustedDates) The adjusted dates associated with a cancelable provision. These dates have been adjusted for any applicable business day convention.

finalCalculationPeriodDateAdjustment (zero or more occurrences; of the type FinalCalculationPeriodDateAdjustment)

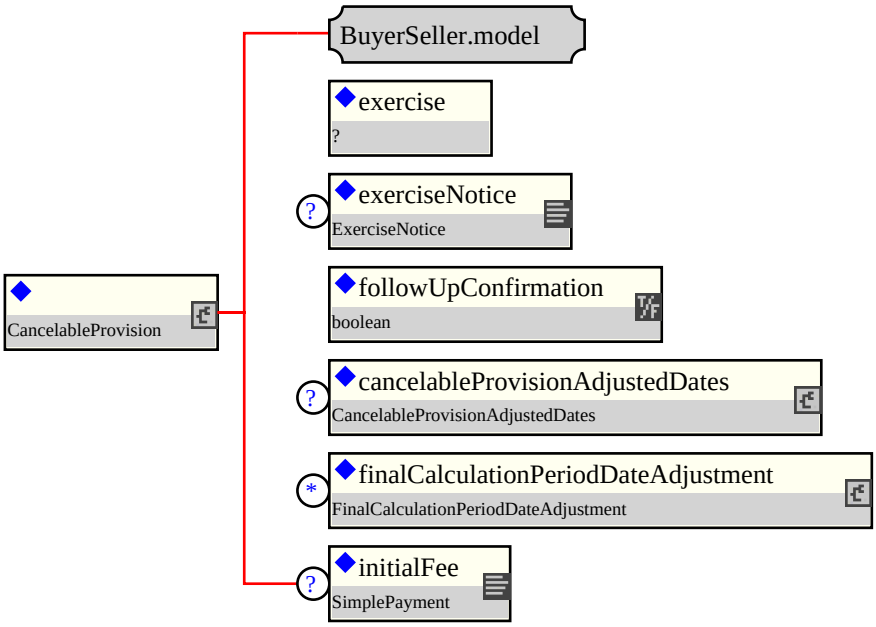
initialFee (zero or one occurrence; of the type SimplePayment) An initial fee for the cancelable option.

1.8.3 Used by:

- Complex type: Swap

1.8.4 Derived Types:

1.8.5 Figure:



1.8.6 Schema Fragment:

```
<xsd:complexType name="CancelableProvision">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the right of a party to cancel a swap transaction
      on the specified exercise dates. The provision is for 'walkaway'
      cancellation (i.e. the fair value of the swap is not paid). A fee
      payable on exercise can be specified.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="BuyerSeller.model"/>
    <xsd:element ref="exercise"/>
    <xsd:element name="exerciseNotice" type="ExerciseNotice" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Definition of the party to whom notice of exercise should be
          given.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="followUpConfirmation" type="xsd:boolean">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A flag to indicate whether follow-up confirmation of exercise
          (written or electronic) is required following telephonic
          notice by the buyer to the seller or seller's agent.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cancelableProvisionAdjustedDates" type="CancelableProvisionAdjustedDates
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with a cancelable provision.
          These dates have been adjusted for any applicable business
          day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="finalCalculationPeriodDateAdjustment" type="FinalCalculationPeriodDateAd
      <xsd:annotation>
        <xsd:documentation>
          Business date convention adjustment to final payment period
          per leg (swapStream) upon exercise event. The adjustments can
          be made in-line with leg level BDC's or they can be specified
          seperately.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

```
    <xsd:element name="initialFee" type="SimplePayment" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An initial fee for the cancelable option.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.9 CancelableProvisionAdjustedDates

1.9.1 Description:

A type to define the adjusted dates for a cancelable provision on a swap transaction.

1.9.2 Contents:

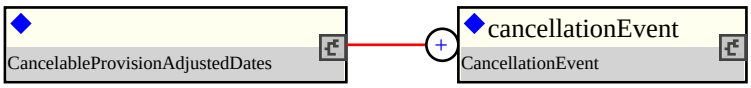
cancellationEvent (one or more occurrences; of the type CancellationEvent) The adjusted dates for an individual cancellation date.

1.9.3 Used by:

- Complex type: CancelableProvision

1.9.4 Derived Types:

1.9.5 Figure:



1.9.6 Schema Fragment:

```
<xsd:complexType name="CancelableProvisionAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define the adjusted dates for a cancelable provision on
      a swap transaction.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="cancellationEvent" type="CancellationEvent" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates for an individual cancellation date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.10 CancellationEvent

1.10.1 Description:

The adjusted dates for a specific cancellation date, including the adjusted exercise date and adjusted termination date.

1.10.2 Contents:

adjustedExerciseDate (exactly one occurrence; of the type xsd:date) The date on which option exercise takes place. This date should already be adjusted for any applicable business day convention.

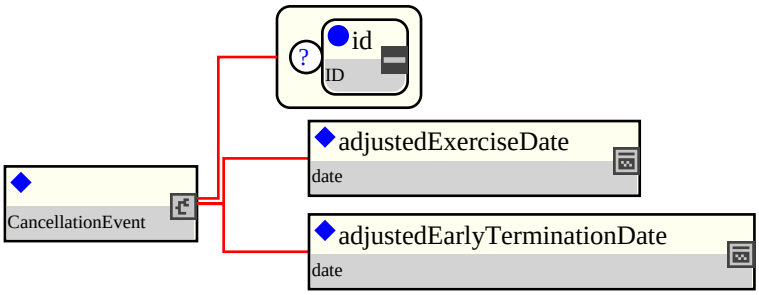
adjustedEarlyTerminationDate (exactly one occurrence; of the type xsd:date) The early termination date that is applicable if an early termination provision is exercised. This date should already be adjusted for any applicable business day convention.

1.10.3 Used by:

- Complex type: CancelableProvisionAdjustedDates

1.10.4 Derived Types:

1.10.5 Figure:



1.10.6 Schema Fragment:

```
<xsd:complexType name="CancellationEvent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The adjusted dates for a specific cancellation date, including
      the adjusted exercise date and adjusted termination date.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedExerciseDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which option exercise takes place. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedEarlyTerminationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The early termination date that is applicable if an early
          termination provision is exercised. This date should already
          be adjusted for any applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.11 CapFloor

1.11.1 Description:

A type defining an interest rate cap, floor, or cap/floor strategy (e.g. collar) product.

1.11.2 Contents:

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

- The base type which all FpML products extend.

capFloorStream (exactly one occurrence; of the type InterestRateStream)

premium (zero or more occurrences; of the type Payment) The option premium amount payable by buyer to seller on the specified payment date.

additionalPayment (zero or more occurrences; of the type Payment) Additional payments between the principal parties.

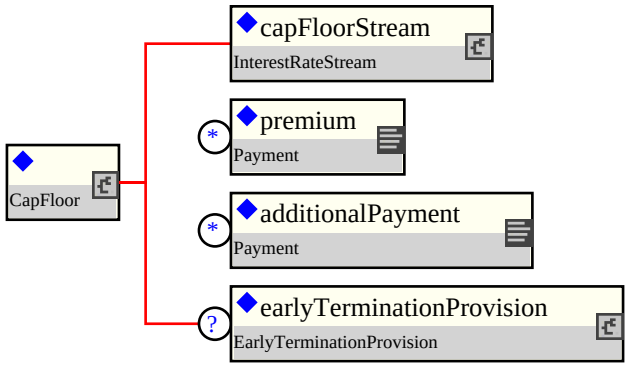
earlyTerminationProvision (zero or one occurrence; of the type EarlyTerminationProvision) Parameters specifying provisions relating to the optional and mandatory early terminarion of a CapFloor transaction.

1.11.3 Used by:

- Element: capFloor

1.11.4 Derived Types:

1.11.5 Figure:



1.11.6 Schema Fragment:

```
<xsd:complexType name="CapFloor">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining an interest rate cap, floor, or cap/floor
      strategy (e.g. collar) product.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element name="capFloorStream" type="InterestRateStream"/>
        <xsd:element name="premium" type="Payment" minOccurs="0" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The option premium amount payable by buyer to seller on
              the specified payment date.
            </xsd:documentation>
          </xsd:annotation>
```

```
        </xsd:element>
        <xsd:element name="additionalPayment" type="Payment" minOccurs="0" maxOccurs="unbounded
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Additional payments between the principal parties.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="earlyTerminationProvision" type="EarlyTerminationProvision" minOccur
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Parameters specifying provisions relating to the optional
              and mandatory early terminarion of a CapFloor
              transaction.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.12 Cashflows

1.12.1 Description:

A type defining the cashflow representation of a swap trade.

1.12.2 Contents:

cashflowsMatchParameters (exactly one occurrence; of the type xsd:boolean) A true/false flag to indicate whether the cashflows match the parametric definition of the stream, i.e. whether the cashflows could be regenerated from the parameters without loss of information.

principalExchange (zero or more occurrences; of the type PrincipalExchange) The initial, intermediate and final principal exchange amounts. Typically required on cross currency interest rate swaps where actual exchanges of principal occur. A list of principal exchange elements may be ordered in the document by ascending adjusted principal exchange date. An FpML document containing an unordered principal exchange list is still regarded as a conformant document.

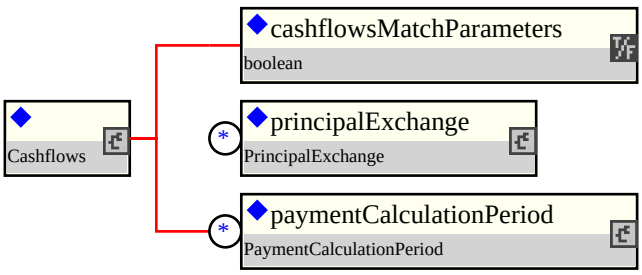
paymentCalculationPeriod (zero or more occurrences; of the type PaymentCalculationPeriod) The adjusted payment date and associated calculation period parameters required to calculate the actual or projected payment amount. A list of payment calculation period elements may be ordered in the document by ascending adjusted payment date. An FpML document containing an unordered list of payment calculation periods is still regarded as a conformant document.

1.12.3 Used by:

- Complex type: InterestRateStream

1.12.4 Derived Types:

1.12.5 Figure:



1.12.6 Schema Fragment:

```
<xsd:complexType name="Cashflows">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the cashflow representation of a swap trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="cashflowsMatchParameters" type="xsd:boolean">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A true/false flag to indicate whether the cashflows match the
          parametric definition of the stream, i.e. whether the
          cashflows could be regenerated from the parameters without
          loss of information.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="principalExchange" type="PrincipalExchange" minOccurs="0" maxOccurs="unb
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
```

```
          The initial, intermediate and final principal exchange
          amounts. Typically required on cross currency interest rate
          swaps where actual exchanges of principal occur. A list of
          principal exchange elements may be ordered in the document by
          ascending adjusted principal exchange date. An FpML document
          containing an unordered principal exchange list is still
          regarded as a conformant document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="paymentCalculationPeriod" type="PaymentCalculationPeriod" minOccurs="0"
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted payment date and associated calculation period
          parameters required to calculate the actual or projected
          payment amount. A list of payment calculation period elements
          may be ordered in the document by ascending adjusted payment
          date. An FpML document containing an unordered list of
          payment calculation periods is still regarded as a conformant
          document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.13 CashPriceMethod

1.13.1 Description:

A type defining the parameters necessary for each of the ISDA cash price methods for cash settlement.

1.13.2 Contents:

cashSettlementReferenceBanks (zero or one occurrence; of the type CashSettlementReferenceBanks) A container for a set of reference institutions. These reference institutions may be called upon to provide rate quotations as part of the method to determine the applicable cash settlement amount. If institutions are not specified, it is assumed that reference institutions will be agreed between the parties on the exercise date, or in the case of swap transaction to which mandatory early termination is applicable, the cash settlement valuation date.

cashSettlementCurrency (exactly one occurrence; of the type Currency) The currency in which the cash settlement amount will be calculated and settled.

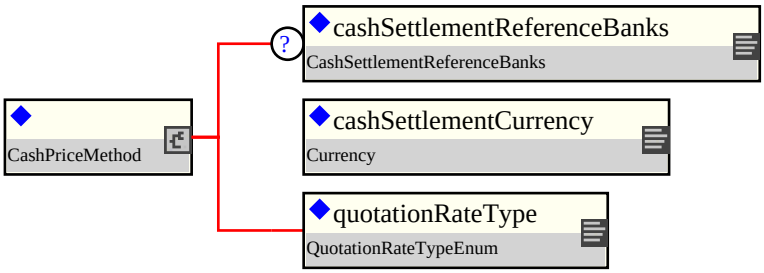
quotationRateType (exactly one occurrence; of the type QuotationRateTypeEnum) Which rate quote is to be observed, either Bid, Mid, Offer or Exercising Party Pays. The meaning of Exercising Party Pays is defined in the 2000 ISDA Definitions, Section 17.2. Certain Definitions Relating to Cash Settlement, paragraph (j)

1.13.3 Used by:

- Complex type: CashSettlement

1.13.4 Derived Types:

1.13.5 Figure:



1.13.6 Schema Fragment:

```
<xsd:complexType name="CashPriceMethod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters necessary for each of the ISDA
      cash price methods for cash settlement.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="cashSettlementReferenceBanks" type="CashSettlementReferenceBanks" minOcc
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A container for a set of reference institutions. These
          reference institutions may be called upon to provide rate
          quotations as part of the method to determine the applicable
          cash settlement amount. If institutions are not specified, it
          is assumed that reference institutions will be agreed between
          the parties on the exercise date, or in the case of swap
          transaction to which mandatory early termination is
          applicable, the cash settlement valuation date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cashSettlementCurrency" type="Currency">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which the cash settlement amount will be
          calculated and settled.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotationRateType" type="QuotationRateTypeEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Which rate quote is to be observed, either Bid, Mid, Offer or
          Exercising Party Pays. The meaning of Exercising Party Pays
          is defined in the 2000 ISDA Definitions, Section 17.2.
          Certain Definitions Relating to Cash Settlement, paragraph
          (j)
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.14 CashSettlement

1.14.1 Description:

A type to define the cash settlement terms for a product where cash settlement is applicable.

1.14.2 Contents:

cashSettlementValuationTime (zero or one occurrence; of the type BusinessCenterTime) The time of the cash settlement valuation date when the cash settlement amount will be determined according to the cash settlement method if the parties have not otherwise been able to agree the cash settlement amount.

cashSettlementValuationDate (zero or one occurrence; of the type RelativeDateOffset) The date on which the cash settlement amount will be determined according to the cash settlement method if the parties have not otherwise been able to agree the cash settlement amount.

cashSettlementPaymentDate (zero or one occurrence; of the type CashSettlementPaymentDate) The date on which the cash settlement amount will be paid, subject to adjustment in accordance with any applicable business day convention. This component would not be present for a mandatory early termination provision where the cash settlement payment date is the mandatory early termination date.

Either

cashPriceMethod (exactly one occurrence; of the type CashPriceMethod) An ISDA defined cash settlement method used for the determination of the applicable cash settlement amount. The method is defined in the 2000 ISDA Definitions, Section 17.3. Cash Settlement Methods, paragraph (a).

Or

cashPriceAlternateMethod (exactly one occurrence; of the type CashPriceMethod) An ISDA defined cash settlement method used for the determination of the applicable cash settlement amount. The method is defined in the 2000 ISDA Definitions, Section 17.3. Cash Settlement Methods, paragraph (b).

Or

parYieldCurveAdjustedMethod (exactly one occurrence; of the type YieldCurveMethod) An ISDA defined cash settlement method used for the determination of the applicable cash settlement amount. The method is defined in the 2000 ISDA Definitions, Section 17.3. Cash Settlement Methods, paragraph (c).

Or

zeroCouponYieldAdjustedMethod (exactly one occurrence; of the type YieldCurveMethod) An ISDA defined cash settlement method used for the determination of the applicable cash settlement amount. The method is defined in the 2000 ISDA Definitions, Section 17.3. Cash Settlement Methods, paragraph (d).

Or

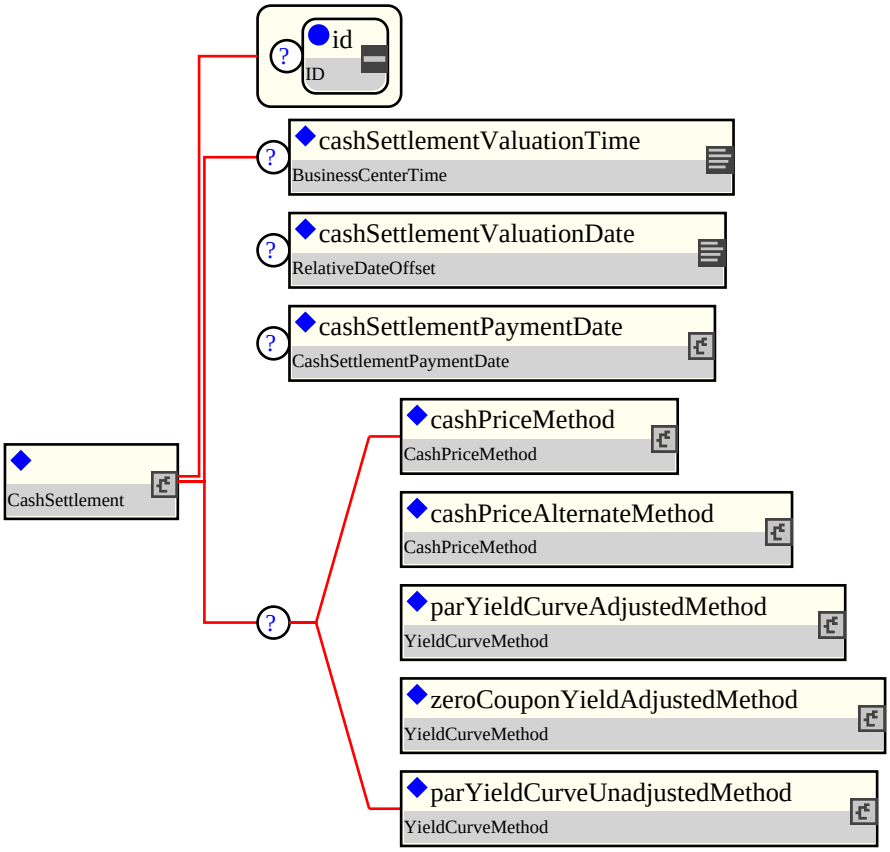
parYieldCurveUnadjustedMethod (exactly one occurrence; of the type YieldCurveMethod) An ISDA defined cash settlement method used for the determination of the applicable cash settlement amount. The method is defined in the 2000 ISDA Definitions, Section 17.3. Cash Settlement Methods, paragraph (e).

1.14.3 Used by:

- Complex type: MandatoryEarlyTermination
- Complex type: OptionalEarlyTermination
- Complex type: Swaption

1.14.4 Derived Types:

1.14.5 Figure:



1.14.6 Schema Fragment:

```
<xsd:complexType name="CashSettlement">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define the cash settlement terms for a product where
      cash settlement is applicable.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="cashSettlementValuationTime" type="BusinessCenterTime" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The time of the cash settlement valuation date when the cash
          settlement amount will be determined according to the cash
          settlement method if the parties have not otherwise been able
          to agree the cash settlement amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cashSettlementValuationDate" type="RelativeDateOffset" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the cash settlement amount will be
          determined according to the cash settlement method if the
          parties have not otherwise been able to agree the cash
          settlement amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cashSettlementPaymentDate" type="CashSettlementPaymentDate" minOccurs="0
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the cash settlement amount will be paid,
          subject to adjustment in accordance with any applicable
          business day convention. This component would not be present
          for a mandatory early termination provision where the cash
          settlement payment date is the mandatory early termination
          date.
```

```
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:choice minOccurs="0">
    <xsd:element name="cashPriceMethod" type="CashPriceMethod">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An ISDA defined cash settlement method used for the
          determination of the applicable cash settlement amount. The
          method is defined in the 2000 ISDA Definitions, Section
          17.3. Cash Settlement Methods, paragraph (a).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cashPriceAlternateMethod" type="CashPriceMethod">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An ISDA defined cash settlement method used for the
          determination of the applicable cash settlement amount. The
          method is defined in the 2000 ISDA Definitions, Section
          17.3. Cash Settlement Methods, paragraph (b).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="parYieldCurveAdjustedMethod" type="YieldCurveMethod">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An ISDA defined cash settlement method used for the
          determination of the applicable cash settlement amount. The
          method is defined in the 2000 ISDA Definitions, Section
          17.3. Cash Settlement Methods, paragraph (c).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="zeroCouponYieldAdjustedMethod" type="YieldCurveMethod">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An ISDA defined cash settlement method used for the
          determination of the applicable cash settlement amount. The
          method is defined in the 2000 ISDA Definitions, Section
          17.3. Cash Settlement Methods, paragraph (d).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="parYieldCurveUnadjustedMethod" type="YieldCurveMethod">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An ISDA defined cash settlement method used for the
          determination of the applicable cash settlement amount. The
          method is defined in the 2000 ISDA Definitions, Section
          17.3. Cash Settlement Methods, paragraph (e).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
</xsd:sequence>
<xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.15 CashSettlementPaymentDate

1.15.1 Description:

A type defining the cash settlement payment date(s) as either a set of explicit dates, together with applicable adjustments, or as a date relative to some other (anchor) date, or as any date in a range of contiguous business days.

1.15.2 Contents:

Either

adjustableDates (exactly one occurrence; of the type AdjustableDates) A series of dates that shall be subject to adjustment if they would otherwise fall on a day that is not a business day in the specified business centers, together with the convention for adjusting the date.

Or

relativeDate (exactly one occurrence; of the type RelativeDateOffset) A date specified as some offset to another date (the anchor date).

Or

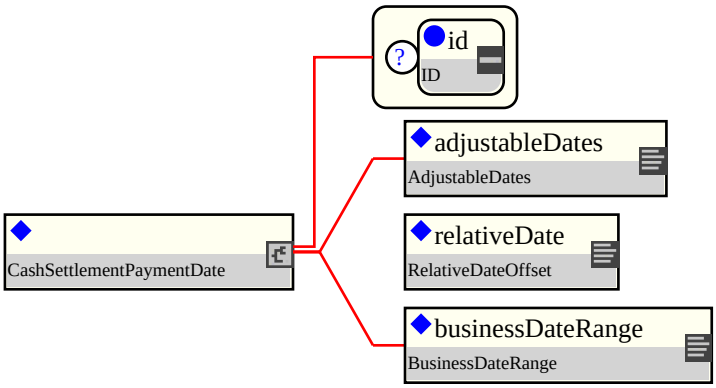
businessDateRange (exactly one occurrence; of the type BusinessDateRange) A range of contiguous business days.

1.15.3 Used by:

- Complex type: CashSettlement

1.15.4 Derived Types:

1.15.5 Figure:



1.15.6 Schema Fragment:

```
<xsd:complexType name="CashSettlementPaymentDate">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the cash settlement payment date(s) as either a
      set of explicit dates, together with applicable adjustments, or
      as a date relative to some other (anchor) date, or as any date in
      a range of contiguous business days.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="adjustableDates" type="AdjustableDates">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A series of dates that shall be subject to adjustment if they
```

```
          would otherwise fall on a day that is not a business day in
          the specified business centers, together with the convention
          for adjusting the date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="relativeDate" type="RelativeDateOffset">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A date specified as some offset to another date (the anchor
          date).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="businessDateRange" type="BusinessDateRange">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A range of contiguous business days.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.16 DateRelativeToPaymentDates

1.16.1 Description:

A type to provide the ability to point to multiple payment nodes in the document through the unbounded paymentDatesReference.

1.16.2 Contents:

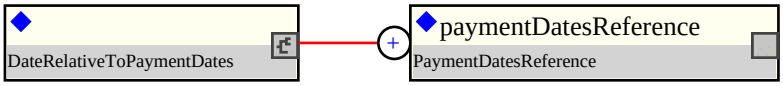
paymentDatesReference (one or more occurrences; of the type PaymentDatesReference) A set of href pointers to payment dates defined somewhere else in the document.

1.16.3 Used by:

- Complex type: FxFixingDate

1.16.4 Derived Types:

1.16.5 Figure:



1.16.6 Schema Fragment:

```
<xsd:complexType name="DateRelativeToPaymentDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to provide the ability to point to multiple payment nodes
      in the document through the unbounded paymentDatesReference.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="paymentDatesReference" type="PaymentDatesReference" maxOccurs="unbounded
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A set of href pointers to payment dates defined somewhere
          else in the document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.17 Discounting

1.17.1 Description:

A type defining discounting information. The 2000 ISDA definitions, section 8.4. discounting (related to the calculation of a discounted fixed amount or floating amount) apply. This type must only be included if discounting applies.

1.17.2 Contents:

discountingType (exactly one occurrence; of the type DiscountingTypeEnum) The discounting method that is applicable.

discountRate (zero or one occurrence; of the type xsd:decimal) A discount rate, expressed as a decimal, to be used in the calculation of a discounted amount. A discount amount of 5% would be represented as 0.05.

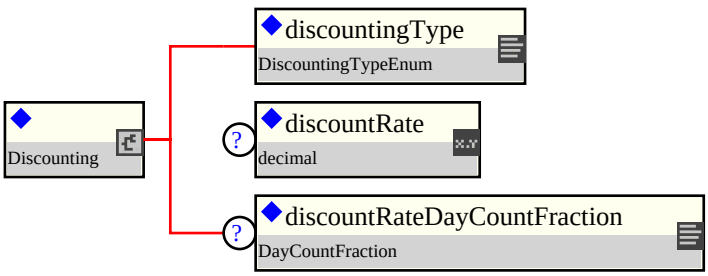
discountRateDayCountFraction (zero or one occurrence; of the type DayCountFraction) A discount day count fraction to be used in the calculation of a discounted amount.

1.17.3 Used by:

- Complex type: Calculation

1.17.4 Derived Types:

1.17.5 Figure:



1.17.6 Schema Fragment:

```
<xsd:complexType name="Discounting">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining discounting information. The 2000 ISDA
      definitions, section 8.4. discounting (related to the calculation
      of a discounted fixed amount or floating amount) apply. This type
      must only be included if discounting applies.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="discountingType" type="DiscountingTypeEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The discounting method that is applicable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="discountRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A discount rate, expressed as a decimal, to be used in the
          calculation of a discounted amount. A discount amount of 5%
          would be represented as 0.05.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="discountRateDayCountFraction" type="DayCountFraction" minOccurs="0">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A discount day count fraction to be used in the calculation
          of a discounted amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.18 EarlyTerminationEvent

1.18.1 Description:

A type to define the adjusted dates associated with an early termination provision.

1.18.2 Contents:

adjustedExerciseDate (exactly one occurrence; of the type xsd:date) The date on which option exercise takes place. This date should already be adjusted for any applicable business day convention.

adjustedEarlyTerminationDate (exactly one occurrence; of the type xsd:date) The early termination date that is applicable if an early termination provision is exercised. This date should already be adjusted for any applicable business day convention.

adjustedCashSettlementValuationDate (exactly one occurrence; of the type xsd:date) The date by which the cash settlement amount must be agreed. This date should already be adjusted for any applicable business day convention.

adjustedCashSettlementPaymentDate (exactly one occurrence; of the type xsd:date) The date on which the cash settlement amount is paid. This date should already be adjusted for any applicable business dat convention.

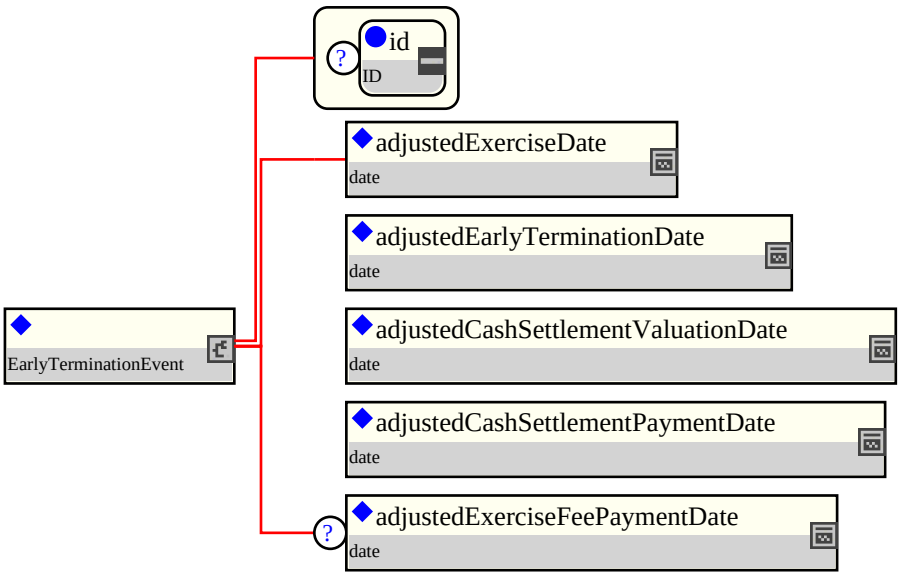
adjustedExerciseFeePaymentDate (zero or one occurrence; of the type xsd:date) The date on which the exercise fee amount is paid. This date should already be adjusted for any applicable business day convention.

1.18.3 Used by:

- Complex type: OptionalEarlyTerminationAdjustedDates

1.18.4 Derived Types:

1.18.5 Figure:



1.18.6 Schema Fragment:

```
<xsd:complexType name="EarlyTerminationEvent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define the adjusted dates associated with an early
```

```
      termination provision.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedExerciseDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which option exercise takes place. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedEarlyTerminationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The early termination date that is applicable if an early
          termination provision is exercised. This date should already
          be adjusted for any applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementValuationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date by which the cash settlement amount must be agreed.
          This date should already be adjusted for any applicable
          business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementPaymentDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the cash settlement amount is paid. This
          date should already be adjusted for any applicable business
          dat convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedExerciseFeePaymentDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the exercise fee amount is paid. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.19 EarlyTerminationProvision

1.19.1 Description:

A type defining an early termination provision for a swap. This early termination is at fair value, i.e. on termination the fair value of the product must be settled between the parties.

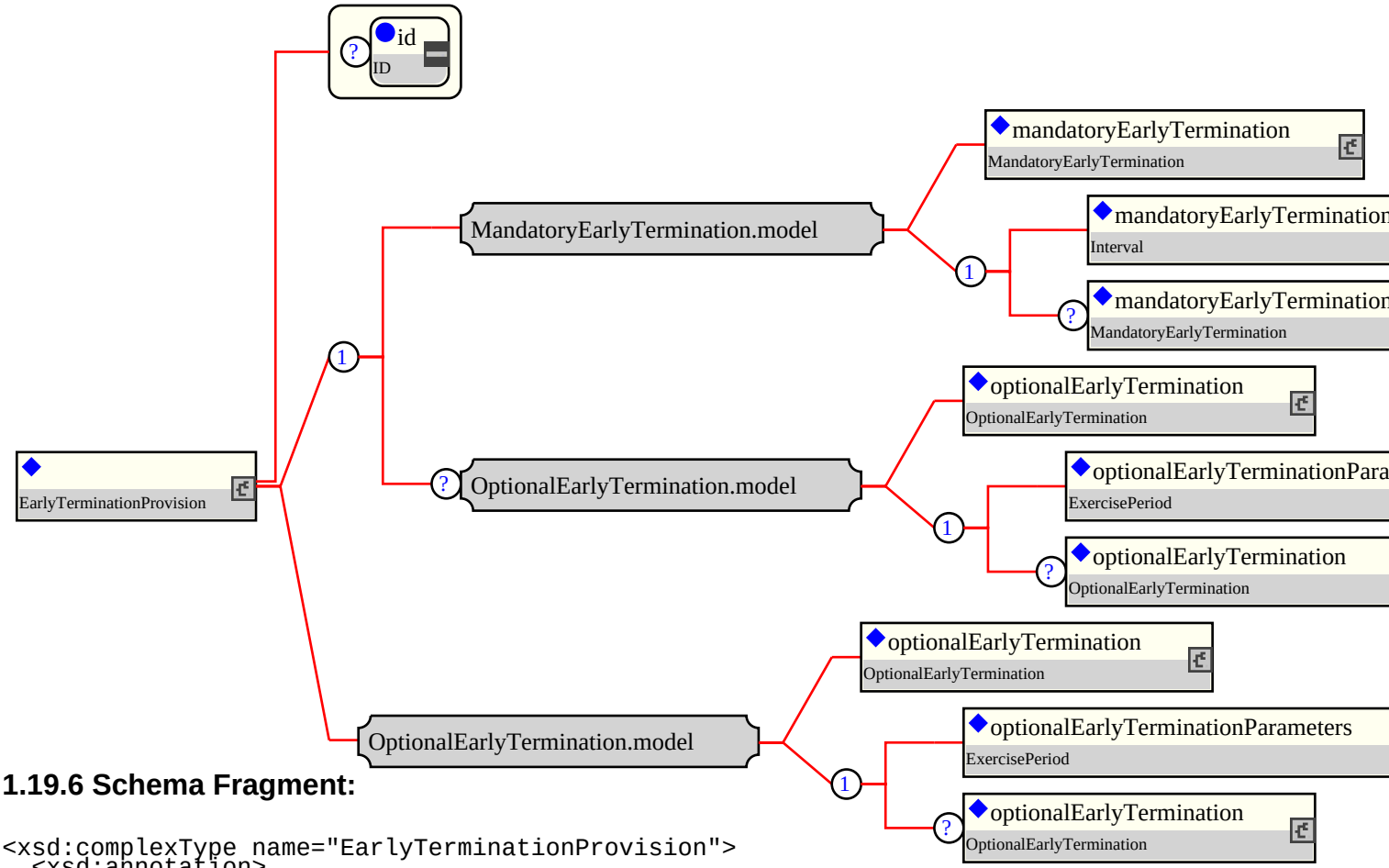
1.19.2 Contents:

1.19.3 Used by:

- Complex type: CapFloor
- Complex type: Swap

1.19.4 Derived Types:

1.19.5 Figure:



1.19.6 Schema Fragment:

```
<xsd:complexType name="EarlyTerminationProvision">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining an early termination provision for a swap. This
      early termination is at fair value, i.e. on termination the fair
      value of the product must be settled between the parties.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:sequence>
      <xsd:group ref="MandatoryEarlyTermination.model"/>
      <xsd:group ref="OptionalEarlyTermination.model" minOccurs="0"/>
```

```
    </xsd:sequence>
    <xsd:group ref="OptionalEarlyTermination.model"/>
  </xsd:choice>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.20 ExerciseEvent

1.20.1 Description:

A type defining the adjusted dates associated with a particular exercise event.

1.20.2 Contents:

adjustedExerciseDate (exactly one occurrence; of the type xsd:date) The date on which option exercise takes place. This date should already be adjusted for any applicable business day convention.

adjustedRelevantSwapEffectiveDate (exactly one occurrence; of the type xsd:date) The effective date of the underlying swap associated with a given exercise date. This date should already be adjusted for any applicable business day convention.

adjustedCashSettlementValuationDate (zero or one occurrence; of the type xsd:date) The date by which the cash settlement amount must be agreed. This date should already be adjusted for any applicable business day convention.

adjustedCashSettlementPaymentDate (zero or one occurrence; of the type xsd:date) The date on which the cash settlement amount is paid. This date should already be adjusted for any applicable business dat convention.

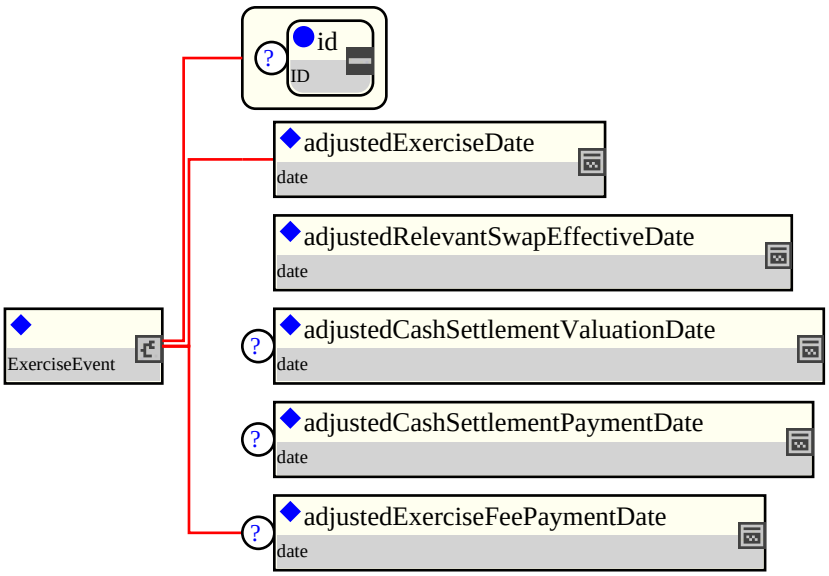
adjustedExerciseFeePaymentDate (zero or one occurrence; of the type xsd:date) The date on which the exercise fee amount is paid. This date should already be adjusted for any applicable business day convention.

1.20.3 Used by:

- Complex type: SwaptionAdjustedDates

1.20.4 Derived Types:

1.20.5 Figure:



1.20.6 Schema Fragment:

```
<xsd:complexType name="ExerciseEvent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted dates associated with a particular
```

```
      exercise event.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedExerciseDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which option exercise takes place. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedRelevantSwapEffectiveDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The effective date of the underlying swap associated with a
          given exercise date. This date should already be adjusted for
          any applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementValuationDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date by which the cash settlement amount must be agreed.
          This date should already be adjusted for any applicable
          business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementPaymentDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the cash settlement amount is paid. This
          date should already be adjusted for any applicable business
          dat convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedExerciseFeePaymentDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the exercise fee amount is paid. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.21 ExercisePeriod

1.21.1 Description:

This defines the time interval to the start of the exercise period, i.e. the earliest exercise date, and the frequency of subsequent exercise dates (if any).

1.21.2 Contents:

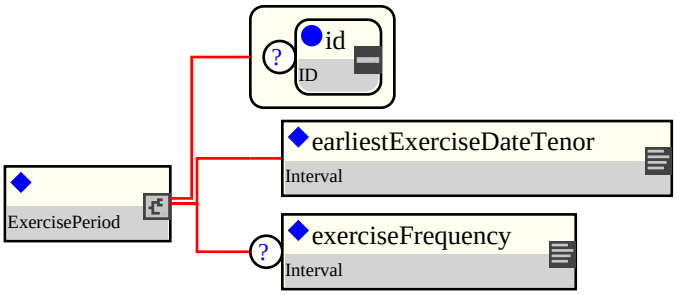
earliestExerciseDateTenor (exactly one occurrence; of the type Interval) The time interval to the first (and possibly only) exercise date in the exercise period.

exerciseFrequency (zero or one occurrence; of the type Interval) The frequency of subsequent exercise dates in the exercise period following the earliest exercise date. An interval of 1 day should be used to indicate an American style exercise period.

1.21.3 Used by:

1.21.4 Derived Types:

1.21.5 Figure:



1.21.6 Schema Fragment:

```
<xsd:complexType name="ExercisePeriod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      This defines the time interval to the start of the exercise
      period, i.e. the earliest exercise date, and the frequency of
      subsequent exercise dates (if any).
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="earliestExerciseDateTenor" type="Interval">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The time interval to the first (and possibly only) exercise
          date in the exercise period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="exerciseFrequency" type="Interval" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency of subsequent exercise dates in the exercise
          period following the earliest exercise date. An interval of 1
          day should be used to indicate an American style exercise
          period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.22 ExtendibleProvision

1.22.1 Description:

A type defining an option to extend an existing swap transaction on the specified exercise dates for a term ending on the specified new termination date.

1.22.2 Contents:

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

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

exercise (exactly one occurrence; of the type Exercise) An placeholder for the actual option exercise definitions.

exerciseNotice (zero or one occurrence; of the type ExerciseNotice) Definition of the party to whom notice of exercise should be given.

followUpConfirmation (exactly one occurrence; of the type xsd:boolean) A flag to indicate whether follow-up confirmation of exercise (written or electronic) is required following telephonic notice by the buyer to the seller or seller's agent.

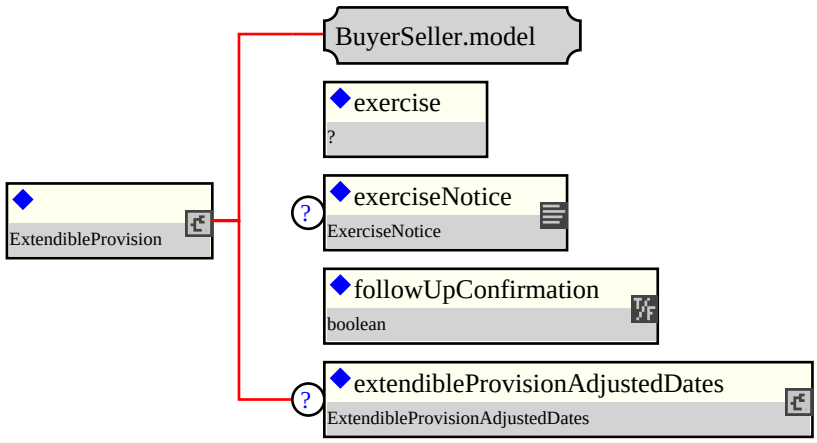
extendibleProvisionAdjustedDates (zero or one occurrence; of the type ExtendibleProvisionAdjustedDates) The adjusted dates associated with an extendible provision. These dates have been adjusted for any applicable business day convention.

1.22.3 Used by:

- Complex type: Swap

1.22.4 Derived Types:

1.22.5 Figure:



1.22.6 Schema Fragment:

```
<xsd:complexType name="ExtendibleProvision">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining an option to extend an existing swap transaction
```

```
      on the specified exercise dates for a term ending on the
      specified new termination date.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="BuyerSeller.model"/>
    <xsd:element ref="exercise"/>
    <xsd:element name="exerciseNotice" type="ExerciseNotice" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Definition of the party to whom notice of exercise should be
          given.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="followUpConfirmation" type="xsd:boolean">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A flag to indicate whether follow-up confirmation of exercise
          (written or electronic) is required following telephonic
          notice by the buyer to the seller or seller's agent.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="extendibleProvisionAdjustedDates" type="ExtendibleProvisionAdjustedDates
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with an extendible provision.
          These dates have been adjusted for any applicable business
          day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.23 ExtendibleProvisionAdjustedDates

1.23.1 Description:

A type defining the adjusted dates associated with a provision to extend a swap.

1.23.2 Contents:

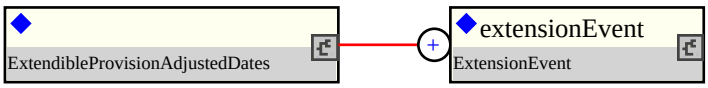
extensionEvent (one or more occurrences; of the type ExtensionEvent) The adjusted dates associated with a single extendible exercise date.

1.23.3 Used by:

- Complex type: ExtendibleProvision

1.23.4 Derived Types:

1.23.5 Figure:



1.23.6 Schema Fragment:

```
<xsd:complexType name="ExtendibleProvisionAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted dates associated with a provision to
      extend a swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="extensionEvent" type="ExtensionEvent" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with a single extendible
          exercise date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.24 ExtensionEvent

1.24.1 Description:

A type to define the adjusted dates associated with an individual extension event.

1.24.2 Contents:

adjustedExerciseDate (exactly one occurrence; of the type xsd:date) The date on which option exercise takes place. This date should already be adjusted for any applicable business day convention.

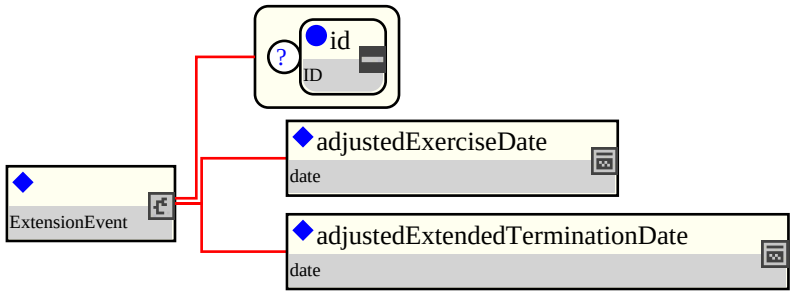
adjustedExtendedTerminationDate (exactly one occurrence; of the type xsd:date) The termination date if an extendible provision is exercised. This date should already be adjusted for any applicable business day convention.

1.24.3 Used by:

- Complex type: ExtendibleProvisionAdjustedDates

1.24.4 Derived Types:

1.24.5 Figure:



1.24.6 Schema Fragment:

```
<xsd:complexType name="ExtensionEvent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define the adjusted dates associated with an individual
      extension event.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedExerciseDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which option exercise takes place. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedExtendedTerminationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The termination date if an extendible provision is exercised.
          This date should already be adjusted for any applicable
          business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.25 FallbackReferencePrice

1.25.1 Description:

The method, prioritzed by the order it is listed in this element, to get a replacement rate for the disrupted settlement rate option.

1.25.2 Contents:

valuationPostponement (zero or one occurrence; of the type ValuationPostponement) Specifies how long to wait to get a quote from a settlement rate option upon a price source disruption

fallbackSettlementRateOption (zero or more occurrences; of the type SettlementRateOption) This settlement rate option will be used in its place.

fallbackSurveyValuationPostponenment (zero or one occurrence; of the type Empty) Request rate quotes from the market.

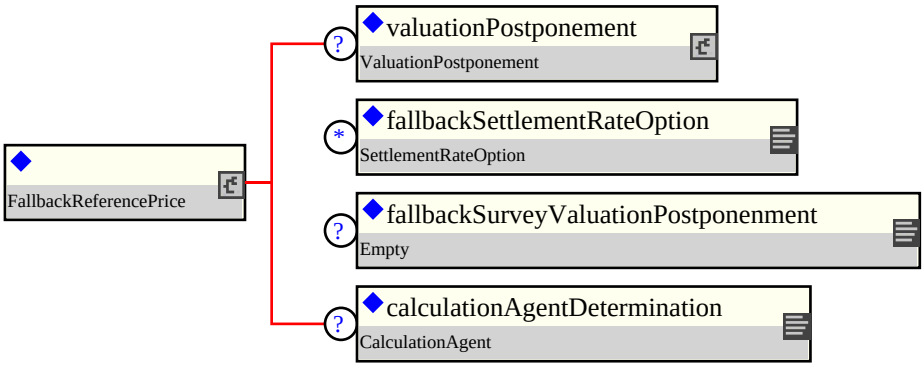
calculationAgentDetermination (zero or one occurrence; of the type CalculationAgent) The calculation agent will decide the rate.

1.25.3 Used by:

- Complex type: PriceSourceDisruption

1.25.4 Derived Types:

1.25.5 Figure:



1.25.6 Schema Fragment:

```
<xsd:complexType name="FallbackReferencePrice">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The method, prioritzed by the order it is listed in this element,
      to get a replacement rate for the disrupted settlement rate
      option.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="valuationPostponement" type="ValuationPostponement" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies how long to wait to get a quote from a settlement
          rate option upon a price source disruption
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fallbackSettlementRateOption" type="SettlementRateOption" minOccurs="0"
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
```

```
          This settlement rate option will be used in its place.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fallbackSurveyValuationPostponenment" type="Empty" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Request rate quotes from the market.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationAgentDetermination" type="CalculationAgent" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The calculation agent will decide the rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.26 FinalCalculationPeriodDateAdjustment

1.26.1 Description:

1.26.2 Contents:

relevantUnderlyingDateReference (exactly one occurrence; of the type RelevantUnderlyingDateReference)

swapStreamReference (exactly one occurrence; of the type InterestRateStreamReference)

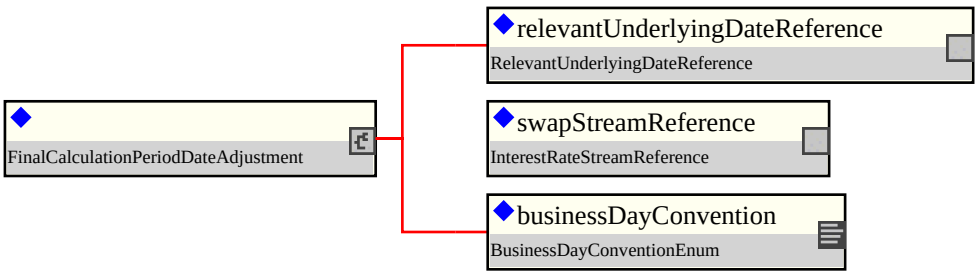
businessDayConvention (exactly one occurrence; of the type BusinessDayConventionEnum) Override business date convention. This takes precedence over leg level information.

1.26.3 Used by:

- Complex type: CancelableProvision

1.26.4 Derived Types:

1.26.5 Figure:



1.26.6 Schema Fragment:

```
<xsd:complexType name="FinalCalculationPeriodDateAdjustment">
  <xsd:annotation>
    <xsd:documentation>
      A type to define business date convention adjustment to final
      payment period per leg.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="relevantUnderlyingDateReference" type="RelevantUnderlyingDateReference">
      <xsd:annotation>
        <xsd:documentation>
          Reference to the unadjusted cancellation effective dates.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="swapStreamReference" type="InterestRateStreamReference">
      <xsd:annotation>
        <xsd:documentation>
          Reference to the leg, where date adjustments may apply.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="businessDayConvention" type="BusinessDayConventionEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Override business date convention. This takes precedence over
          leg level information.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.27 FloatingRateDefinition

1.27.1 Description:

A type defining parameters associated with a floating rate reset. This type forms part of the cashflows representation of a stream.

1.27.2 Contents:

calculatedRate (zero or one occurrence; of the type xsd:decimal) The final calculated rate for a calculation period after any required averaging of rates A calculated rate of 5% would be represented as 0.05.

rateObservation (zero or more occurrences; of the type RateObservation) The details of a particular rate observation, including the fixing date and observed rate. A list of rate observation elements may be ordered in the document by ascending adjusted fixing date. An FpML document containing an unordered list of rate observations is still regarded as a conformant document.

floatingRateMultiplier (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. 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.

capRate (zero or more occurrences; of the type Strike) The cap rate, 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.

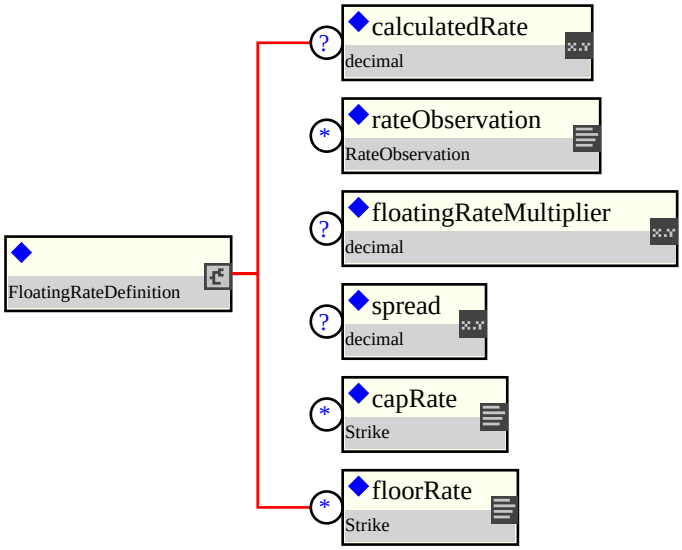
floorRate (zero or more occurrences; of the type Strike) The floor rate, if any, which applies to the floating rate for the calculation period. The floor rate (strike) is only required where the floating rate on a swap stream is floored at a certain strike level. The floor rate is assumed to be exclusive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

1.27.3 Used by:

- Complex type: CalculationPeriod

1.27.4 Derived Types:

1.27.5 Figure:



1.27.6 Schema Fragment:

```
<xsd:complexType name="FloatingRateDefinition">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining parameters associated with a floating rate reset.
      This type forms part of the cashflows representation of a stream.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculatedRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The final calculated rate for a calculation period after any
          required averaging of rates A calculated rate of 5% would be
          represented as 0.05.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="rateObservation" type="RateObservation" minOccurs="0" maxOccurs="unbound
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The details of a particular rate observation, including the
          fixing date and observed rate. A list of rate observation
          elements may be ordered in the document by ascending adjusted
          fixing date. An FpML document containing an unordered list of
          rate observations is still regarded as a conformant document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="floatingRateMultiplier" 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. 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="capRate" type="Strike" minOccurs="0" maxOccurs="unbounded">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The cap rate, 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="floorRate" type="Strike" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The floor rate, 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:complexType>
```

1.28 Fra

1.28.1 Description:

A type defining a Forward Rate Agreement (FRA) product.

1.28.2 Contents:

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

- The base type which all FpML products extend.

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

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

adjustedEffectiveDate (exactly one occurrence; of the type RequiredIdentifierDate) The start date of the calculation period. This date should already be adjusted for any applicable business day convention. This is also the date when the observed rate is applied, the reset date.

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

paymentDate (exactly one occurrence; of the type AdjustableDate) The payment date. This date is subject to adjustment in accordance with any applicable business day convention.

fixingDateOffset (exactly one occurrence; of the type RelativeDateOffset) Specifies the fixing date relative to the reset date in terms of a business days offset and an associated set of financial business centers. Normally these offset calculation rules will be those specified in the ISDA definition for the relevant floating rate index (ISDA's Floating Rate Option). However, non-standard offset calculation rules may apply for a trade if mutually agreed by the principal parties to the transaction. The href attribute on the dateRelativeTo element should reference the id attribute on the adjustedEffectiveDate element.

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

calculationPeriodNumberOfDays (exactly one occurrence; of the type xsd:positiveInteger) The number of days from the adjusted effective date to the adjusted termination date calculated in accordance with the applicable day count fraction.

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

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

floatingRateIndex (exactly one occurrence; of the type FloatingRateIndex)

indexTenor (one or more occurrences; of the type Interval) The ISDA Designated Maturity, i.e. the tenor of the floating rate.

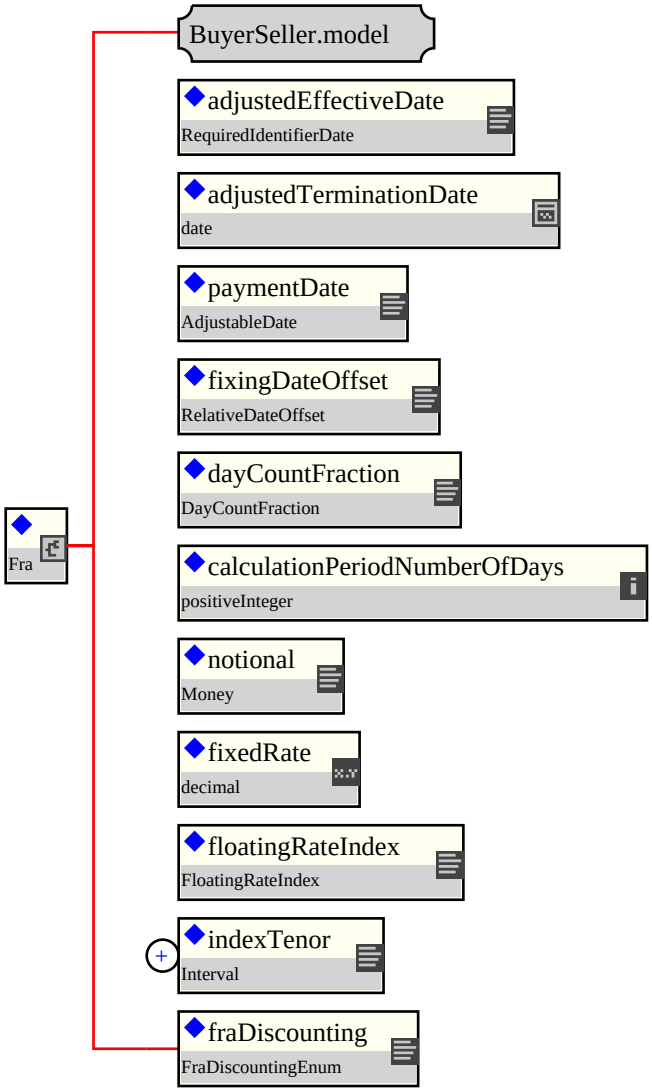
fraDiscounting (exactly one occurrence; of the type FraDiscountingEnum) Specifies whether discounting applies and, if so, what type.

1.28.3 Used by:

- Element: fra

1.28.4 Derived Types:

1.28.5 Figure:



1.28.6 Schema Fragment:

```
<xsd:complexType name="Fra">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining a Forward Rate Agreement (FRA) product.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:group ref="BuyerSeller.model"/>
        <xsd:element name="adjustedEffectiveDate" type="RequiredIdentifierDate">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The start date of the calculation period. This date
              should already be adjusted for any applicable business
              day convention. This is also the date when the observed
              rate is applied, the reset date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="adjustedTerminationDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The end date of the calculation period. This date should
              already be adjusted for any applicable business day
              convention.
```

```
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="paymentDate" type="AdjustableDate">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The payment date. This date is subject to adjustment in
            accordance with any applicable business day convention.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fixingDateOffset" type="RelativeDateOffset">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the fixing date relative to the reset date in
            terms of a business days offset and an associated set of
            financial business centers. Normally these offset
            calculation rules will be those specified in the ISDA
            definition for the relevant floating rate index (ISDA's
            Floating Rate Option). However, non-standard offset
            calculation rules may apply for a trade if mutually
            agreed by the principal parties to the transaction. The
            href attribute on the dateRelativeTo element should
            reference the id attribute on the adjustedEffectiveDate
            element.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="dayCountFraction" type="DayCountFraction">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The day count fraction.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="calculationPeriodNumberOfDays" type="xsd:positiveInteger">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The number of days from the adjusted effective date to
            the adjusted termination date calculated in accordance
            with the applicable day count fraction.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="notional" type="Money">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The notional amount.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fixedRate" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The calculation period fixed rate. A per annum rate,
            expressed as a decimal. A fixed rate of 5% would be
            represented as 0.05.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="floatingRateIndex" type="FloatingRateIndex"/>
      <xsd:element name="indexTenor" type="Interval" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The ISDA Designated Maturity, i.e. the tenor of the
            floating rate.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fraDiscounting" type="FraDiscountingEnum">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies whether discounting applies and, if so, what
            type.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
```

1.29 FxFixingDate

1.29.1 Description:

A type that is extending the Offset structure for providing the ability to specify an FX fixing date as an offset to dates specified somewhere else in the document.

1.29.2 Contents:

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

- A type defining an offset used in calculating a new date relative to a reference date. Currently, the only offsets defined are expected to be expressed as either calendar or business day offsets.

businessDayConvention (exactly one occurrence; of the type BusinessDayConventionEnum) The convention for adjusting a date if it would otherwise fall on a day that is not a business day.

Either

businessCentersReference (exactly one occurrence; of the type BusinessCentersReference) A pointer style reference to a set of financial business centers defined elsewhere in the document. This set of business centers is used to determine whether a particular day is a business day or not.

Or

businessCenters (exactly one occurrence; of the type BusinessCenters)

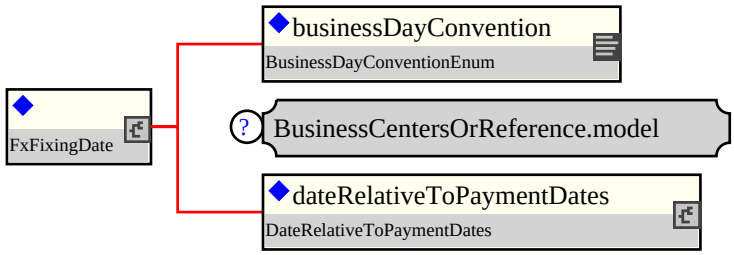
dateRelativeToPaymentDates (exactly one occurrence; of the type DateRelativeToPaymentDates) The payment date references on which settlements in non-deliverable currency are due and will then have to be converted according to the terms specified through the other parts of the nonDeliverableSettlement structure.

1.29.3 Used by:

- Complex type: NonDeliverableSettlement

1.29.4 Derived Types:

1.29.5 Figure:



1.29.6 Schema Fragment:

```
<xsd:complexType name="FxFixingDate">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is extending the Offset structure for providing the
      ability to specify an FX fixing date as an offset to dates
      specified somewhere else in the document.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Offset">
      <xsd:sequence>
        <xsd:element name="businessDayConvention" type="BusinessDayConventionEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
```

```
              The convention for adjusting a date if it would otherwise
              fall on a day that is not a business day.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:group ref="BusinessCentersOrReference.model" minOccurs="0"/>
        <xsd:element name="dateRelativeToPaymentDates" type="DateRelativeToPaymentDates">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The payment date references on which settlements in
              non-deliverable currency are due and will then have to be
              converted according to the terms specified through the
              other parts of the nonDeliverableSettlement structure.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.30 FxLinkedNotionalAmount

1.30.1 Description:

A type to describe the cashflow representation for fx linked notionals.

1.30.2 Contents:

resetDate (zero or one occurrence; of the type xsd:date)

adjustedFxSpotFixingDate (zero or one occurrence; of the type xsd:date) The date on which the fx spot rate is observed. This date should already be adjusted for any applicable business day convention.

observedFxSpotRate (zero or one occurrence; of the type xsd:decimal) The actual observed fx spot rate.

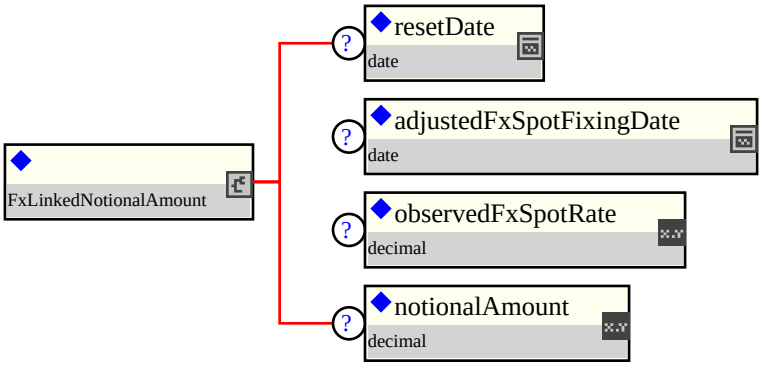
notionalAmount (zero or one occurrence; of the type xsd:decimal) The calculation period notional amount.

1.30.3 Used by:

- Complex type: CalculationPeriod

1.30.4 Derived Types:

1.30.5 Figure:



1.30.6 Schema Fragment:

```
<xsd:complexType name="FxLinkedNotionalAmount">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to describe the cashflow representation for fx linked
      notionals.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="resetDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="adjustedFxSpotFixingDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the fx spot rate is observed. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observedFxSpotRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The actual observed fx spot rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

```
    <xsd:element name="notionalAmount" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The calculation period notional amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.31 FxLinkedNotionalSchedule

1.31.1 Description:

A type to describe a notional schedule where each notional that applies to a calculation period is calculated with reference to a notional amount or notional amount schedule in a different currency by means of a spot currency exchange rate which is normally observed at the beginning of each period.

1.31.2 Contents:

constantNotionalScheduleReference (exactly one occurrence; of the type ScheduleReference) A pointer style reference to the associated constant notional schedule defined elsewhere in the document which contains the currency amounts which will be converted into the varying notional currency amounts using the spot currency exchange rate.

initialValue (zero or one occurrence; of the type xsd:decimal) The initial currency amount for the varying notional.

varyingNotionalCurrency (exactly one occurrence; of the type Currency) The currency of the varying notional amount, i.e. the notional amount being determined periodically based on observation of a spot currency exchange rate.

varyingNotionalFixingDates (exactly one occurrence; of the type RelativeDateOffset) The dates on which spot currency exchange rates are observed for purposes of determining the varying notional currency amount that will apply to a calculation period.

fxSpotRateSource (exactly one occurrence; of the type FxSpotRateSource) The information source and time at which the spot currency exchange rate will be observed.

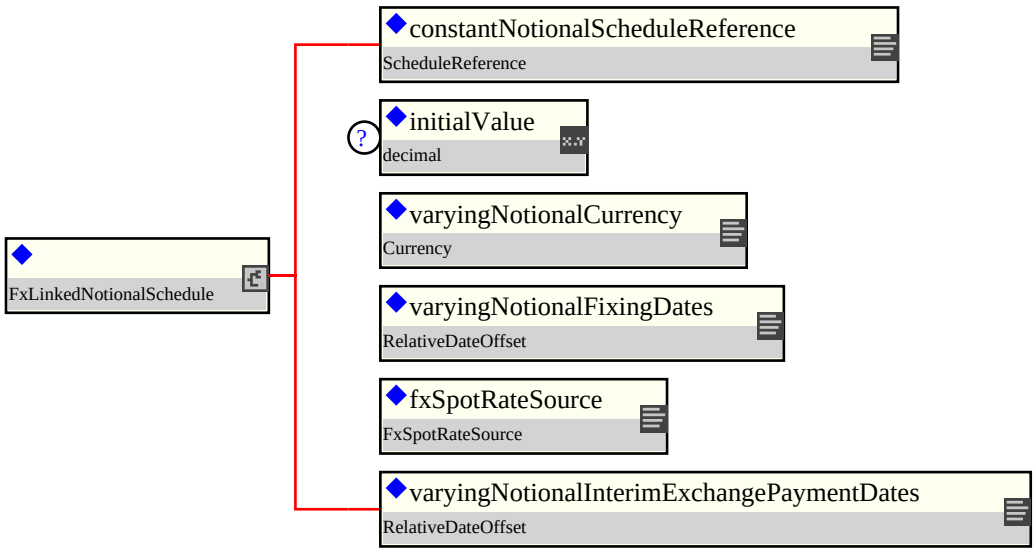
varyingNotionalInterimExchangePaymentDates (exactly one occurrence; of the type RelativeDateOffset) The dates on which interim exchanges of notional are paid. Interim exchanges will arise as a result of changes in the spot currency exchange amount or changes in the constant notional schedule (e.g. amortization).

1.31.3 Used by:

- Complex type: Calculation

1.31.4 Derived Types:

1.31.5 Figure:



1.31.6 Schema Fragment:

```
<xsd:complexType name="FxLinkedNotionalSchedule">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to describe a notional schedule where each notional that
      applies to a calculation period is calculated with reference to a
      notional amount or notional amount schedule in a different
      currency by means of a spot currency exchange rate which is
      normally observed at the beginning of each period.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="constantNotionalScheduleReference" type="ScheduleReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A pointer style reference to the associated constant notional
          schedule defined elsewhere in the document which contains the
          currency amounts which will be converted into the varying
          notional currency amounts using the spot currency exchange
          rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="initialValue" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The initial currency amount for the varying notional.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="varyingNotionalCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency of the varying notional amount, i.e. the
          notional amount being determined periodically based on
          observation of a spot currency exchange rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="varyingNotionalFixingDates" type="RelativeDateOffset">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The dates on which spot currency exchange rates are observed
          for purposes of determining the varying notional currency
          amount that will apply to a calculation period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fxSpotRateSource" type="FxSpotRateSource">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The information source and time at which the spot currency
          exchange rate will be observed.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="varyingNotionalInterimExchangePaymentDates" type="RelativeDateOffset">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The dates on which interim exchanges of notional are paid.
          Interim exchanges will arise as a result of changes in the
          spot currency exchange amount or changes in the constant
          notional schedule (e.g. amortization).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.32 InflationRateCalculation

1.32.1 Description:

A type defining the components specifiying an Inflation Rate Calculation

1.32.2 Contents:

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

- A type defining the floating rate and definitions relating to the calculation of floating rate amounts.

inflationLag (exactly one occurrence; of the type Offset) an offsetting period from the payment date which determines the reference period for which the inflation index is onserved.

indexSource (exactly one occurrence; of the type RateSourcePage) The reference source such as Reuters or Bloomberg.

mainPublication (zero or one occurrence; of the type MainPublication) The current main publication source such as relevant web site or a government body.

interpolationMethod (exactly one occurrence; of the type InterpolationMethod) The method used when calculating the Inflation Index Level from multiple points - the most common is Linear.

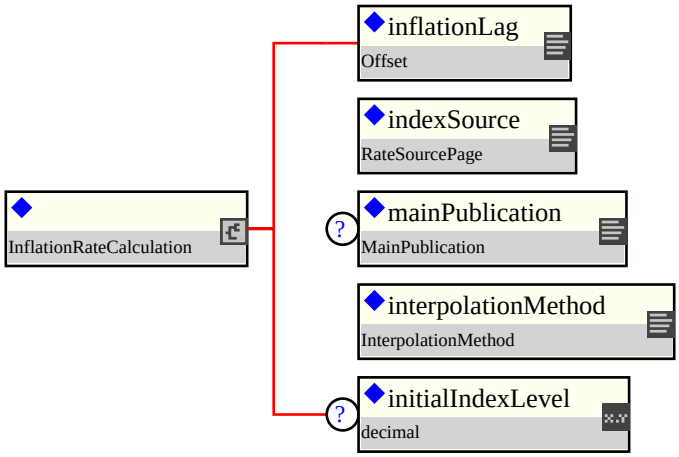
initialIndexLevel (zero or one occurrence; of the type xsd:decimal) initial known index level for the first calculation period.

1.32.3 Used by:

- Element: inflationRateCalculation

1.32.4 Derived Types:

1.32.5 Figure:



1.32.6 Schema Fragment:

```
<xsd:complexType name="InflationRateCalculation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the components specifiying an Inflation Rate
      Calculation
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="FloatingRateCalculation">
```

```
      <xsd:sequence>
        <xsd:element name="inflationLag" type="Offset">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              an offsetting period from the payment date which
              determines the reference period for which the inflation
              index is onserved.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="indexSource" type="RateSourcePage">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The reference source such as Reuters or Bloomberg.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="mainPublication" type="MainPublication" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The current main publication source such as relevant web
              site or a government body.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="interpolationMethod" type="InterpolationMethod">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The method used when calculating the Inflation Index
              Level from multiple points - the most common is Linear.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="initialIndexLevel" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              initial known index level for the first calculation
              period.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.33 InterestRateStream

1.33.1 Description:

A type defining the components specifiying an interest rate stream, including both a parametric and cashflow representation for the stream of payments.

1.33.2 Contents:

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

- A supertype of leg. All swap legs extend this type.

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.

calculationPeriodDates (exactly one occurrence; of the type CalculationPeriodDates) The calculation periods dates schedule.

paymentDates (exactly one occurrence; of the type PaymentDates) The payment dates schedule.

resetDates (zero or one occurrence; of the type ResetDates) The reset dates schedule. The reset dates schedule only applies for a floating rate stream.

calculationPeriodAmount (exactly one occurrence; of the type CalculationPeriodAmount) The calculation period amount parameters.

stubCalculationPeriodAmount (zero or one occurrence; of the type StubCalculationPeriodAmount) The stub calculation period amount parameters. This element must only be included if there is an initial or final stub calculation period. Even then, it must only be included if either the stub references a different floating rate tenor to the regular calculation periods, or if the stub is calculated as a linear interpolation of two different floating rate tenors, or if a specific stub rate or stub amount has been negotiated.

principalExchanges (zero or one occurrence; of the type PrincipalExchanges) The true/false flags indicating whether initial, intermediate or final exchanges of principal should occur.

cashflows (zero or one occurrence; of the type Cashflows) The cashflows representation of the swap stream.

settlementProvision (zero or one occurrence; of the type SettlementProvision) A provision that allows the specification of settlement terms, occuring when the settlement currency is different to the notional currency of the trade.

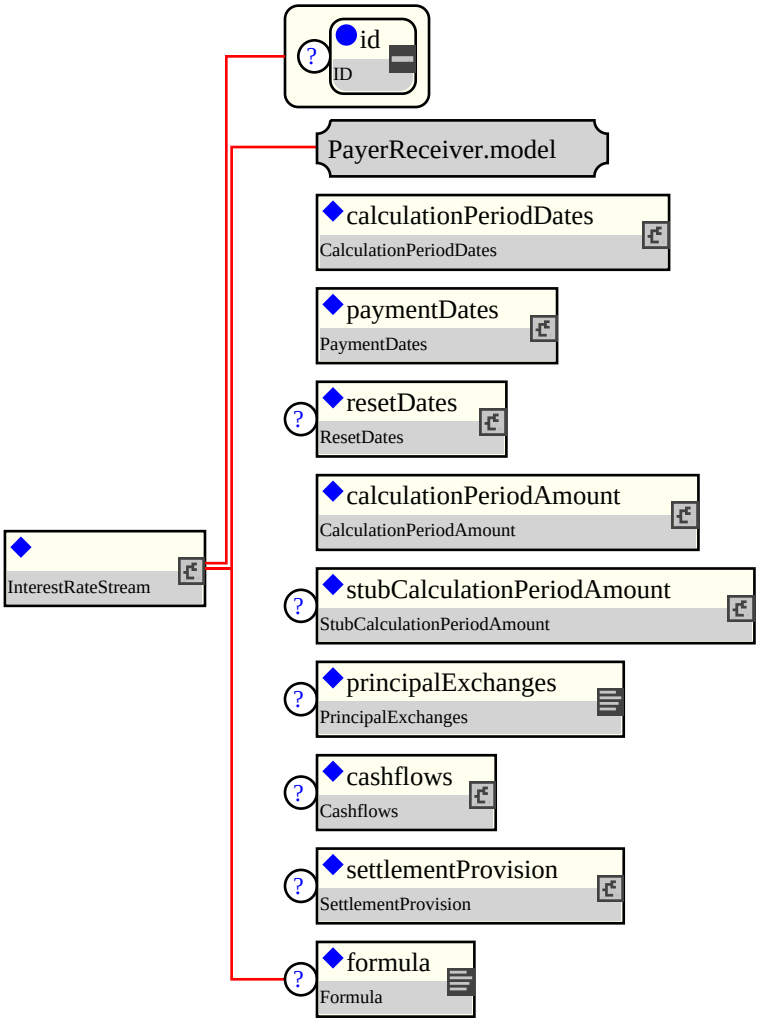
formula (zero or one occurrence; of the type Formula) An interest rate derivative formula.

1.33.3 Used by:

- Complex type: CapFloor
- Complex type: Swap

1.33.4 Derived Types:

1.33.5 Figure:



1.33.6 Schema Fragment:

```
<xsd:complexType name="InterestRateStream">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the components specifiying an interest rate
      stream, including both a parametric and cashflow representation
      for the stream of payments.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Leg">
      <xsd:sequence>
        <xsd:group ref="PayerReceiver.model"/>
        <xsd:element name="calculationPeriodDates" type="CalculationPeriodDates">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The calculation periods dates schedule.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentDates" type="PaymentDates">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The payment dates schedule.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="resetDates" type="ResetDates" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
```

```
            The reset dates schedule. The reset dates schedule only
            applies for a floating rate stream.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="calculationPeriodAmount" type="CalculationPeriodAmount">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The calculation period amount parameters.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="stubCalculationPeriodAmount" type="StubCalculationPeriodAmount" minO
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The stub calculation period amount parameters. This
            element must only be included if there is an initial or
            final stub calculation period. Even then, it must only be
            included if either the stub references a different
            floating rate tenor to the regular calculation periods,
            or if the stub is calculated as a linear interpolation of
            two different floating rate tenors, or if a specific stub
            rate or stub amount has been negotiated.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="principalExchanges" type="PrincipalExchanges" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The true/false flags indicating whether initial,
            intermediate or final exchanges of principal should
            occur.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="cashflows" type="Cashflows" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The cashflows representation of the swap stream.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="settlementProvision" type="SettlementProvision" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A provision that allows the specification of settlement
            terms, occuring when the settlement currency is different
            to the notional currency of the trade.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="formula" type="Formula" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            An interest rate derivative formula.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
    <xsd:attribute name="id" type="xsd:ID"/>
  </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
```

1.34 InterestRateStreamReference

1.34.1 Description:

1.34.2 Contents:

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

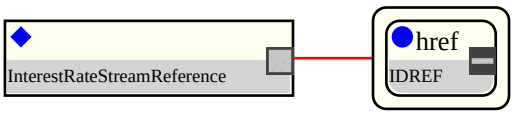
- The abstract base class for all types which define intra-document pointers.

1.34.3 Used by:

- Complex type: FinalCalculationPeriodDateAdjustment

1.34.4 Derived Types:

1.34.5 Figure:



1.34.6 Schema Fragment:

```
<xsd:complexType name="InterestRateStreamReference">
  <xsd:annotation>
    <xsd:documentation>
      Reference to an InterestRateStream component.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference">
      <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="InterestRateS
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.35 MandatoryEarlyTermination

1.35.1 Description:

A type to define an early termination provision for which exercise is mandatory.

1.35.2 Contents:

mandatoryEarlyTerminationDate (exactly one occurrence; of the type AdjustableDate) The early termination date associated with a mandatory early termination of a swap.

calculationAgent (exactly one occurrence; of the type CalculationAgent) The ISDA Calculation Agent responsible for performing duties associated with an optional early termination.

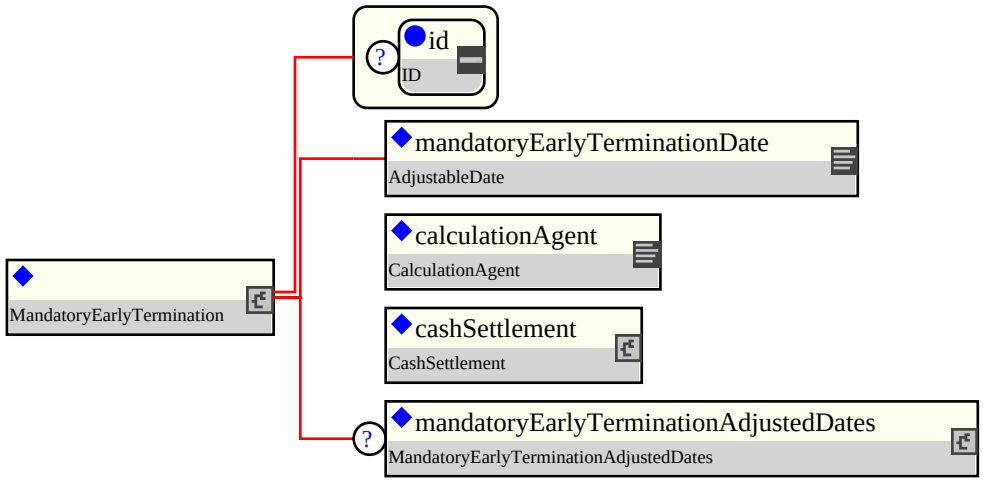
cashSettlement (exactly one occurrence; of the type CashSettlement) If specified, this means that cash settlement is applicable to the transaction and defines the parameters associated with the cash settlement prodcedure. If not specified, then physical settlement is applicable.

mandatoryEarlyTerminationAdjustedDates (zero or one occurrence; of the type MandatoryEarlyTerminationAdjustedDates) The adjusted dates associated with a mandatory early termination provision. These dates have been adjusted for any applicable business day convention.

1.35.3 Used by:

1.35.4 Derived Types:

1.35.5 Figure:



1.35.6 Schema Fragment:

```
<xsd:complexType name="MandatoryEarlyTermination">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define an early termination provision for which
      exercise is mandatory.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="mandatoryEarlyTerminationDate" type="AdjustableDate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The early termination date associated with a mandatory early
          termination of a swap.
        </xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:element>
    <xsd:element name="calculationAgent" type="CalculationAgent">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The ISDA Calculation Agent responsible for performing duties
          associated with an optional early termination.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cashSettlement" type="CashSettlement">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          If specified, this means that cash settlement is applicable
          to the transaction and defines the parameters associated with
          the cash settlement prodcedure. If not specified, then
          physical settlement is applicable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="mandatoryEarlyTerminationAdjustedDates" type="MandatoryEarlyTerminationA
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with a mandatory early
          termination provision. These dates have been adjusted for any
          applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.36 MandatoryEarlyTerminationAdjustedDates

1.36.1 Description:

A type defining the adjusted dates associated with a mandatory early termination provision.

1.36.2 Contents:

adjustedEarlyTerminationDate (exactly one occurrence; of the type xsd:date) The early termination date that is applicable if an early termination provision is exercised. This date should already be adjusted for any applicable business day convention.

adjustedCashSettlementValuationDate (exactly one occurrence; of the type xsd:date) The date by which the cash settlement amount must be agreed. This date should already be adjusted for any applicable business day convention.

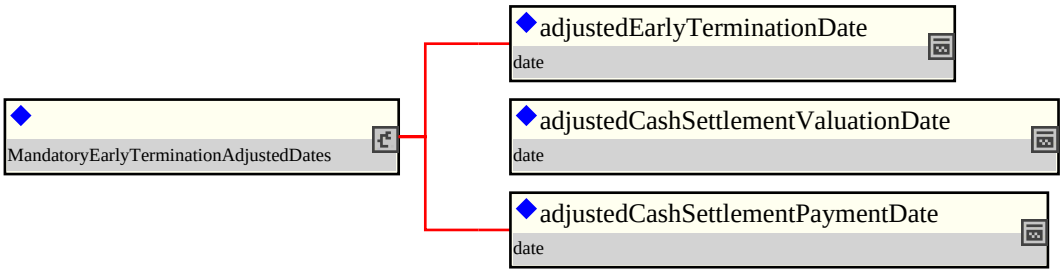
adjustedCashSettlementPaymentDate (exactly one occurrence; of the type xsd:date) The date on which the cash settlement amount is paid. This date should already be adjusted for any applicable business dat convention.

1.36.3 Used by:

- Complex type: MandatoryEarlyTermination

1.36.4 Derived Types:

1.36.5 Figure:



1.36.6 Schema Fragment:

```
<xsd:complexType name="MandatoryEarlyTerminationAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted dates associated with a mandatory
      early termination provision.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedEarlyTerminationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The early termination date that is applicable if an early
          termination provision is exercised. This date should already
          be adjusted for any applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementValuationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date by which the cash settlement amount must be agreed.
          This date should already be adjusted for any applicable
          business day convention.
        </xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:element>
    <xsd:element name="adjustedCashSettlementPaymentDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the cash settlement amount is paid. This
          date should already be adjusted for any applicable business
          dat convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.37 NonDeliverableSettlement

1.37.1 Description:

A type defining the parameters used when the reference currency of the swapStream is non-deliverable.

1.37.2 Contents:

referenceCurrency (exactly one occurrence; of the type Currency) The currency in which the swap stream is denominated in.

fxFixingDate (exactly one occurrence; of the type FxFixingDate) The fixing date(s) on which the currency rate will be determined for the purpose of specifying the amount in deliverable currency.

settlementRateOption (exactly one occurrence; of the type SettlementRateOption) The rate source for the conversion to the settlement currency. This source is specified through a scheme that reflects the terms of the Annex A to the 1998 FX and Currency Option Definitions.

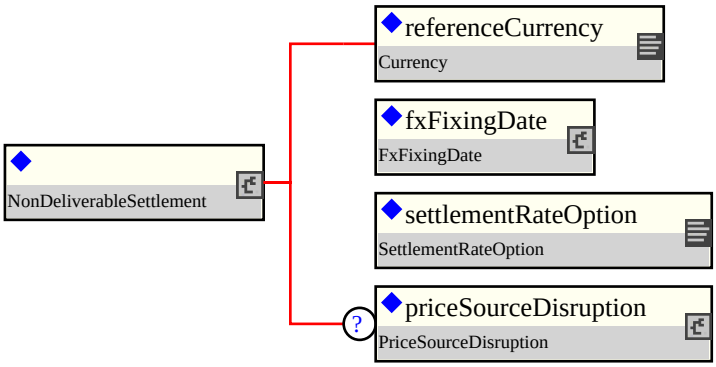
priceSourceDisruption (zero or one occurrence; of the type PriceSourceDisruption) A type defining the parameters to get a new quote when a settlement rate option is disrupted.

1.37.3 Used by:

- Complex type: SettlementProvision

1.37.4 Derived Types:

1.37.5 Figure:



1.37.6 Schema Fragment:

```
<xsd:complexType name="NonDeliverableSettlement">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used when the reference currency
      of the swapStream is non-deliverable.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="referenceCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which the swap stream is denominated in.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fxFixingDate" type="FxFixingDate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The fixing date(s) on which the currency rate will be
          determined for the purpose of specifying the amount in
```

```
          deliverable currency.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="settlementRateOption" type="SettlementRateOption">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The rate source for the conversion to the settlement
          currency. This source is specified through a scheme that
          reflects the terms of the Annex A to the 1998 FX and Currency
          Option Definitions.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="priceSourceDisruption" type="PriceSourceDisruption" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A type defining the parameters to get a new quote when a
          settlement rate option is disrupted.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.38 Notional

1.38.1 Description:

An type defining the notional amount or notional amount schedule associated with a swap stream. The notional schedule will be captured explicitly, specifying the dates that the notional changes and the outstanding notional amount that applies from that date. A parametric representation of the rules defining the notional step schedule can optionally be included.

1.38.2 Contents:

notionalStepSchedule (exactly one occurrence; of the type AmountSchedule) The notional amount or notional amount schedule expressed as explicit outstanding notional amounts and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments.

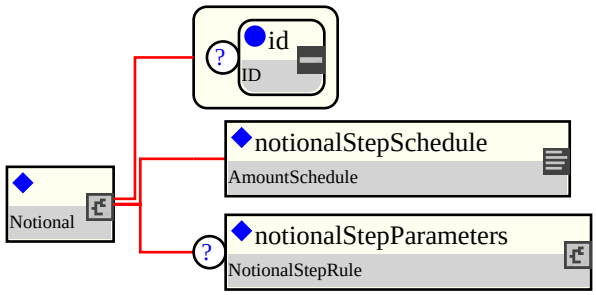
notionalStepParameters (zero or one occurrence; of the type NotionalStepRule) A parametric representation of the notional step schedule, i.e. parameters used to generate the notional schedule.

1.38.3 Used by:

- Complex type: Calculation

1.38.4 Derived Types:

1.38.5 Figure:



1.38.6 Schema Fragment:

```
<xsd:complexType name="Notional">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An type defining the notional amount or notional amount schedule
      associated with a swap stream. The notional schedule will be
      captured explicitly, specifying the dates that the notional
      changes and the outstanding notional amount that applies from
      that date. A parametric representation of the rules defining the
      notional step schedule can optionally be included.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="notionalStepSchedule" type="AmountSchedule">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The notional amount or notional amount schedule expressed as
          explicit outstanding notional amounts 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 name="notionalStepParameters" type="NotionalStepRule" minOccurs="0">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">
          A parametric representation of the notional step schedule,
          i.e. parameters used to generate the notional schedule.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.39 NotionalStepRule

1.39.1 Description:

A type defining a parametric representation of the notional step schedule, i.e. parameters used to generate the notional balance on each step date. The step change in notional can be expressed in terms of either a fixed amount or as a percentage of either the initial notional or previous notional amount. This parametric representation is intended to cover the more common amortizing/accreting.

1.39.2 Contents:

calculationPeriodDatesReference (exactly one occurrence; of the type CalculationPeriodDatesReference) A pointer style reference to the associated calculation period dates component defined elsewhere in the document.

stepFrequency (exactly one occurrence; of the type Interval) The frequency at which the step changes occur. This frequency must be a multiple of the stream calculation period frequency.

firstNotionalStepDate (exactly one occurrence; of the type xsd:date) Effective date of the first change in notional (i.e. a calculation period start date).

lastNotionalStepDate (exactly one occurrence; of the type xsd:date) Effective date of the last change in notional (i.e. a calculation period start date).

Either

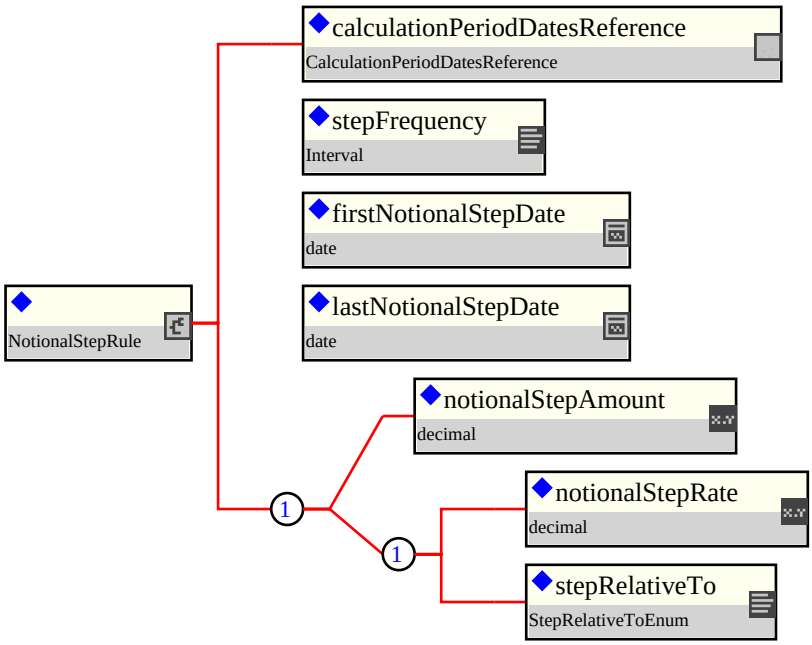
notionalStepAmount (exactly one occurrence; of the type xsd:decimal) The explicit amount that the notional changes on each step date. This can be a positive or negative amount.

1.39.3 Used by:

- Complex type: Notional

1.39.4 Derived Types:

1.39.5 Figure:



1.39.6 Schema Fragment:

```
<xsd:complexType name="NotionalStepRule">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining a parametric representation of the notional step
      schedule, i.e. parameters used to generate the notional balance
      on each step date. The step change in notional can be expressed
      in terms of either a fixed amount or as a percentage of either
      the initial notional or previous notional amount. This parametric
      representation is intended to cover the more common
      amortizing/accreting.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculationPeriodDatesReference" type="CalculationPeriodDatesReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A pointer style reference to the associated calculation
          period dates component defined elsewhere in the document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="stepFrequency" type="Interval">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency at which the step changes occur. This frequency
          must be a multiple of the stream calculation period
          frequency.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="firstNotionalStepDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Effective date of the first change in notional (i.e. a
          calculation period start date).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="lastNotionalStepDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Effective date of the last change in notional (i.e. a
          calculation period start date).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:choice>
      <xsd:element name="notionalStepAmount" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The explicit amount that the notional changes on each step
            date. This can be a positive or negative amount.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:sequence>
        <xsd:element name="notionalStepRate" type="xsd:decimal">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The percentage amount by which the notional changes on
              each step date. The percentage is either a percentage
              applied to the initial notional amount or the previous
              outstanding notional, depending on the value of the
              element stepRelativeTo. The percentage can be either
              positive or negative. A percentage of 5% would be
              represented as 0.05.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="stepRelativeTo" type="StepRelativeToEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies whether the notionalStepRate should be applied
              to the initial notional or the previous notional in order
              to calculate the notional step change amount.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:choice>
  </xsd:sequence>
</xsd:complexType>
```

1.40 OptionalEarlyTermination

1.40.1 Description:

A type defining an early termination provision where either or both parties have the right to exercise.

1.40.2 Contents:

singlePartyOption (zero or one occurrence; of the type SinglePartyOption) If optional early termination is not available to both parties then this component specifies the buyer and seller of the option.

exercise (exactly one occurrence; of the type Exercise) An placeholder for the actual option exercise definitions.

exerciseNotice (zero or more occurrences; of the type ExerciseNotice) Definition of the party to whom notice of exercise should be given.

followUpConfirmation (zero or one occurrence; of the type xsd:boolean) A flag to indicate whether follow-up confirmation of exercise (written or electronic) is required following telephonic notice by the buyer to the seller or seller's agent.

calculationAgent (exactly one occurrence; of the type CalculationAgent) The ISDA Calculation Agent responsible for performing duties associated with an optional early termination.

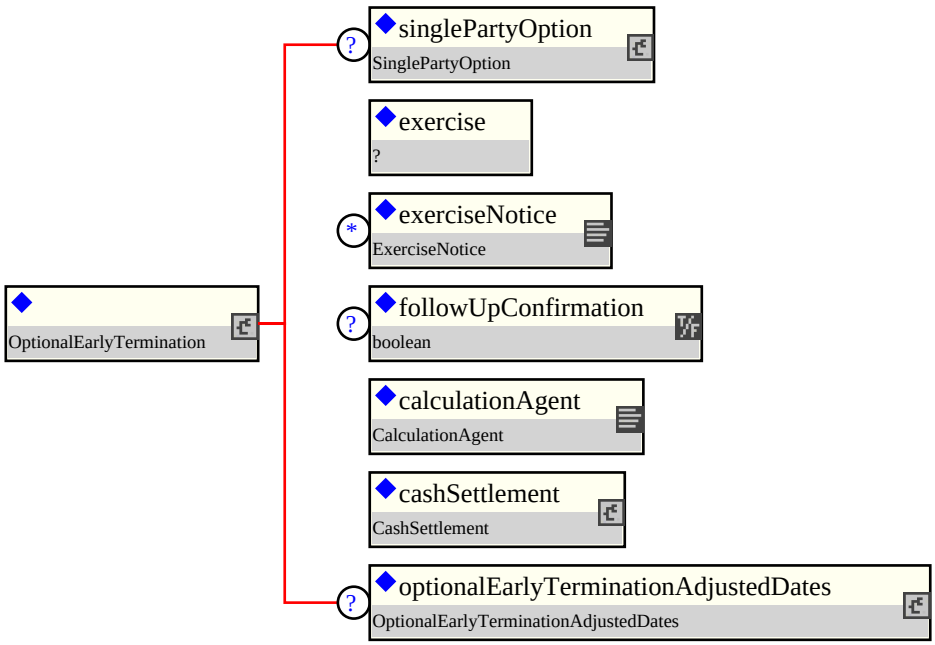
cashSettlement (exactly one occurrence; of the type CashSettlement) If specified, this means that cash settlement is applicable to the transaction and defines the parameters associated with the cash settlement prodcedure. If not specified, then physical settlement is applicable.

optionalEarlyTerminationAdjustedDates (zero or one occurrence; of the type OptionalEarlyTerminationAdjustedDates) An early termination provision to terminate the trade at fair value where one or both parties have the right to decide on termination.

1.40.3 Used by:

1.40.4 Derived Types:

1.40.5 Figure:



1.40.6 Schema Fragment:

```
<xsd:complexType name="OptionalEarlyTermination">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining an early termination provision where either or
      both parties have the right to exercise.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="singlePartyOption" type="SinglePartyOption" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          If optional early termination is not available to both
          parties then this component specifies the buyer and seller of
          the option.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element ref="exercise"/>
    <xsd:element name="exerciseNotice" type="ExerciseNotice" minOccurs="0" maxOccurs="unbounded
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Definition of the party to whom notice of exercise should be
          given.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="followUpConfirmation" type="xsd:boolean" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A flag to indicate whether follow-up confirmation of exercise
          (written or electronic) is required following telephonic
          notice by the buyer to the seller or seller's agent.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationAgent" type="CalculationAgent">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The ISDA Calculation Agent responsible for performing duties
          associated with an optional early termination.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cashSettlement" type="CashSettlement">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          If specified, this means that cash settlement is applicable
          to the transaction and defines the parameters associated with
          the cash settlement prodcedure. If not specified, then
          physical settlement is applicable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="optionalEarlyTerminationAdjustedDates" type="OptionalEarlyTerminationAdj
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An early termination provision to terminate the trade at fair
          value where one or both parties have the right to decide on
          termination.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.41 OptionalEarlyTerminationAdjustedDates

1.41.1 Description:

A type defining the adjusted dates associated with an optional early termination provision.

1.41.2 Contents:

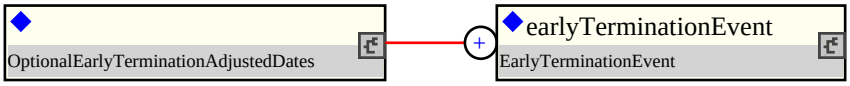
earlyTerminationEvent (one or more occurrences; of the type EarlyTerminationEvent) The adjusted dates associated with an individual earley termination date.

1.41.3 Used by:

- Complex type: OptionalEarlyTermination

1.41.4 Derived Types:

1.41.5 Figure:



1.41.6 Schema Fragment:

```
<xsd:complexType name="OptionalEarlyTerminationAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted dates associated with an optional
      early termination provision.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="earlyTerminationEvent" type="EarlyTerminationEvent" maxOccurs="unbounded
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with an individual earley
          termination date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.42 PaymentCalculationPeriod

1.42.1 Description:

A type defining the adjusted payment date and associated calculation period parameters required to calculate the actual or projected payment amount. This type forms part of the cashflow representation of a swap stream.

1.42.2 Contents:

unadjustedPaymentDate (zero or one occurrence; of the type xsd:date)

adjustedPaymentDate (zero or one occurrence; of the type xsd:date) The adjusted payment date. This date should already be adjusted for any applicable business day convention. This component is not intended for use in trade confirmation but may be specified to allow the fee structure to also serve as a cashflow type component (all dates the Cashflows type are adjusted payment dates).

Either

calculationPeriod (one or more occurrences; of the type CalculationPeriod) The parameters used in the calculation of a fixed or floating rate calculation period amount. A list of calculation period elements may be ordered in the document by ascending start date. An FpML document which contains an unordered list of calcularion periods is still regarded as a conformant document.

Or

fixedPaymentAmount (exactly one occurrence; of the type xsd:decimal) A known fixed payment amount.

discountFactor (zero or one occurrence; of the type xsd:decimal) A decimal value representing the discount factor used to calculate the present value of cash flow.

forecastPaymentAmount (zero or one occurrence; of the type Money) A monetary amount representing the forecast of the future value of the payment.

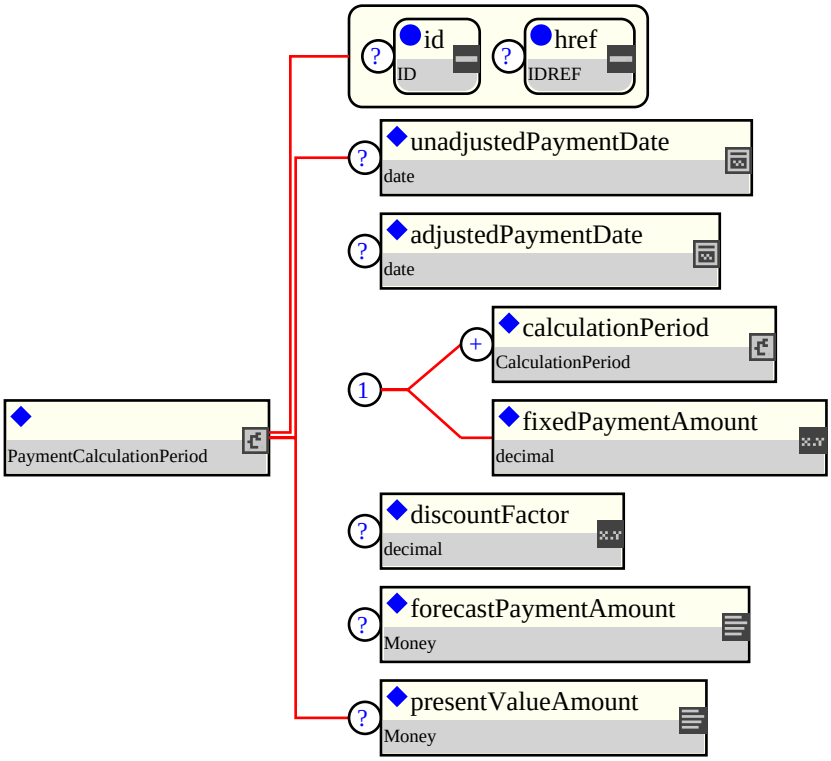
presentValueAmount (zero or one occurrence; of the type Money) A monetary amount representing the present value of the forecast payment.

1.42.3 Used by:

- Complex type: Cashflows

1.42.4 Derived Types:

1.42.5 Figure:



1.42.6 Schema Fragment:

```
<xsd:complexType name="PaymentCalculationPeriod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted payment date and associated
      calculation period parameters required to calculate the actual or
      projected payment amount. This type forms part of the cashflow
      representation of a swap stream.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="unadjustedPaymentDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="adjustedPaymentDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted payment date. This date should already be
          adjusted for any applicable business day convention. This
          component is not intended for use in trade confirmation but
          may be specified to allow the fee structure to also serve as
          a cashflow type component (all dates the Cashflows type are
          adjusted payment dates).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:choice>
      <xsd:element name="calculationPeriod" type="CalculationPeriod" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The parameters used in the calculation of a fixed or
            floating rate calculation period amount. A list of
            calculation period elements may be ordered in the document
            by ascending start date. An FpML document which contains an
            unordered list of calcularion periods is still regarded as
            a conformant document.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fixedPaymentAmount" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A known fixed payment amount.
          </xsd:documentation>
        </xsd:annotation>
```

```
      </xsd:element>
    </xsd:choice>
    <xsd:element name="discountFactor" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A decimal value representing the discount factor used to
          calculate the present value of cash flow.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="forecastPaymentAmount" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A monetary amount representing the forecast of the future
          value of the payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="presentValueAmount" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A monetary amount representing the present value of the
          forecast payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
  <xsd:attribute name="href" type="xsd:IDREF" ecore:reference="PricingStructure">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        Attribute that can be used to reference the yield curve used to
        estimate the discount factor.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:complexType>
```

1.43 PaymentDates

1.43.1 Description:

A type defining parameters used to generate the payment dates schedule, including the specification of early or delayed payments. Payment dates are determined relative to the calculation period dates or the reset dates.

1.43.2 Contents:

Either

calculationPeriodDatesReference (exactly one occurrence; of the type CalculationPeriodDatesReference) A pointer style reference to the associated calculation period dates component defined elsewhere in the document.

Or

resetDatesReference (exactly one occurrence; of the type ResetDatesReference) A pointer style reference to the associated reset dates component defined elsewhere in the document.

paymentFrequency (exactly one occurrence; of the type Interval) The frequency at which regular payment dates occur. If the payment frequency is equal to the frequency defined in the calculation period dates component then one calculation period contributes to each payment amount. If the payment frequency is less frequent than the frequency defined in the calculation period dates component then more than one calculation period will contribute to the payment amount. A payment frequency more frequent than the calculation period frequency or one that is not a multiple of the calculation period frequency is invalid.

firstPaymentDate (zero or one occurrence; of the type xsd:date) The first unadjusted payment date. This day may be subject to adjustment in accordance with any business day convention specified in paymentDatesAdjustments. This element must only be included if there is an initial stub. This date will normally correspond to an unadjusted calculation period start or end date. This is true even if early or delayed payment is specified to be applicable since the actual first payment date will be the specified number of days before or after the applicable adjusted calculation period start or end date with the resulting payment date then being adjusted in accordance with any business day convention specified in paymentDatesAdjustments.

lastRegularPaymentDate (zero or one occurrence; of the type xsd:date) The last regular unadjusted payment date. This day may be subject to adjustment in accordance with any business day convention specified in paymentDatesAdjustments. This element must only be included if there is a final stub. All calculation periods after this date contribute to the final payment. The final payment is made relative to the final set of calculation periods or the final reset date as the case may be. This date will normally correspond to an unadjusted calculation period start or end date. This is true even if early or delayed payment is specified to be applicable since the actual last regular payment date will be the specified number of days before or after the applicable adjusted calculation period start or end date with the resulting payment date then being adjusted in accordance with any business day convention specified in paymentDatesAdjustments.

payRelativeTo (exactly one occurrence; of the type PayRelativeToEnum) Specifies whether the payments occur relative to each adjusted calculation period start date, adjusted calculation period end date or each reset date. The reset date is applicable in the case of certain euro (former French Franc) floating rate indices. Calculation period start date means relative to the start of the first calculation period contributing to a given payment. Similarly, calculation period end date means the end of the last calculation period contributing to a given payment.

paymentDaysOffset (zero or one occurrence; of the type Offset) If early payment or delayed payment is required, specifies the number of days offset that the payment occurs relative to what would otherwise be the unadjusted payment date. The offset can be specified in terms of either calendar or business days. Even in the case of a calendar days offset, the resulting payment date, adjusted for the specified calendar days offset, will still be adjusted in accordance with the specified payment dates adjustments. This element should only be included if early or delayed payment is applicable, i.e. if the periodMultiplier element value is not equal to zero. An early payment would be indicated by a negative periodMultiplier element value and a delayed payment (or payment lag) would be indicated by a positive periodMultiplier element value.

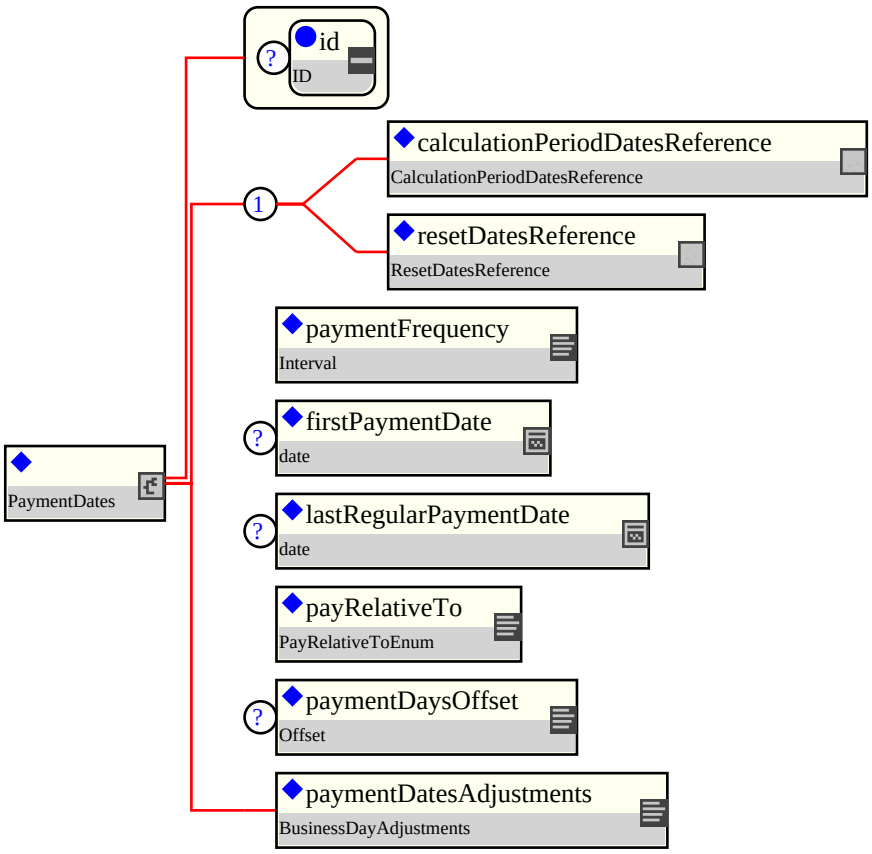
paymentDatesAdjustments (exactly one occurrence; of the type BusinessDayAdjustments) The business day convention to apply to each payment date if it would otherwise fall on a day that is not a business day in the specified financial business centers.

1.43.3 Used by:

- Complex type: InterestRateStream

1.43.4 Derived Types:

1.43.5 Figure:



1.43.6 Schema Fragment:

```
<xsd:complexType name="PaymentDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining parameters used to generate the payment dates
      schedule, including the specification of early or delayed
      payments. Payment dates are determined relative to the
      calculation period dates or the reset dates.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="calculationPeriodDatesReference" type="CalculationPeriodDatesReference
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A pointer style reference to the associated calculation
            period dates component defined elsewhere in the document.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="resetDatesReference" type="ResetDatesReference">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A pointer style reference to the associated reset dates
            component defined elsewhere in the document.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:element name="paymentFrequency" type="Interval">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
```

```
      The frequency at which regular payment dates occur. If the
      payment frequency is equal to the frequency defined in the
      calculation period dates component then one calculation
      period contributes to each payment amount. If the payment
      frequency is less frequent than the frequency defined in the
      calculation period dates component then more than one
      calculation period will contribute to the payment amount. A
      payment frequency more frequent than the calculation period
      frequency or one that is not a multiple of the calculation
      period frequency is invalid.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="firstPaymentDate" type="xsd:date" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The first unadjusted payment date. This day may be subject to
      adjustment in accordance with any business day convention
      specified in paymentDatesAdjustments. This element must only
      be included if there is an initial stub. This date will
      normally correspond to an unadjusted calculation period start
      or end date. This is true even if early or delayed payment is
      specified to be applicable since the actual first payment
      date will be the specified number of days before or after the
      applicable adjusted calculation period start or end date with
      the resulting payment date then being adjusted in accordance
      with any business day convention specified in
      paymentDatesAdjustments.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="lastRegularPaymentDate" type="xsd:date" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The last regular unadjusted payment date. This day may be
      subject to adjustment in accordance with any business day
      convention specified in paymentDatesAdjustments. This element
      must only be included if there is a final stub. All
      calculation periods after this date contribute to the final
      payment. The final payment is made relative to the final set
      of calculation periods or the final reset date as the case
      may be. This date will normally correspond to an unadjusted
      calculation period start or end date. This is true even if
      early or delayed payment is specified to be applicable since
      the actual last regular payment date will be the specified
      number of days before or after the applicable adjusted
      calculation period start or end date with the resulting
      payment date then being adjusted in accordance with any
      business day convention specified in paymentDatesAdjustments.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="payRelativeTo" type="PayRelativeToEnum">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Specifies whether the payments occur relative to each
      adjusted calculation period start date, adjusted calculation
      period end date or each reset date. The reset date is
      applicable in the case of certain euro (former French Franc)
      floating rate indices. Calculation period start date means
      relative to the start of the first calculation period
      contributing to a given payment. Similarly, calculation
      period end date means the end of the last calculation period
      contributing to a given payment.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="paymentDaysOffset" type="Offset" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      If early payment or delayed payment is required, specifies
      the number of days offset that the payment occurs relative to
      what would otherwise be the unadjusted payment date. The
      offset can be specified in terms of either calendar or
      business days. Even in the case of a calendar days offset,
      the resulting payment date, adjusted for the specified
      calendar days offset, will still be adjusted in accordance
      with the specified payment dates adjustments. This element
      should only be included if early or delayed payment is
      applicable, i.e. if the periodMultiplier element value is not
      equal to zero. An early payment would be indicated by a
      negative periodMultiplier element value and a delayed payment
      (or payment lag) would be indicated by a positive
```

```
          periodMultiplier element value.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="paymentDatesAdjustments" type="BusinessDayAdjustments">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The business day convention to apply to each payment date if
          it would otherwise fall on a day that is not a business day
          in the specified financial business centers.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.44 PaymentDatesReference

1.44.1 Description:

Reference to a payment dates structure.

1.44.2 Contents:

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

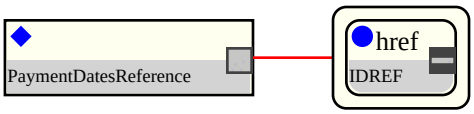
- The abstract base class for all types which define intra-document pointers.

1.44.3 Used by:

- Complex type: DateRelativeToPaymentDates

1.44.4 Derived Types:

1.44.5 Figure:



1.44.6 Schema Fragment:

```
<xsd:complexType name="PaymentDatesReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a payment dates structure.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference">
      <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="PaymentDates'
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.45 PriceSourceDisruption

1.45.1 Description:

A type defining the parameters used to get a price quote to replace the settlement rate option that is disrupted.

1.45.2 Contents:

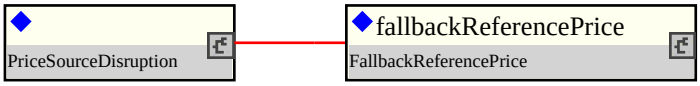
fallbackReferencePrice (exactly one occurrence; of the type FallbackReferencePrice) The method, prioritzed by the order it is listed in this element, to get a replacement rate for the disrupted settlement rate option.

1.45.3 Used by:

- Complex type: NonDeliverableSettlement

1.45.4 Derived Types:

1.45.5 Figure:



1.45.6 Schema Fragment:

```
<xsd:complexType name="PriceSourceDisruption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used to get a price quote to
      replace the settlement rate option that is disrupted.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="fallbackReferencePrice" type="FallbackReferencePrice">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The method, prioritzed by the order it is listed in this
          element, to get a replacement rate for the disrupted
          settlement rate option.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.46 PrincipalExchange

1.46.1 Description:

A type defining a principal exchange amount and adjusted exchange date. The type forms part of the cashflow representation of a swap stream.

1.46.2 Contents:

unadjustedPrincipalExchangeDate (zero or one occurrence; of the type xsd:date)

adjustedPrincipalExchangeDate (zero or one occurrence; of the type xsd:date) The principal exchange date. This date should already be adjusted for any applicable business day convention.

principalExchangeAmount (zero or one occurrence; of the type xsd:decimal) The principal exchange amount. This amount should be positive if the stream payer is paying the exchange amount and signed negative if they are receiving it.

discountFactor (zero or one occurrence; of the type xsd:decimal) The value representing the discount factor used to calculate the present value of the principal exchange amount.

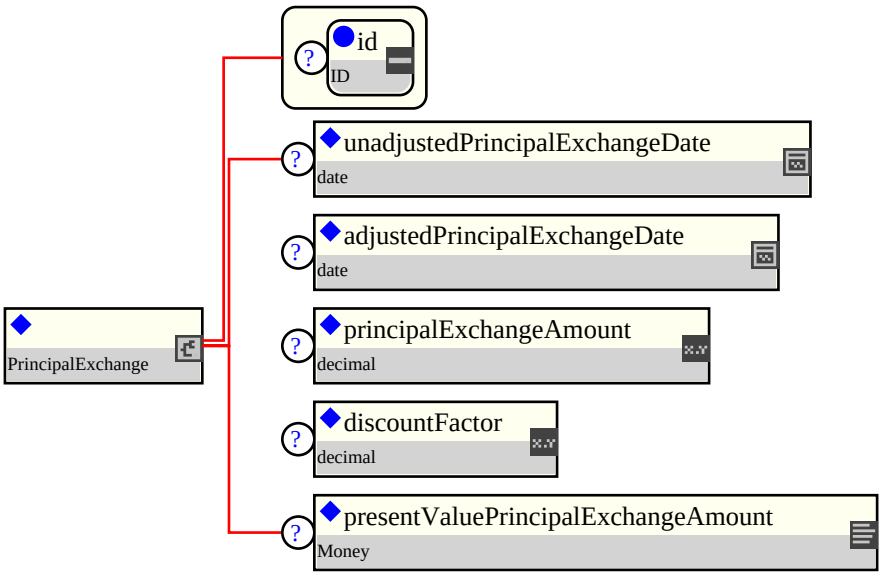
presentValuePrincipalExchangeAmount (zero or one occurrence; of the type Money) The amount representing the present value of the principal exchange.

1.46.3 Used by:

- Complex type: Cashflows

1.46.4 Derived Types:

1.46.5 Figure:



1.46.6 Schema Fragment:

```
<xsd:complexType name="PrincipalExchange">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining a principal exchange amount and adjusted exchange
      date. The type forms part of the cashflow representation of a
      swap stream.
    </xsd:documentation>
```

```
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="unadjustedPrincipalExchangeDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="adjustedPrincipalExchangeDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The principal exchange date. This date should already be
          adjusted for any applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="principalExchangeAmount" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The principal exchange amount. This amount should be positive
          if the stream payer is paying the exchange amount and signed
          negative if they are receiving it.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="discountFactor" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The value representing the discount factor used to calculate
          the present value of the principal exchange amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="presentValuePrincipalExchangeAmount" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The amount representing the present value of the principal
          exchange.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

1.47 RelevantUnderlyingDateReference

1.47.1 Description:

1.47.2 Contents:

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

- The abstract base class for all types which define intra-document pointers.

1.47.3 Used by:

- Complex type: FinalCalculationPeriodDateAdjustment

1.47.4 Derived Types:

1.47.5 Figure:

1.47.6 Schema Fragment:

```
<xsd:complexType name="RelevantUnderlyingDateReference">
  <xsd:annotation>
    <xsd:documentation>
      Reference to relevant underlying date.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference"/>
  </xsd:complexContent>
</xsd:complexType>
```

1.48 ResetDates

1.48.1 Description:

A type defining the parameters used to generate the reset dates schedule and associated fixing dates. The reset dates are determined relative to the calculation periods schedules dates.

1.48.2 Contents:

calculationPeriodDatesReference (exactly one occurrence; of the type CalculationPeriodDatesReference) A pointer style reference to the associated calculation period dates component defined elsewhere in the document.

resetRelativeTo (zero or one occurrence; of the type ResetRelativeToEnum) Specifies whether the reset dates are determined with respect to each adjusted calculation period start date or adjusted calculation period end date. If the reset frequency is specified as daily this element must not be included.

initialFixingDate (zero or one occurrence; of the type RelativeDateOffset)

fixingDates (exactly one occurrence; of the type RelativeDateOffset) Specifies the fixing date relative to the reset date in terms of a business days offset and an associated set of financial business centers. Normally these offset calculation rules will be those specified in the ISDA definition for the relevant floating rate index (ISDA's Floating Rate Option). However, non-standard offset calculation rules may apply for a trade if mutually agreed by the principal parties to the transaction. The href attribute on the dateRelativeTo element should reference the id attribute on the resetDates element.

rateCutOffDaysOffset (zero or one occurrence; of the type Offset) Specifies the number of business days before the period end date when the rate cut-off date is assumed to apply. The financial business centers associated with determining the rate cut-off date are those specified in the reset dates adjustments. The rate cut-off number of days must be a negative integer (a value of zero would imply no rate cut off applies in which case the rateCutOffDaysOffset element should not be included). The relevant rate for each reset date in the period from, and including, a rate cut-off date to, but excluding, the next applicable period end date (or, in the case of the last calculation period, the termination date) will (solely for purposes of calculating the floating amount payable on the next applicable payment date) be deemed to be the relevant rate in effect on that rate cut-off date. For example, if rate cut-off days for a daily averaging deal is -2 business days, then the refix rate applied on (period end date - 2 days) will also be applied as the reset on (period end date - 1 day), i.e. the actual number of reset dates remains the same but from the rate cut-off date until the period end date, the same refix rate is applied. Note that in the case of several calculation periods contributing to a single payment, the rate cut-off is assumed only to apply to the final calculation period contributing to that payment. The day type associated with the offset must imply a business days offset.

resetFrequency (exactly one occurrence; of the type ResetFrequency) The frequency at which reset dates occur. In the case of a weekly reset frequency, also specifies the day of the week that the reset occurs. If the reset frequency is greater than the calculation period frequency then this implies that more than one reset date is established for each calculation period and some form of rate averaging is applicable.

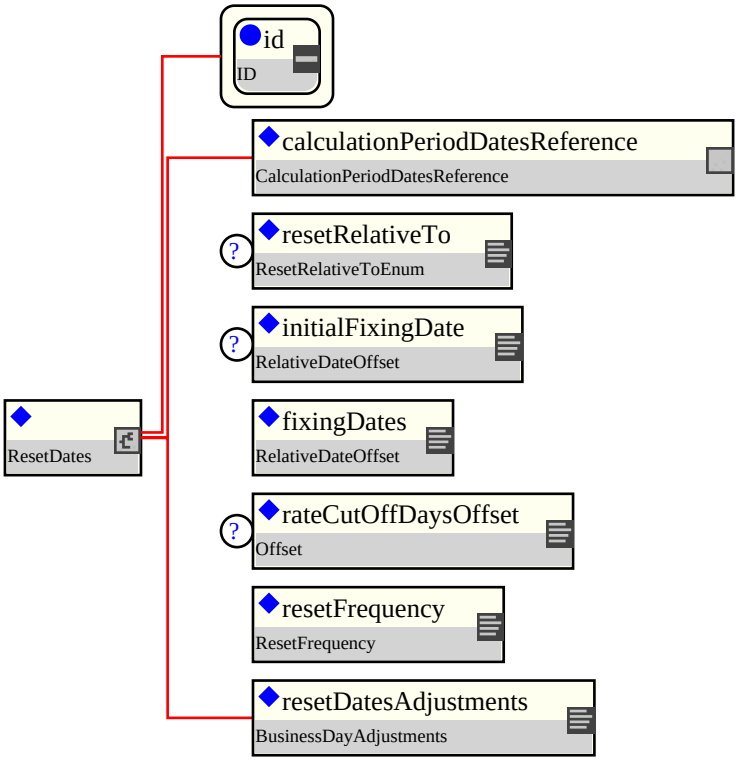
resetDatesAdjustments (exactly one occurrence; of the type BusinessDayAdjustments) The business day convention to apply to each reset date if it would otherwise fall on a day that is not a business day in the specified financial business centers.

1.48.3 Used by:

- Complex type: InterestRateStream

1.48.4 Derived Types:

1.48.5 Figure:



1.48.6 Schema Fragment:

```
<xsd:complexType name="ResetDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used to generate the reset dates
      schedule and associated fixing dates. The reset dates are
      determined relative to the calculation periods schedules dates.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculationPeriodDatesReference" type="CalculationPeriodDatesReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A pointer style reference to the associated calculation
          period dates component defined elsewhere in the document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="resetRelativeTo" type="ResetRelativeToEnum" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies whether the reset dates are determined with respect
          to each adjusted calculation period start date or adjusted
          calculation period end date. If the reset frequency is
          specified as daily this element must not be included.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="initialFixingDate" type="RelativeDateOffset" minOccurs="0"/>
    <xsd:element name="fixingDates" type="RelativeDateOffset">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the fixing date relative to the reset date in terms
          of a business days offset and an associated set of financial
          business centers. Normally these offset calculation rules
          will be those specified in the ISDA definition for the
          relevant floating rate index (ISDA's Floating Rate Option).
          However, non-standard offset calculation rules may apply for
          a trade if mutually agreed by the principal parties to the
          transaction. The href attribute on the dateRelativeTo element
          should reference the id attribute on the resetDates element.
        </xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:element>
    <xsd:element name="rateCutOffDaysOffset" type="Offset" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the number of business days before the period end
          date when the rate cut-off date is assumed to apply. The
          financial business centers associated with determining the
          rate cut-off date are those specified in the reset dates
          adjustments. The rate cut-off number of days must be a
          negative integer (a value of zero would imply no rate cut off
          applies in which case the rateCutOffDaysOffset element should
          not be included). The relevant rate for each reset date in
          the period from, and including, a rate cut-off date to, but
          excluding, the next applicable period end date (or, in the
          case of the last calculation period, the termination date)
          will (solely for purposes of calculating the floating amount
          payable on the next applicable payment date) be deemed to be
          the relevant rate in effect on that rate cut-off date. For
          example, if rate cut-off days for a daily averaging deal is
          -2 business days, then the refix rate applied on (period end
          date - 2 days) will also be applied as the reset on (period
          end date - 1 day), i.e. the actual number of reset dates
          remains the same but from the rate cut-off date until the
          period end date, the same refix rate is applied. Note that in
          the case of several calculation periods contributing to a
          single payment, the rate cut-off is assumed only to apply to
          the final calculation period contributing to that payment.
          The day type associated with the offset must imply a business
          days offset.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="resetFrequency" type="ResetFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency at which reset dates occur. In the case of a
          weekly reset frequency, also specifies the day of the week
          that the reset occurs. If the reset frequency is greater than
          the calculation period frequency then this implies that more
          than one reset date is established for each calculation
          period and some form of rate averaging is applicable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="resetDatesAdjustments" type="BusinessDayAdjustments">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The business day convention to apply to each reset date if it
          would otherwise fall on a day that is not a business day in
          the specified financial business centers.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID" use="required"/>
</xsd:complexType>
```

1.49 ResetDatesReference

1.49.1 Description:

Reference to a reset dates component.

1.49.2 Contents:

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

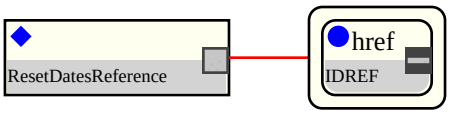
- The abstract base class for all types which define intra-document pointers.

1.49.3 Used by:

- Complex type: PaymentDates

1.49.4 Derived Types:

1.49.5 Figure:



1.49.6 Schema Fragment:

```
<xsd:complexType name="ResetDatesReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a reset dates component.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference">
      <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="ResetDates"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.50 SettlementProvision

1.50.1 Description:

A type defining the specification of settlement terms, occuring when the settlement currency is different to the notional currency of the trade.

1.50.2 Contents:

settlementCurrency (exactly one occurrence; of the type Currency) The currency that stream settles in (to support swaps that settle in a currency different from the notional currency).

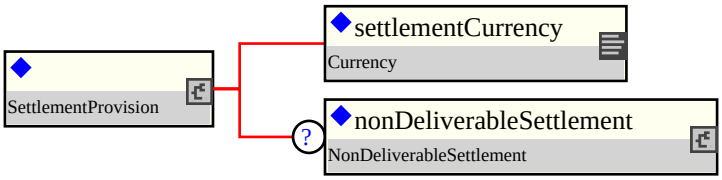
nonDeliverableSettlement (zero or one occurrence; of the type NonDeliverableSettlement) The specification of the non-deliverable settlement provision.

1.50.3 Used by:

- Complex type: InterestRateStream

1.50.4 Derived Types:

1.50.5 Figure:



1.50.6 Schema Fragment:

```
<xsd:complexType name="SettlementProvision">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the specification of settlement terms, occuring
      when the settlement currency is different to the notional
      currency of the trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="settlementCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency that stream settles in (to support swaps that
          settle in a currency different from the notional currency).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="nonDeliverableSettlement" type="NonDeliverableSettlement" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The specification of the non-deliverable settlement
          provision.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.51 SettlementRateOption

1.51.1 Description:

A type defining the settlement rate options through a scheme reflecting the terms of the Annex A to the 1998 FX and Currency Option Definitions.

1.51.2 Contents:

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

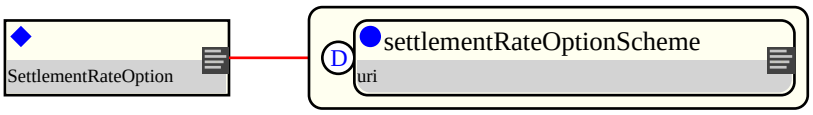
•

1.51.3 Used by:

- Complex type: FallbackReferencePrice
- Complex type: NonDeliverableSettlement

1.51.4 Derived Types:

1.51.5 Figure:



1.51.6 Schema Fragment:

```
<xsd:complexType name="SettlementRateOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the settlement rate options through a scheme
      reflecting the terms of the Annex A to the 1998 FX and Currency
      Option Definitions.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="settlementRateOptionScheme" type="xsd:anyURI" default="http://www.fp
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

1.52 SinglePartyOption

1.52.1 Description:

A type describing the buyer and seller of an option.

1.52.2 Contents:

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

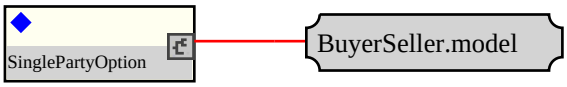
sellerPartyReference (exactly one occurrence; of the type PartyOrTradeSideReference) A reference to the party that sells ("writes") this instrument, i.e. that grants the rights defined by this instrument and in return receives a payment for it. See 2000 ISDA definitions Article 11.1 (a). In the case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

1.52.3 Used by:

- Complex type: OptionalEarlyTermination

1.52.4 Derived Types:

1.52.5 Figure:



1.52.6 Schema Fragment:

```
<xsd:complexType name="SinglePartyOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the buyer and seller of an option.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="BuyerSeller.model"/>
  </xsd:sequence>
</xsd:complexType>
```

1.53 StubCalculationPeriodAmount

1.53.1 Description:

A type defining how the initial or final stub calculation period amounts is calculated. For example, the rate to be applied to the initial or final stub calculation period may be the linear interpolation of two different tenors for the floating rate index specified in the calculation period amount component, e.g. A two month stub period may used the linear interpolation of a one month and three month floating rate. The different rate tenors would be specified in this component. Note that a maximum of two rate tenors can be specified. If a stub period uses a single index tenor and this is the same as that specified in the calculation period amount component then the initial stub or final stub component, as the case may be, must not be included.

1.53.2 Contents:

calculationPeriodDatesReference (exactly one occurrence; of the type CalculationPeriodDatesReference) A pointer style reference to the associated calculation period dates component defined elsewhere in the document.

initialStub (zero or one occurrence; of the type StubValue) Specifies how the initial stub amount is calculated. A single floating rate tenor different to that used for the regular part of the calculation periods schedule may be specified, or two floating tenors may be specified. If two floating rate tenors are specified then Linear Interpolation (in accordance with the 2000 ISDA Definitions, Section 8.3. Interpolation) is assumed to apply. Alternatively, an actual known stub rate or stub amount may be specified.

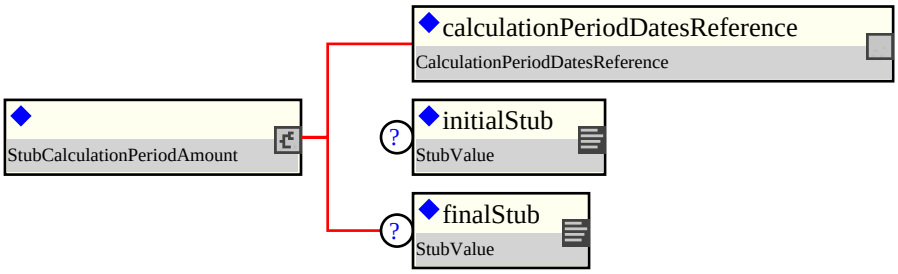
finalStub (zero or one occurrence; of the type StubValue) Specifies how the final stub amount is calculated. A single floating rate tenor different to that used for the regular part of the calculation periods schedule may be specified, or two floating tenors may be specified. If two floating rate tenors are specified then Linear Interpolation (in accordance with the 2000 ISDA Definitions, Section 8.3. Interpolation) is assumed to apply. Alternatively, an actual known stub rate or stub amount may be specified.

1.53.3 Used by:

- Complex type: InterestRateStream

1.53.4 Derived Types:

1.53.5 Figure:



1.53.6 Schema Fragment:

```
<xsd:complexType name="StubCalculationPeriodAmount">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining how the initial or final stub calculation period
      amounts is calculated. For example, the rate to be applied to the
      initial or final stub calculation period may be the linear
      interpolation of two different tenors for the floating rate index
      specified in the calculation period amount component, e.g. A two
      month stub period may used the linear interpolation of a one
      month and three month floating rate. The different rate tenors
      would be specified in this component. Note that a maximum of two
      rate tenors can be specified. If a stub period uses a single
```

```
      index tenor and this is the same as that specified in the
      calculation period amount component then the initial stub or
      final stub component, as the case may be, must not be included.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculationPeriodDatesReference" type="CalculationPeriodDatesReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A pointer style reference to the associated calculation
          period dates component defined elsewhere in the document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="initialStub" type="StubValue" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies how the initial stub amount is calculated. A single
          floating rate tenor different to that used for the regular
          part of the calculation periods schedule may be specified, or
          two floating tenors may be specified. If two floating rate
          tenors are specified then Linear Interpolation (in accordance
          with the 2000 ISDA Definitions, Section 8.3. Interpolation)
          is assumed to apply. Alternatively, an actual known stub rate
          or stub amount may be specified.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="finalStub" type="StubValue" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies how the final stub amount is calculated. A single
          floating rate tenor different to that used for the regular
          part of the calculation periods schedule may be specified, or
          two floating tenors may be specified. If two floating rate
          tenors are specified then Linear Interpolation (in accordance
          with the 2000 ISDA Definitions, Section 8.3. Interpolation)
          is assumed to apply. Alternatively, an actual known stub rate
          or stub amount may be specified.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.54 Swap

1.54.1 Description:

A type defining swap streams and additional payments between the principal parties involved in the swap.

1.54.2 Contents:

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

- The base type which all FpML products extend.

swapStream (one or more occurrences; of the type InterestRateStream) The swap streams.

earlyTerminationProvision (zero or one occurrence; of the type EarlyTerminationProvision) Parameters specifying provisions relating to the optional and mandatory early terminarion of a swap transaction.

cancelableProvision (zero or one occurrence; of the type CancelableProvision) A provision that allows the specification of an embedded option within a swap giving the buyer of the option the right to terminate the swap, in whole or in part, on the early termination date.

extendibleProvision (zero or one occurrence; of the type ExtendibleProvision) A provision that allows the specification of an embedded option with a swap giving the buyer of the option the right to extend the swap, in whole or in part, to the extended termination date.

additionalPayment (zero or more occurrences; of the type Payment) Additional payments between the principal parties.

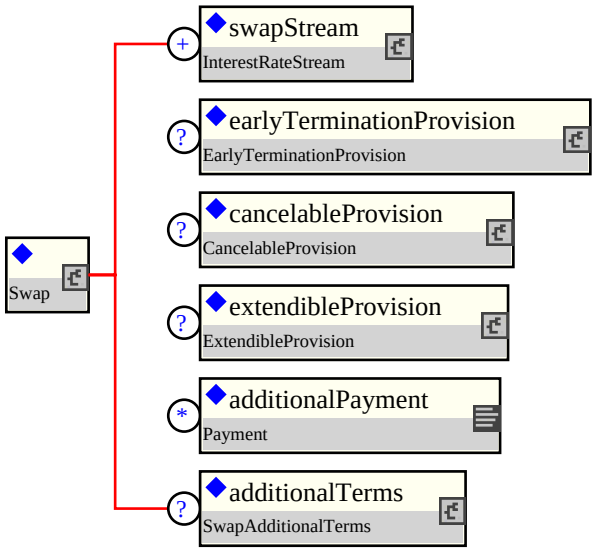
additionalTerms (zero or one occurrence; of the type SwapAdditionalTerms) Contains any additional terms to the swap contract.

1.54.3 Used by:

- Element: swap

1.54.4 Derived Types:

1.54.5 Figure:



1.54.6 Schema Fragment:

```
<xsd:complexType name="Swap">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining swap streams and additional payments between the
      principal parties involved in the swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element name="swapStream" type="InterestRateStream" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The swap streams.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="earlyTerminationProvision" type="EarlyTerminationProvision" minOccur
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Parameters specifying provisions relating to the optional
              and mandatory early terminarion of a swap transaction.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="cancelableProvision" type="CancelableProvision" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A provision that allows the specification of an embedded
              option within a swap giving the buyer of the option the
              right to terminate the swap, in whole or in part, on the
              early termination date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="extendibleProvision" type="ExtendibleProvision" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A provision that allows the specification of an embedded
              option with a swap giving the buyer of the option the
              right to extend the swap, in whole or in part, to the
              extended termination date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="additionalPayment" type="Payment" minOccurs="0" maxOccurs="unbounded
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Additional payments between the principal parties.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="additionalTerms" type="SwapAdditionalTerms" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Contains any additional terms to the swap contract.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

1.55 SwapAdditionalTerms

1.55.1 Description:

Additional terms to a swap contract.

1.55.2 Contents:

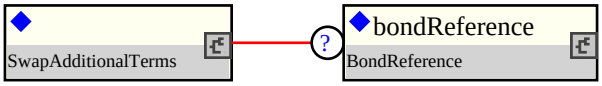
bondReference (zero or one occurrence; of the type BondReference) Reference to a bond underlyer to represent an asset swap or Condition Precedent Bond.

1.55.3 Used by:

- Complex type: Swap

1.55.4 Derived Types:

1.55.5 Figure:



1.55.6 Schema Fragment:

```
<xsd:complexType name="SwapAdditionalTerms">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Additional terms to a swap contract.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="bondReference" type="BondReference" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Reference to a bond underlyer to represent an asset swap or
          Condition Precedent Bond.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.56 Swaption

1.56.1 Description:

A type to define an option on a swap.

1.56.2 Contents:

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

- The base type which all FpML products extend.

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

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

premium (zero or more occurrences; of the type Payment) The option premium amount payable by buyer to seller on the specified payment date.

exercise (exactly one occurrence; of the type Exercise) An placeholder for the actual option exercise definitions.

exerciseProcedure (zero or one occurrence; of the type ExerciseProcedure) A set of parameters defining procedures associated with the exercise.

calculationAgent (zero or one occurrence; of the type CalculationAgent) The ISDA Calculation Agent responsible for performing duties associated with an optional early termination.

cashSettlement (zero or one occurrence; of the type CashSettlement) If specified, this means that cash settlement is applicable to the transaction and defines the parameters associated with the cash settlement prodcedure. If not specified, then physical settlement is applicable.

swaptionStraddle (exactly one occurrence; of the type xsd:boolean) Whether the option is a swaption or a swaption straddle.

swaptionAdjustedDates (zero or one occurrence; of the type SwaptionAdjustedDates) The adjusted dates associated with swaption exercise. These dates have been adjusted for any applicable business day convention.

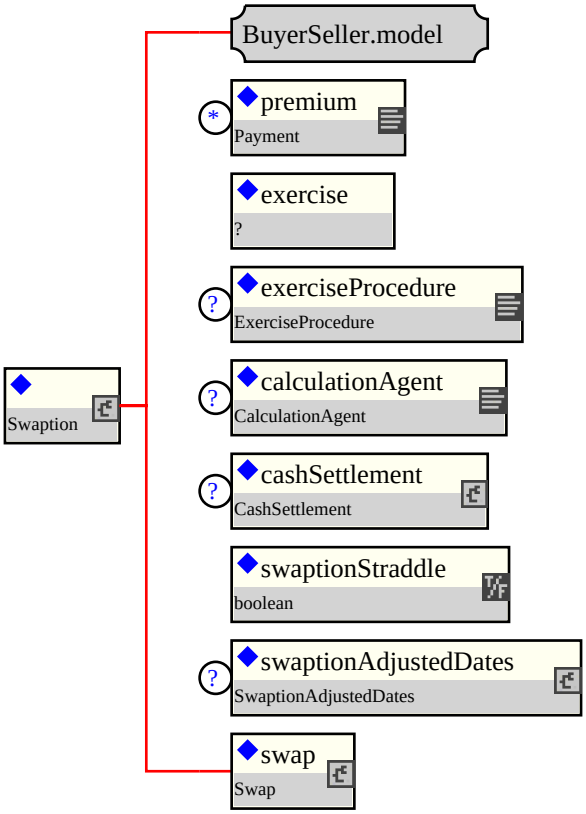
swap (exactly one occurrence; of the type Swap) A swap product definition.

1.56.3 Used by:

- Element: swaption

1.56.4 Derived Types:

1.56.5 Figure:



1.56.6 Schema Fragment:

```
<xsd:complexType name="Swaption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define an option on a swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:group ref="BuyerSeller.model"/>
        <xsd:element name="premium" type="Payment" minOccurs="0" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The option premium amount payable by buyer to seller on
              the specified payment date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element ref="exercise"/>
        <xsd:element name="exerciseProcedure" type="ExerciseProcedure" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A set of parameters defining procedures associated with
              the exercise.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="calculationAgent" type="CalculationAgent" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The ISDA Calculation Agent responsible for performing
              duties associated with an optional early termination.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="cashSettlement" type="CashSettlement" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              If specified, this means that cash settlement is
```

```
            applicable to the transaction and defines the parameters
            associated with the cash settlement prodcedure. If not
            specified, then physical settlement is applicable.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="swaptionStraddle" type="xsd:boolean">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Whether the option is a swaption or a swaption straddle.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="swaptionAdjustedDates" type="SwaptionAdjustedDates" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The adjusted dates associated with swaption exercise.
            These dates have been adjusted for any applicable
            business day convention.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element ref="swap"/>
    </xsd:sequence>
  </xsd:extension>
 </xsd:complexContent>
</xsd:complexType>
```

1.57 SwaptionAdjustedDates

1.57.1 Description:

A type describing the adjusted dates associated with swaption exercise and settlement.

1.57.2 Contents:

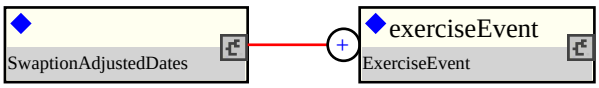
exerciseEvent (one or more occurrences; of the type ExerciseEvent) The adjusted dates associated with an individual swaption exercise date.

1.57.3 Used by:

- Complex type: Swaption

1.57.4 Derived Types:

1.57.5 Figure:



1.57.6 Schema Fragment:

```
<xsd:complexType name="SwaptionAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the adjusted dates associated with swaption
      exercise and settlement.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="exerciseEvent" type="ExerciseEvent" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with an individual swaption
          exercise date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.58 ValuationPostponement

1.58.1 Description:

Specifies how long to wait to get a quote from a settlement rate option upon a price source disruption.

1.58.2 Contents:

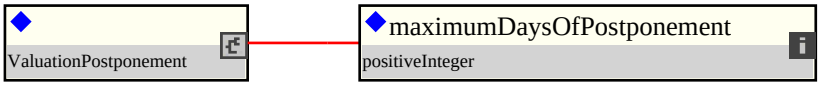
maximumDaysOfPostponement (exactly one occurrence; of the type xsd:positiveInteger) The maximum number of days to wait for a quote from the disrupted settlement rate option before proceding to the next method.

1.58.3 Used by:

- Complex type: FallbackReferencePrice

1.58.4 Derived Types:

1.58.5 Figure:



1.58.6 Schema Fragment:

```
<xsd:complexType name="ValuationPostponement">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Specifies how long to wait to get a quote from a settlement rate
      option upon a price source disruption.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="maximumDaysOfPostponement" type="xsd:positiveInteger">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The maximum number of days to wait for a quote from the
          disrupted settlement rate option before proceding to the next
          method.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

1.59 YieldCurveMethod

1.59.1 Description:

A type defining the parameters required for each of the ISDA defined yield curve methods for cash settlement.

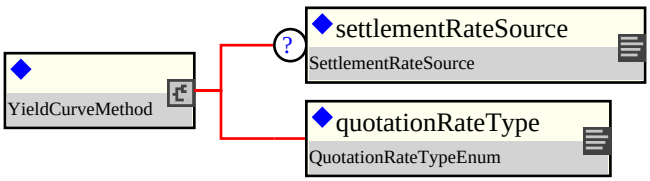
1.59.2 Contents:

1.59.3 Used by:

- Complex type: CashSettlement

1.59.4 Derived Types:

1.59.5 Figure:



1.59.6 Schema Fragment:

```
<xsd:complexType name="YieldCurveMethod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters required for each of the ISDA
      defined yield curve methods for cash settlement.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:sequence>
      <xsd:element name="settlementRateSource" type="SettlementRateSource" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The method for obtaining a settlement rate. This may be
            from some information source (e.g. Reuters) or from a set
            of reference banks.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="quotationRateType" type="QuotationRateTypeEnum">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Which rate quote is to be observed, either Bid, Mid, Offer
            or Exercising Party Pays. The meaning of Exercising Party
            Pays is defined in the 2000 ISDA Definitions, Section 17.2.
            Certain Definitions Relating to Cash Settlement, paragraph
            (j)
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:sequence>
</xsd:complexType>
```

2 Global Elements

2.1 bulletPayment

2.1.1 Description:

A product to represent a single known payment.

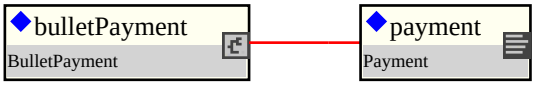
2.1.2 Contents:

Element bulletPayment is defined by the complex type BulletPayment

2.1.3 Used by:

2.1.4 Substituted by:

2.1.5 Figure:



2.1.6 Schema Fragment:

```
<xsd:element name="bulletPayment" type="BulletPayment" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A product to represent a single known payment.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

2.2 capFloor

2.2.1 Description:

A cap, floor or cap floor structures product definition.

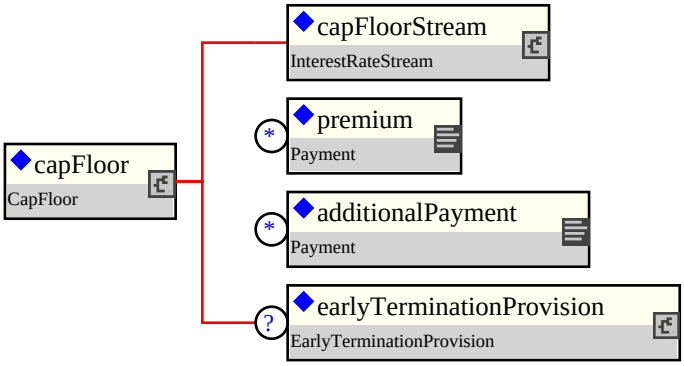
2.2.2 Contents:

Element capFloor is defined by the complex type CapFloor

2.2.3 Used by:

2.2.4 Substituted by:

2.2.5 Figure:



2.2.6 Schema Fragment:

```
<xsd:element name="capFloor" type="CapFloor" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A cap, floor or cap floor structures product definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

2.3 floatingRateCalculation

2.3.1 Description:

A floating rate calculation definition.

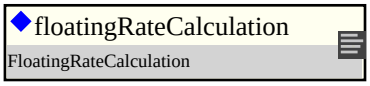
2.3.2 Contents:

Element floatingRateCalculation is defined by the complex type FloatingRateCalculation

2.3.3 Used by:

2.3.4 Substituted by:

2.3.5 Figure:



2.3.6 Schema Fragment:

```
<xsd:element name="floatingRateCalculation" type="FloatingRateCalculation" substitutionGroup="n
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A floating rate calculation definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

2.4 fra

2.4.1 Description:

A forward rate agreement product definition.

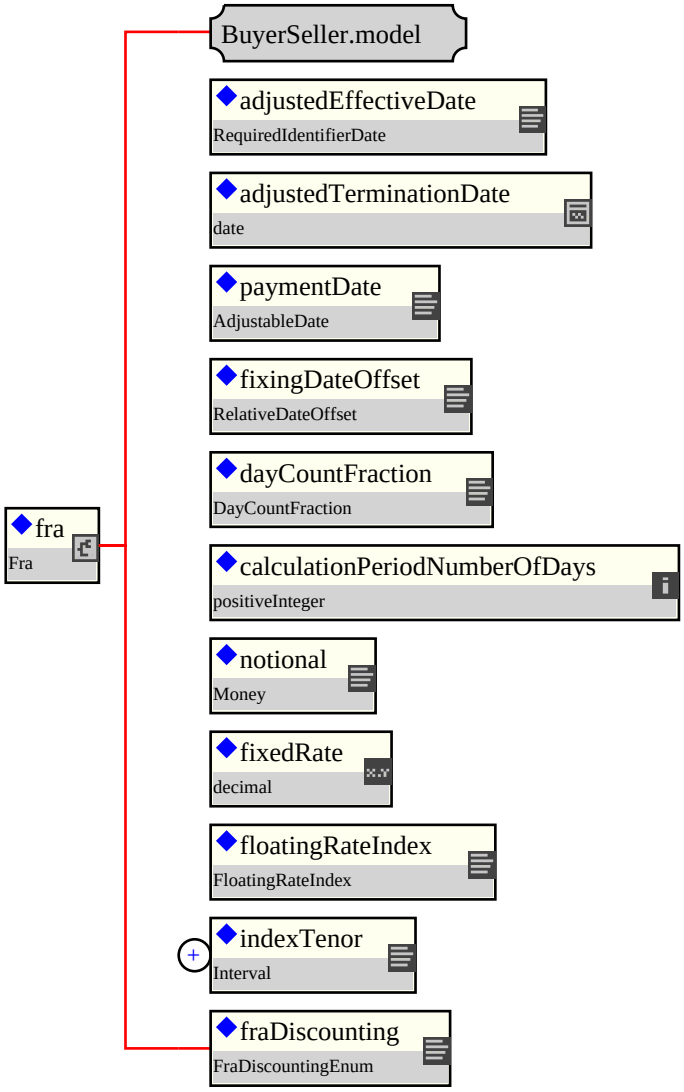
2.4.2 Contents:

Element fra is defined by the complex type Fra

2.4.3 Used by:

2.4.4 Substituted by:

2.4.5 Figure:



2.4.6 Schema Fragment:

```
<xsd:element name="fra" type="Fra" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A forward rate agreement product definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

2.5 inflationRateCalculation

2.5.1 Description:

An inflation rate calculation definition.

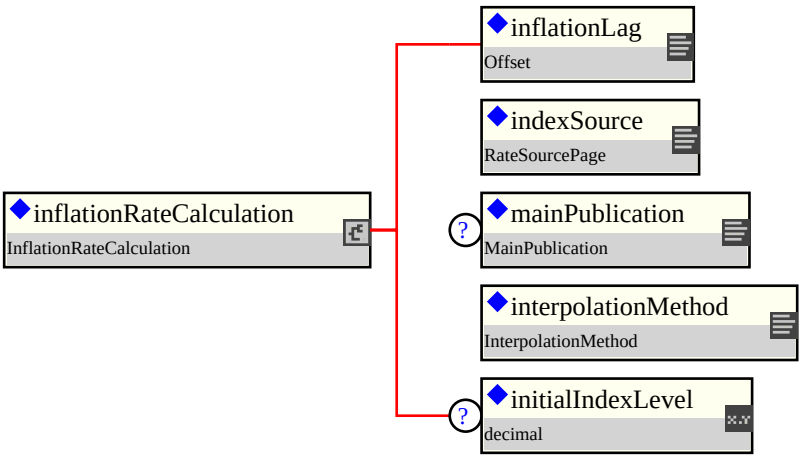
2.5.2 Contents:

Element inflationRateCalculation is defined by the complex type InflationRateCalculation

2.5.3 Used by:

2.5.4 Substituted by:

2.5.5 Figure:



2.5.6 Schema Fragment:

```
<xsd:element name="inflationRateCalculation" type="InflationRateCalculation" substitutionGroup=
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An inflation rate calculation definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

2.6 rateCalculation

2.6.1 Description:

The base element for the floating rate calculation definitions.

2.6.2 Contents:

Element rateCalculation is defined by the complex type Rate

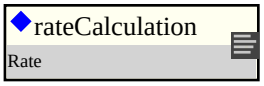
2.6.3 Used by:

- Complex type: Calculation

2.6.4 Substituted by:

- Element: floatingRateCalculation
- Element: inflationRateCalculation

2.6.5 Figure:



2.6.6 Schema Fragment:

```
<xsd:element name="rateCalculation" type="Rate" abstract="true">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The base element for the floating rate calculation definitions.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

2.7 swap

2.7.1 Description:

A swap product definition.

2.7.2 Contents:

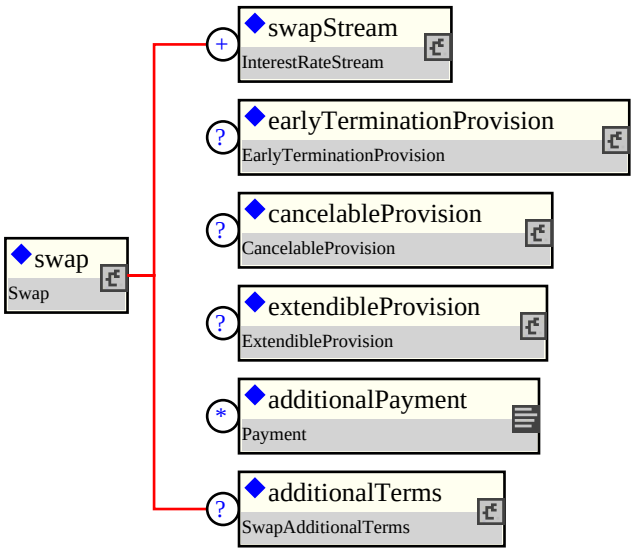
Element swap is defined by the complex type Swap

2.7.3 Used by:

- Complex type: Swaption

2.7.4 Substituted by:

2.7.5 Figure:



2.7.6 Schema Fragment:

```
<xsd:element name="swap" type="Swap" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A swap product definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

2.8 swaption

2.8.1 Description:

A swaption product definition.

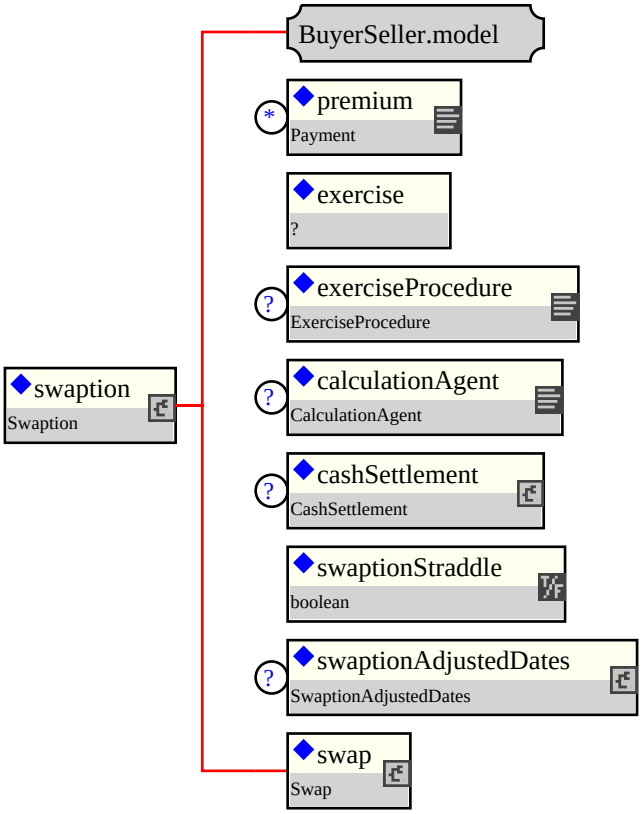
2.8.2 Contents:

Element swaption is defined by the complex type Swaption

2.8.3 Used by:

2.8.4 Substituted by:

2.8.5 Figure:



2.8.6 Schema Fragment:

```
<xsd:element name="swaption" type="Swaption" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A swaption product definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

3 Groups

3.1 MandatoryEarlyTermination.model

3.1.1 Description:

3.1.2 Contents:

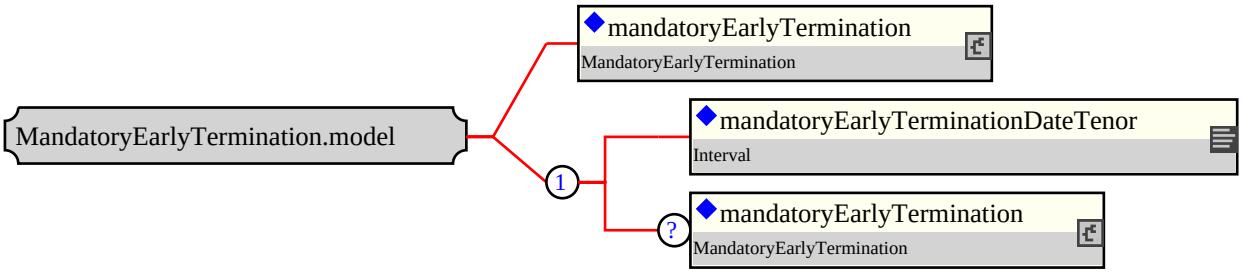
Either

mandatoryEarlyTermination (exactly one occurrence; of the type MandatoryEarlyTermination) A mandatory early termination provision to terminate the swap at fair value.

3.1.3 Used by:

- Complex type: EarlyTerminationProvision

3.1.4 Figure:



3.1.5 Schema Fragment:

```
<xsd:group name="MandatoryEarlyTermination.model">
  <xsd:choice>
    <xsd:element name="mandatoryEarlyTermination" type="MandatoryEarlyTermination">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A mandatory early termination provision to terminate the swap
          at fair value.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:sequence>
      <xsd:element name="mandatoryEarlyTerminationDateTenor" type="Interval">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Period after trade date of the mandatory early termination
            date.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="mandatoryEarlyTermination" type="MandatoryEarlyTermination" minOccurs=
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A mandatory early termination provision to terminate the
            swap at fair value.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:choice>
</xsd:group>
```

3.2 OptionalEarlyTermination.model

3.2.1 Description:

3.2.2 Contents:

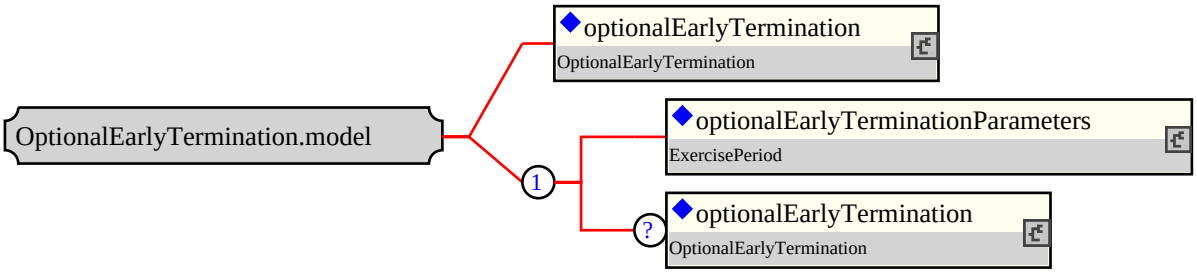
Either

optionalEarlyTermination (exactly one occurrence; of the type OptionalEarlyTermination) An option for either or both parties to terminate the swap at fair value.

3.2.3 Used by:

- Complex type: EarlyTerminationProvision

3.2.4 Figure:



3.2.5 Schema Fragment:

```
<xsd:group name="OptionalEarlyTermination.model">
  <xsd:choice>
    <xsd:element name="optionalEarlyTermination" type="OptionalEarlyTermination">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An option for either or both parties to terminate the swap at
          fair value.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:sequence>
      <xsd:element name="optionalEarlyTerminationParameters" type="ExercisePeriod">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Definition of the first early termination date and the
            frequency of the termination dates subsequent to that.
            American exercise is defined by having a frequency of one
            day.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="optionalEarlyTermination" type="OptionalEarlyTermination" minOccurs="0
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            An option for either or both parties to terminate the swap
            at fair value.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:choice>
</xsd:group>
```

4 Schema listing

```
<xsd:schema ecore:nsPrefix="fpml" ecore:package="org.fpml" ecore:documentRoot="FpML" targetName
  <xsd:include schemaLocation="fpml-mktenv-4-3.xsd"/>
  <xsd:complexType name="BondReference">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A type including a reference to a bond to support the
        representation of an asset swap or Condition Precedent Bond.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
      <xsd:element ref="bond">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Reference to a bond underlyer.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="conditionPrecedentBond" type="xsd:boolean">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            To indicate whether the Condition Precedent Bond is
            applicable. The swap contract is only valid if the bond is
            issued and if there is any dispute over the terms of fixed
            stream then the bond terms would be used.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="discrepancyClause" type="xsd:boolean" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            To indicate whether the Discrepancy Clause is applicable.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="BulletPayment">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A product to represent a single cashflow.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="Product">
        <xsd:sequence>
          <xsd:element name="payment" type="Payment">
            <xsd:annotation>
              <xsd:documentation xml:lang="en">
                A known payment between two parties.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="Calculation">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A type defininig the parameters used in the calculation of
        fixed or floating calculation period amounts.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
      <xsd:choice>
        <xsd:element name="notionalSchedule" type="Notional">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The notional amount or notional amount schedule.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxLinkedNotionalSchedule" type="FxLinkedNotionalSchedule">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A notional amount schedule where each notional that
              applied to a calculation period is calculated with
              reference to a notional amount or notional amount
              schedule in a different currency by means of a spot
```

```
            currency exchange rate which is normally observed at the
            beginning of each period.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:choice>
      <xsd:element name="fixedRateSchedule" 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="rateCalculation">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            This element is the head of a substitution group. It is
            substituted by the floatingRateCalculation element for
            standard Floating Rate legs, or the
            inflationRateCalculation element for inflation swaps.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:element name="dayCountFraction" type="DayCountFraction">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The day count fraction.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="discounting" type="Discounting" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The parameters specifying any discounting conventions that
          may apply. This element must only be included if
          discounting applies.
        </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:sequence>
</xsd:complexType>
<xsd:complexType name="CalculationPeriod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used in the calculation of a
      fixed or floating rate calculation period amount. This type
      forms part of cashflows representation of a swap stream.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="unadjustedStartDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="unadjustedEndDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="adjustedStartDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The calculation period start date, adjusted according to
          any relevant business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedEndDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The calculation period end date, adjusted according to any
          relevant business day convention.
        </xsd:documentation>
```

```
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationPeriodNumberOfDays" 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:choice>
      <xsd:element name="notionalAmount" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The amount that a cashflow will accrue interest on.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fxLinkedNotionalAmount" type="FxLinkedNotionalAmount">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The amount that a cashflow will accrue interest on. This
            is the calculated amount of the fx linked - ie the other
            currency notional amount multiplied by the appropriate fx
            spot rate.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:choice>
      <xsd:element name="floatingRateDefinition" type="FloatingRateDefinition">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The floating rate reset information for the calculation
            period.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fixedRate" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The calculation period fixed rate. A per annum rate,
            expressed as a decimal. A fixed rate of 5% would be
            represented as 0.05.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <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="forecastAmount" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The amount representing the forecast of the accrued value
          of the calculation period. An intermediate value used to
          generate the forecastPaymentAmount in the
          PaymentCalculationPeriod.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="forecastRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A value representing the forecast rate used to calculate
          the forecast future value of the accrual period. This is a
          calculated rate determined based on averaging the rates in
          the rateObservation elements, and incorporates all of the
          rate treatment and averaging rules. A value of 1% should be
          represented as 0.01
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

```
<xsd:complexType name="CalculationPeriodAmount">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used in the calculation of fixed
      or floating rate calculation period amounts or for specifying a
      known calculation period amount or known amount schedule.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="calculation" type="Calculation">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The parameters used in the calculation of fixed or floaring
          rate calculation period amounts.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="knownAmountSchedule" type="AmountSchedule">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The known calculation period amount or a known amount
          schedule expressed as explicit known amounts 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:choice>
</xsd:complexType>
<xsd:complexType name="CalculationPeriodDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used to generate the calculation
      period dates schedule, including the specification of any
      initial or final stub calculation periods. A calculation perod
      schedule consists of an optional initial stub calculation
      period, one or more regular calculation periods and an optional
      final stub calculation period. In the absence of any initial or
      final stub calculation periods, the regular part of the
      calculation period schedule is assumed to be between the
      effective date and the termination date. No implicit stubs are
      allowed, i.e. stubs must be explicitly specified using an
      appropriate combination of firstPeriodStateDate,
      firstRegularPeriodStartDate and lastRegularPeriodEndDate.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="effectiveDate" type="AdjustableDate">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The first day of the term of the trade. This day may be
            subject to adjustment in accordance with a business day
            convention.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="relativeEffectiveDate" type="AdjustedRelativeDateOffset">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Defines the effective date.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:choice>
      <xsd:element name="terminationDate" type="AdjustableDate">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The last day of the term of the trade. This day may be
            subject to adjustment in accordance with a business day
            convention.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="relativeTerminationDate" type="RelativeDateOffset">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The term/maturity of the swap, express as a tenor
            (typically in years).
          </xsd:documentation>
        </xsd:annotation>
```

```
      </xsd:element>
    </xsd:choice>
    <xsd:element name="calculationPeriodDatesAdjustments" type="BusinessDayAdjustments">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The business day convention to apply to each calculation
          period end date if it would otherwise fall on a day that is
          not a business day in the specified financial business
          centers.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="firstPeriodStartDate" type="AdjustableDate" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The start date of the calculation period if the date falls
          before the effective date. It must only be specified if it
          is not equal to the effective date. This date may be
          subject to adjustment in accordance with a business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="firstRegularPeriodStartDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The start date of the regular part of the calculation
          period schedule. It must only be specified if there is an
          initial stub calculation period. This day may be subject to
          adjustment in accordance with any adjustments specified in
          calculationPeriodDatesAdjustments.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="firstCompoundingPeriodEndDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The end date of the initial compounding period when
          compounding is applicable. It must only be specified when
          the compoundingMethod element is present and not equal to a
          value of None. This date may be subject to adjustment in
          accordance with any adjustments specified in
          calculationPeriodDatesAdjustments.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="lastRegularPeriodEndDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The end date of the regular part of the calculation period
          schedule. It must only be specified if there is a final
          stub calculation period. This day may be subject to
          adjustment in accordance with any adjustments specified in
          calculationPeriodDatesAdjustments.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="stubPeriodType" type="StubPeriodTypeEnum" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Method to allocate any irregular period remaining after
          regular periods have been allocated between the effective
          and termination date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationPeriodFrequency" type="CalculationPeriodFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency at which calculation period end dates occur
          with the regular part of the calculation period schedule
          and their roll date convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID" use="required"/>
</xsd:complexType>
<xsd:complexType name="CalculationPeriodDatesReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a calculation period dates component.
    </xsd:documentation>
```

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  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference">
      <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="Calculation
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="CancelableProvision">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the right of a party to cancel a swap
      transaction on the specified exercise dates. The provision is
      for 'walkaway' cancellation (i.e. the fair value of the swap is
      not paid). A fee payable on exercise can be specified.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="BuyerSeller.model"/>
    <xsd:element ref="exercise"/>
    <xsd:element name="exerciseNotice" type="ExerciseNotice" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Definition of the party to whom notice of exercise should
          be given.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="followUpConfirmation" type="xsd:boolean">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A flag to indicate whether follow-up confirmation of
          exercise (written or electronic) is required following
          telephonic notice by the buyer to the seller or seller's
          agent.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cancelableProvisionAdjustedDates" type="CancelableProvisionAdjustedDat
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with a cancelable provision.
          These dates have been adjusted for any applicable business
          day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="finalCalculationPeriodDateAdjustment" type="FinalCalculationPeriodDate
      <xsd:annotation>
        <xsd:documentation>
          Business date convention adjustment to final payment period
          per leg (swapStream) upon exercise event. The adjustments
          can be made in-line with leg level BDC's or they can be
          specified seperately.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="initialFee" type="SimplePayment" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An initial fee for the cancelable option.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CancelableProvisionAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define the adjusted dates for a cancelable provision
      on a swap transaction.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="cancellationEvent" type="CancellationEvent" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates for an individual cancellation date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CancellationEvent">
```

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  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The adjusted dates for a specific cancellation date, including
      the adjusted exercise date and adjusted termination date.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedExerciseDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which option exercise takes place. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedEarlyTerminationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The early termination date that is applicable if an early
          termination provision is exercised. This date should
          already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="CapFloor">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining an interest rate cap, floor, or cap/floor
      strategy (e.g. collar) product.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element name="capFloorStream" type="InterestRateStream"/>
        <xsd:element name="premium" type="Payment" minOccurs="0" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The option premium amount payable by buyer to seller on
              the specified payment date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="additionalPayment" type="Payment" minOccurs="0" maxOccurs="unbound
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Additional payments between the principal parties.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="earlyTerminationProvision" type="EarlyTerminationProvision" minOc
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Parameters specifying provisions relating to the
              optional and mandatory early terminarion of a CapFloor
              transaction.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Cashflows">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the cashflow representation of a swap trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="cashflowsMatchParameters" type="xsd:boolean">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A true/false flag to indicate whether the cashflows match
          the parametric definition of the stream, i.e. whether the
          cashflows could be regenerated from the parameters without
          loss of information.
        </xsd:documentation>
```

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      </xsd:annotation>
    </xsd:element>
    <xsd:element name="principalExchange" type="PrincipalExchange" minOccurs="0" maxOccurs="u
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The initial, intermediate and final principal exchange
          amounts. Typically required on cross currency interest rate
          swaps where actual exchanges of principal occur. A list of
          principal exchange elements may be ordered in the document
          by ascending adjusted principal exchange date. An FpML
          document containing an unordered principal exchange list is
          still regarded as a conformant document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="paymentCalculationPeriod" type="PaymentCalculationPeriod" minOccurs="0
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted payment date and associated calculation period
          parameters required to calculate the actual or projected
          payment amount. A list of payment calculation period
          elements may be ordered in the document by ascending
          adjusted payment date. An FpML document containing an
          unordered list of payment calculation periods is still
          regarded as a conformant document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CashPriceMethod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters necessary for each of the ISDA
      cash price methods for cash settlement.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="cashSettlementReferenceBanks" type="CashSettlementReferenceBanks" minO
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A container for a set of reference institutions. These
          reference institutions may be called upon to provide rate
          quotations as part of the method to determine the
          applicable cash settlement amount. If institutions are not
          specified, it is assumed that reference institutions will
          be agreed between the parties on the exercise date, or in
          the case of swap transaction to which mandatory early
          termination is applicable, the cash settlement valuation
          date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cashSettlementCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which the cash settlement amount will be
          calculated and settled.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotationRateType" type="QuotationRateTypeEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Which rate quote is to be observed, either Bid, Mid, Offer
          or Exercising Party Pays. The meaning of Exercising Party
          Pays is defined in the 2000 ISDA Definitions, Section 17.2.
          Certain Definitions Relating to Cash Settlement, paragraph
          (j).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CashSettlement">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define the cash settlement terms for a product where
      cash settlement is applicable.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="cashSettlementValuationTime" type="BusinessCenterTime" minOccurs="0">
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  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The time of the cash settlement valuation date when the
      cash settlement amount will be determined according to the
      cash settlement method if the parties have not otherwise
      been able to agree the cash settlement amount.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="cashSettlementValuationDate" type="RelativeDateOffset" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The date on which the cash settlement amount will be
      determined according to the cash settlement method if the
      parties have not otherwise been able to agree the cash
      settlement amount.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="cashSettlementPaymentDate" type="CashSettlementPaymentDate" minOccurs=
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The date on which the cash settlement amount will be paid,
      subject to adjustment in accordance with any applicable
      business day convention. This component would not be
      present for a mandatory early termination provision where
      the cash settlement payment date is the mandatory early
      termination date.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:choice minOccurs="0">
  <xsd:element name="cashPriceMethod" type="CashPriceMethod">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        An ISDA defined cash settlement method used for the
        determination of the applicable cash settlement amount.
        The method is defined in the 2000 ISDA Definitions,
        Section 17.3. Cash Settlement Methods, paragraph (a).
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="cashPriceAlternateMethod" type="CashPriceMethod">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        An ISDA defined cash settlement method used for the
        determination of the applicable cash settlement amount.
        The method is defined in the 2000 ISDA Definitions,
        Section 17.3. Cash Settlement Methods, paragraph (b).
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="parYieldCurveAdjustedMethod" type="YieldCurveMethod">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        An ISDA defined cash settlement method used for the
        determination of the applicable cash settlement amount.
        The method is defined in the 2000 ISDA Definitions,
        Section 17.3. Cash Settlement Methods, paragraph (c).
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="zeroCouponYieldAdjustedMethod" type="YieldCurveMethod">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        An ISDA defined cash settlement method used for the
        determination of the applicable cash settlement amount.
        The method is defined in the 2000 ISDA Definitions,
        Section 17.3. Cash Settlement Methods, paragraph (d).
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="parYieldCurveUnadjustedMethod" type="YieldCurveMethod">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        An ISDA defined cash settlement method used for the
        determination of the applicable cash settlement amount.
        The method is defined in the 2000 ISDA Definitions,
        Section 17.3. Cash Settlement Methods, paragraph (e).
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:choice>
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  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="CashSettlementPaymentDate">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the cash settlement payment date(s) as either a
      set of explicit dates, together with applicable adjustments, or
      as a date relative to some other (anchor) date, or as any date
      in a range of contiguous business days.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="adjustableDates" type="AdjustableDates">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A series of dates that shall be subject to adjustment if
          they would otherwise fall on a day that is not a business
          day in the specified business centers, together with the
          convention for adjusting the date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="relativeDate" type="RelativeDateOffset">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A date specified as some offset to another date (the anchor
          date).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="businessDateRange" type="BusinessDateRange">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A range of contiguous business days.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="DateRelativeToPaymentDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to provide the ability to point to multiple payment
      nodes in the document through the unbounded
      paymentDatesReference.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="paymentDatesReference" type="PaymentDatesReference" maxOccurs="unbound
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A set of href pointers to payment dates defined somewhere
          else in the document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Discounting">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining discounting information. The 2000 ISDA
      definitions, section 8.4. discounting (related to the
      calculation of a discounted fixed amount or floating amount)
      apply. This type must only be included if discounting applies.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="discountingType" type="DiscountingTypeEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The discounting method that is applicable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="discountRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A discount rate, expressed as a decimal, to be used in the
          calculation of a discounted amount. A discount amount of 5%
          would be represented as 0.05.
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        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="discountRateDayCountFraction" type="DayCountFraction" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A discount day count fraction to be used in the calculation
          of a discounted amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="EarlyTerminationEvent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define the adjusted dates associated with an early
      termination provision.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedExerciseDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which option exercise takes place. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedEarlyTerminationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The early termination date that is applicable if an early
          termination provision is exercised. This date should
          already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementValuationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date by which the cash settlement amount must be
          agreed. This date should already be adjusted for any
          applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementPaymentDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the cash settlement amount is paid. This
          date should already be adjusted for any applicable business
          dat convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedExerciseFeePaymentDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the exercise fee amount is paid. This
          date should already be adjusted for any applicable business
          day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="EarlyTerminationProvision">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining an early termination provision for a swap. This
      early termination is at fair value, i.e. on termination the
      fair value of the product must be settled between the parties.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:sequence>
      <xsd:group ref="MandatoryEarlyTermination.model"/>
      <xsd:group ref="OptionalEarlyTermination.model" minOccurs="0"/>
    </xsd:sequence>
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    <xsd:group ref="OptionalEarlyTermination.model"/>
  </xsd:choice>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="ExerciseEvent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted dates associated with a particular
      exercise event.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedExerciseDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which option exercise takes place. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedRelevantSwapEffectiveDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The effective date of the underlying swap associated with a
          given exercise date. This date should already be adjusted
          for any applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementValuationDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date by which the cash settlement amount must be
          agreed. This date should already be adjusted for any
          applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementPaymentDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the cash settlement amount is paid. This
          date should already be adjusted for any applicable business
          dat convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedExerciseFeePaymentDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the exercise fee amount is paid. This
          date should already be adjusted for any applicable business
          day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="ExercisePeriod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      This defines the time interval to the start of the exercise
      period, i.e. the earliest exercise date, and the frequency of
      subsequent exercise dates (if any).
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="earliestExerciseDateTenor" type="Interval">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The time interval to the first (and possibly only) exercise
          date in the exercise period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="exerciseFrequency" type="Interval" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency of subsequent exercise dates in the exercise
          period following the earliest exercise date. An interval of
          1 day should be used to indicate an American style exercise
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          period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="ExtendibleProvision">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining an option to extend an existing swap
      transaction on the specified exercise dates for a term ending
      on the specified new termination date.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="BuyerSeller.model"/>
    <xsd:element ref="exercise"/>
    <xsd:element name="exerciseNotice" type="ExerciseNotice" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Definition of the party to whom notice of exercise should
          be given.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="followUpConfirmation" type="xsd:boolean">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A flag to indicate whether follow-up confirmation of
          exercise (written or electronic) is required following
          telephonic notice by the buyer to the seller or seller's
          agent.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="extendibleProvisionAdjustedDates" type="ExtendibleProvisionAdjustedDat
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with an extendible provision.
          These dates have been adjusted for any applicable business
          day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="ExtendibleProvisionAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted dates associated with a provision
      to extend a swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="extensionEvent" type="ExtensionEvent" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with a single extendible
          exercise date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="ExtensionEvent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define the adjusted dates associated with an
      individual extension event.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedExerciseDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which option exercise takes place. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedExtendedTerminationDate" type="xsd:date">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The termination date if an extendible provision is
          exercised. This date should already be adjusted for any
          applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="FinalCalculationPeriodDateAdjustment">
  <xsd:annotation>
    <xsd:documentation>
      A type to define business date convention adjustment to final
      payment period per leg.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="relevantUnderlyingDateReference" type="RelevantUnderlyingDateReference
      <xsd:annotation>
        <xsd:documentation>
          Reference to the unadjusted cancellation effective dates.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="swapStreamReference" type="InterestRateStreamReference">
      <xsd:annotation>
        <xsd:documentation>
          Reference to the leg, where date adjustments may apply.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="businessDayConvention" type="BusinessDayConventionEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Override business date convention. This takes precedence
          over leg level information.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FallbackReferencePrice">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The method, prioritzed by the order it is listed in this
      element, to get a replacement rate for the disrupted settlement
      rate option.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="valuationPostponement" type="ValuationPostponement" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies how long to wait to get a quote from a settlement
          rate option upon a price source disruption
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fallbackSettlementRateOption" type="SettlementRateOption" minOccurs="0
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          This settlement rate option will be used in its place.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fallbackSurveyValuationPostponenment" type="Empty" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Request rate quotes from the market.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationAgentDetermination" type="CalculationAgent" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The calculation agent will decide the rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

```
<xsd:complexType name="FloatingRateDefinition">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining parameters associated with a floating rate
      reset. This type forms part of the cashflows representation of
      a stream.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculatedRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The final calculated rate for a calculation period after
          any required averaging of rates A calculated rate of 5%
          would be represented as 0.05.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="rateObservation" type="RateObservation" minOccurs="0" maxOccurs="unbou
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The details of a particular rate observation, including the
          fixing date and observed rate. A list of rate observation
          elements may be ordered in the document by ascending
          adjusted fixing date. An FpML document containing an
          unordered list of rate observations is still regarded as a
          conformant document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="floatingRateMultiplier" 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. 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="capRate" type="Strike" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The cap rate, 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="floorRate" type="Strike" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The floor rate, 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:complexType>
<xsd:complexType name="Fra">
  <xsd:annotation>
```

```
  <xsd:documentation xml:lang="en">
    A type defining a Forward Rate Agreement (FRA) product.
  </xsd:documentation>
</xsd:annotation>
<xsd:complexContent>
  <xsd:extension base="Product">
    <xsd:sequence>
      <xsd:group ref="BuyerSeller.model"/>
      <xsd:element name="adjustedEffectiveDate" type="RequiredIdentifierDate">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The start date of the calculation period. This date
            should already be adjusted for any applicable business
            day convention. This is also the date when the observed
            rate is applied, the reset date.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="adjustedTerminationDate" type="xsd:date">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The end date of the calculation period. This date
            should already be adjusted for any applicable business
            day convention.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="paymentDate" type="AdjustableDate">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The payment date. This date is subject to adjustment in
            accordance with any applicable business day convention.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fixingDateOffset" type="RelativeDateOffset">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the fixing date relative to the reset date in
            terms of a business days offset and an associated set
            of financial business centers. Normally these offset
            calculation rules will be those specified in the ISDA
            definition for the relevant floating rate index (ISDA's
            Floating Rate Option). However, non-standard offset
            calculation rules may apply for a trade if mutually
            agreed by the principal parties to the transaction. The
            href attribute on the dateRelativeTo element should
            reference the id attribute on the adjustedEffectiveDate
            element.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="dayCountFraction" type="DayCountFraction">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The day count fraction.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="calculationPeriodNumberOfDays" type="xsd:positiveInteger">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The number of days from the adjusted effective date to
            the adjusted termination date calculated in accordance
            with the applicable day count fraction.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="notional" type="Money">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The notional amount.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fixedRate" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The calculation period fixed rate. A per annum rate,
            expressed as a decimal. A fixed rate of 5% would be
            represented as 0.05.
          </xsd:documentation>
        </xsd:annotation>
```

```
        </xsd:element>
        <xsd:element name="floatingRateIndex" type="FloatingRateIndex"/>
        <xsd:element name="indexTenor" type="Interval" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The ISDA Designated Maturity, i.e. the tenor of the
              floating rate.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fraDiscounting" type="FraDiscountingEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies whether discounting applies and, if so, what
              type.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FxFixingDate">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type that is extending the Offset structure for providing the
      ability to specify an FX fixing date as an offset to dates
      specified somewhere else in the document.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Offset">
      <xsd:sequence>
        <xsd:element name="businessDayConvention" type="BusinessDayConventionEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The convention for adjusting a date if it would
              otherwise fall on a day that is not a business day.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:group ref="BusinessCentersOrReference.model" minOccurs="0"/>
        <xsd:element name="dateRelativeToPaymentDates" type="DateRelativeToPaymentDates">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The payment date references on which settlements in
              non-deliverable currency are due and will then have to
              be converted according to the terms specified through
              the other parts of the nonDeliverableSettlement
              structure.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FxLinkedNotionalAmount">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to describe the cashflow representation for fx linked
      notionals.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="resetDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="adjustedFxSpotFixingDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the fx spot rate is observed. This date
          should already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="observedFxSpotRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The actual observed fx spot rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="notionalAmount" type="xsd:decimal" minOccurs="0">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The calculation period notional amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FxLinkedNotionalSchedule">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to describe a notional schedule where each notional that
      applies to a calculation period is calculated with reference to
      a notional amount or notional amount schedule in a different
      currency by means of a spot currency exchange rate which is
      normally observed at the beginning of each period.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="constantNotionalScheduleReference" type="ScheduleReference">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A pointer style reference to the associated constant
          notional schedule defined elsewhere in the document which
          contains the currency amounts which will be converted into
          the varying notional currency amounts using the spot
          currency exchange rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="initialValue" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The initial currency amount for the varying notional.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="varyingNotionalCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency of the varying notional amount, i.e. the
          notional amount being determined periodically based on
          observation of a spot currency exchange rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="varyingNotionalFixingDates" type="RelativeDateOffset">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The dates on which spot currency exchange rates are
          observed for purposes of determining the varying notional
          currency amount that will apply to a calculation period.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fxSpotRateSource" type="FxSpotRateSource">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The information source and time at which the spot currency
          exchange rate will be observed.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="varyingNotionalInterimExchangePaymentDates" type="RelativeDateOffset">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The dates on which interim exchanges of notional are paid.
          Interim exchanges will arise as a result of changes in the
          spot currency exchange amount or changes in the constant
          notional schedule (e.g. amortization).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="InflationRateCalculation">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the components specifiying an Inflation Rate
      Calculation
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
```

```
    <xsd:extension base="FloatingRateCalculation">
      <xsd:sequence>
        <xsd:element name="inflationLag" type="Offset">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              an offsetting period from the payment date which
              determines the reference period for which the inflation
              index is onserved.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="indexSource" type="RateSourcePage">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The reference source such as Reuters or Bloomberg.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="mainPublication" type="MainPublication" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The current main publication source such as relevant
              web site or a government body.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="interpolationMethod" type="InterpolationMethod">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The method used when calculating the Inflation Index
              Level from multiple points - the most common is Linear.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="initialIndexLevel" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              initial known index level for the first calculation
              period.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="InterestRateStream">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the components specifiying an interest rate
      stream, including both a parametric and cashflow representation
      for the stream of payments.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Leg">
      <xsd:sequence>
        <xsd:group ref="PayerReceiver.model"/>
        <xsd:element name="calculationPeriodDates" type="CalculationPeriodDates">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The calculation periods dates schedule.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentDates" type="PaymentDates">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The payment dates schedule.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="resetDates" type="ResetDates" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The reset dates schedule. The reset dates schedule only
              applies for a floating rate stream.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="calculationPeriodAmount" type="CalculationPeriodAmount">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
```

```
            The calculation period amount parameters.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="stubCalculationPeriodAmount" type="StubCalculationPeriodAmount" mi
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The stub calculation period amount parameters. This
            element must only be included if there is an initial or
            final stub calculation period. Even then, it must only
            be included if either the stub references a different
            floating rate tenor to the regular calculation periods,
            or if the stub is calculated as a linear interpolation
            of two different floating rate tenors, or if a specific
            stub rate or stub amount has been negotiated.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="principalExchanges" type="PrincipalExchanges" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The true/false flags indicating whether initial,
            intermediate or final exchanges of principal should
            occur.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="cashflows" type="Cashflows" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The cashflows representation of the swap stream.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="settlementProvision" type="SettlementProvision" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A provision that allows the specification of settlement
            terms, occuring when the settlement currency is
            different to the notional currency of the trade.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="formula" type="Formula" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            An interest rate derivative formula.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
    <xsd:attribute name="id" type="xsd:ID"/>
  </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="InterestRateStreamReference">
  <xsd:annotation>
    <xsd:documentation>
      Reference to an InterestRateStream component.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference">
      <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="InterestRat
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="MandatoryEarlyTermination">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define an early termination provision for which
      exercise is mandatory.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="mandatoryEarlyTerminationDate" type="AdjustableDate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The early termination date associated with a mandatory
          early termination of a swap.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

```
    <xsd:element name="calculationAgent" type="CalculationAgent">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The ISDA Calculation Agent responsible for performing
          duties associated with an optional early termination.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cashSettlement" type="CashSettlement">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          If specified, this means that cash settlement is applicable
          to the transaction and defines the parameters associated
          with the cash settlement prodcedure. If not specified, then
          physical settlement is applicable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="mandatoryEarlyTerminationAdjustedDates" type="MandatoryEarlyTerminatio
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with a mandatory early
          termination provision. These dates have been adjusted for
          any applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="MandatoryEarlyTerminationAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted dates associated with a mandatory
      early termination provision.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="adjustedEarlyTerminationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The early termination date that is applicable if an early
          termination provision is exercised. This date should
          already be adjusted for any applicable business day
          convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementValuationDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date by which the cash settlement amount must be
          agreed. This date should already be adjusted for any
          applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="adjustedCashSettlementPaymentDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date on which the cash settlement amount is paid. This
          date should already be adjusted for any applicable business
          dat convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="NonDeliverableSettlement">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used when the reference currency
      of the swapStream is non-deliverable.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="referenceCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which the swap stream is denominated in.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

```
    <xsd:element name="fxFixingDate" type="FxFixingDate">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The fixing date(s) on which the currency rate will be
          determined for the purpose of specifying the amount in
          deliverable currency.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="settlementRateOption" type="SettlementRateOption">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The rate source for the conversion to the settlement
          currency. This source is specified through a scheme that
          reflects the terms of the Annex A to the 1998 FX and
          Currency Option Definitions.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="priceSourceDisruption" type="PriceSourceDisruption" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A type defining the parameters to get a new quote when a
          settlement rate option is disrupted.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Notional">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An type defining the notional amount or notional amount
      schedule associated with a swap stream. The notional schedule
      will be captured explicitly, specifying the dates that the
      notional changes and the outstanding notional amount that
      applies from that date. A parametric representation of the
      rules defining the notional step schedule can optionally be
      included.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="notionalStepSchedule" type="AmountSchedule">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The notional amount or notional amount schedule expressed
          as explicit outstanding notional amounts 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 name="notionalStepParameters" type="NotionalStepRule" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A parametric representation of the notional step schedule,
          i.e. parameters used to generate the notional schedule.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="NotionalStepRule">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining a parametric representation of the notional
      step schedule, i.e. parameters used to generate the notional
      balance on each step date. The step change in notional can be
      expressed in terms of either a fixed amount or as a percentage
      of either the initial notional or previous notional amount.
      This parametric representation is intended to cover the more
      common amortizing/accreting.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculationPeriodDatesReference" type="CalculationPeriodDatesReference
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A pointer style reference to the associated calculation
          period dates component defined elsewhere in the document.
        </xsd:documentation>
```

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      </xsd:annotation>
    </xsd:element>
    <xsd:element name="stepFrequency" type="Interval">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency at which the step changes occur. This
          frequency must be a multiple of the stream calculation
          period frequency.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="firstNotionalStepDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Effective date of the first change in notional (i.e. a
          calculation period start date).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="lastNotionalStepDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Effective date of the last change in notional (i.e. a
          calculation period start date).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:choice>
      <xsd:element name="notionalStepAmount" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The explicit amount that the notional changes on each
            step date. This can be a positive or negative amount.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:sequence>
        <xsd:element name="notionalStepRate" type="xsd:decimal">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The percentage amount by which the notional changes on
              each step date. The percentage is either a percentage
              applied to the initial notional amount or the previous
              outstanding notional, depending on the value of the
              element stepRelativeTo. The percentage can be either
              positive or negative. A percentage of 5% would be
              represented as 0.05.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="stepRelativeTo" type="StepRelativeToEnum">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies whether the notionalStepRate should be
              applied to the initial notional or the previous
              notional in order to calculate the notional step change
              amount.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:choice>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="OptionalEarlyTermination">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining an early termination provision where either or
      both parties have the right to exercise.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="singlePartyOption" type="SinglePartyOption" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          If optional early termination is not available to both
          parties then this component specifies the buyer and seller
          of the option.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element ref="exercise"/>
    <xsd:element name="exerciseNotice" type="ExerciseNotice" minOccurs="0" maxOccurs="unbound
```

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      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Definition of the party to whom notice of exercise should
          be given.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="followUpConfirmation" type="xsd:boolean" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A flag to indicate whether follow-up confirmation of
          exercise (written or electronic) is required following
          telephonic notice by the buyer to the seller or seller's
          agent.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="calculationAgent" type="CalculationAgent">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The ISDA Calculation Agent responsible for performing
          duties associated with an optional early termination.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="cashSettlement" type="CashSettlement">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          If specified, this means that cash settlement is applicable
          to the transaction and defines the parameters associated
          with the cash settlement prodcedure. If not specified, then
          physical settlement is applicable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="optionalEarlyTerminationAdjustedDates" type="OptionalEarlyTerminationA
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An early termination provision to terminate the trade at
          fair value where one or both parties have the right to
          decide on termination.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="OptionalEarlyTerminationAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted dates associated with an optional
      early termination provision.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="earlyTerminationEvent" type="EarlyTerminationEvent" maxOccurs="unbound
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with an individual earley
          termination date.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="PaymentCalculationPeriod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the adjusted payment date and associated
      calculation period parameters required to calculate the actual
      or projected payment amount. This type forms part of the
      cashflow representation of a swap stream.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="unadjustedPaymentDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="adjustedPaymentDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted payment date. This date should already be
          adjusted for any applicable business day convention. This
          component is not intended for use in trade confirmation but
          may be specified to allow the fee structure to also serve
          as a cashflow type component (all dates the Cashflows type
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          are adjusted payment dates).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:choice>
      <xsd:element name="calculationPeriod" type="CalculationPeriod" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The parameters used in the calculation of a fixed or
            floating rate calculation period amount. A list of
            calculation period elements may be ordered in the
            document by ascending start date. An FpML document which
            contains an unordered list of calculation periods is
            still regarded as a conformant document.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fixedPaymentAmount" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A known fixed payment amount.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:element name="discountFactor" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A decimal value representing the discount factor used to
          calculate the present value of cash flow.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="forecastPaymentAmount" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A monetary amount representing the forecast of the future
          value of the payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="presentValueAmount" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A monetary amount representing the present value of the
          forecast payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
  <xsd:attribute name="href" type="xsd:IDREF" ecore:reference="PricingStructure">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        Attribute that can be used to reference the yield curve used
        to estimate the discount factor.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:complexType>
<xsd:complexType name="PaymentDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining parameters used to generate the payment dates
      schedule, including the specification of early or delayed
      payments. Payment dates are determined relative to the
      calculation period dates or the reset dates.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="calculationPeriodDatesReference" type="CalculationPeriodDatesReferen
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A pointer style reference to the associated calculation
            period dates component defined elsewhere in the document.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="resetDatesReference" type="ResetDatesReference">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A pointer style reference to the associated reset dates
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        component defined elsewhere in the document.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:choice>
<xsd:element name="paymentFrequency" type="Interval">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The frequency at which regular payment dates occur. If the
      payment frequency is equal to the frequency defined in the
      calculation period dates component then one calculation
      period contributes to each payment amount. If the payment
      frequency is less frequent than the frequency defined in
      the calculation period dates component then more than one
      calculation period will contribute to the payment amount. A
      payment frequency more frequent than the calculation period
      frequency or one that is not a multiple of the calculation
      period frequency is invalid.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="firstPaymentDate" type="xsd:date" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The first unadjusted payment date. This day may be subject
      to adjustment in accordance with any business day
      convention specified in paymentDatesAdjustments. This
      element must only be included if there is an initial stub.
      This date will normally correspond to an unadjusted
      calculation period start or end date. This is true even if
      early or delayed payment is specified to be applicable
      since the actual first payment date will be the specified
      number of days before or after the applicable adjusted
      calculation period start or end date with the resulting
      payment date then being adjusted in accordance with any
      business day convention specified in
      paymentDatesAdjustments.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="lastRegularPaymentDate" type="xsd:date" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The last regular unadjusted payment date. This day may be
      subject to adjustment in accordance with any business day
      convention specified in paymentDatesAdjustments. This
      element must only be included if there is a final stub. All
      calculation periods after this date contribute to the final
      payment. The final payment is made relative to the final
      set of calculation periods or the final reset date as the
      case may be. This date will normally correspond to an
      unadjusted calculation period start or end date. This is
      true even if early or delayed payment is specified to be
      applicable since the actual last regular payment date will
      be the specified number of days before or after the
      applicable adjusted calculation period start or end date
      with the resulting payment date then being adjusted in
      accordance with any business day convention specified in
      paymentDatesAdjustments.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="payRelativeTo" type="PayRelativeToEnum">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Specifies whether the payments occur relative to each
      adjusted calculation period start date, adjusted
      calculation period end date or each reset date. The reset
      date is applicable in the case of certain euro (former
      French Franc) floating rate indices. Calculation period
      start date means relative to the start of the first
      calculation period contributing to a given payment.
      Similarly, calculation period end date means the end of the
      last calculation period contributing to a given payment.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="paymentDaysOffset" type="Offset" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      If early payment or delayed payment is required, specifies
      the number of days offset that the payment occurs relative
      to what would otherwise be the unadjusted payment date. The
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          offset can be specified in terms of either calendar or
          business days. Even in the case of a calendar days offset,
          the resulting payment date, adjusted for the specified
          calendar days offset, will still be adjusted in accordance
          with the specified payment dates adjustments. This element
          should only be included if early or delayed payment is
          applicable, i.e. if the periodMultiplier element value is
          not equal to zero. An early payment would be indicated by a
          negative periodMultiplier element value and a delayed
          payment (or payment lag) would be indicated by a positive
          periodMultiplier element value.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="paymentDatesAdjustments" type="BusinessDayAdjustments">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The business day convention to apply to each payment date
          if it would otherwise fall on a day that is not a business
          day in the specified financial business centers.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="PaymentDatesReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a payment dates structure.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference">
      <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="PaymentDate
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="PriceSourceDisruption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used to get a price quote to
      replace the settlement rate option that is disrupted.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="fallbackReferencePrice" type="FallbackReferencePrice">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The method, prioritzed by the order it is listed in this
          element, to get a replacement rate for the disrupted
          settlement rate option.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="PrincipalExchange">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining a principal exchange amount and adjusted
      exchange date. The type forms part of the cashflow
      representation of a swap stream.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="unadjustedPrincipalExchangeDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="adjustedPrincipalExchangeDate" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The principal exchange date. This date should already be
          adjusted for any applicable business day convention.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="principalExchangeAmount" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The principal exchange amount. This amount should be
          positive if the stream payer is paying the exchange amount
          and signed negative if they are receiving it.
        </xsd:documentation>
      </xsd:annotation>
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    </xsd:element>
    <xsd:element name="discountFactor" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The value representing the discount factor used to
          calculate the present value of the principal exchange
          amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="presentValuePrincipalExchangeAmount" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The amount representing the present value of the principal
          exchange.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:complexType name="RelevantUnderlyingDateReference">
  <xsd:annotation>
    <xsd:documentation>
      Reference to relevant underlying date.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference"/>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="ResetDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters used to generate the reset dates
      schedule and associated fixing dates. The reset dates are
      determined relative to the calculation periods schedules dates.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculationPeriodDatesReference" type="CalculationPeriodDatesReference
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A pointer style reference to the associated calculation
          period dates component defined elsewhere in the document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="resetRelativeTo" type="ResetRelativeToEnum" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies whether the reset dates are determined with
          respect to each adjusted calculation period start date or
          adjusted calculation period end date. If the reset
          frequency is specified as daily this element must not be
          included.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="initialFixingDate" type="RelativeDateOffset" minOccurs="0"/>
    <xsd:element name="fixingDates" type="RelativeDateOffset">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the fixing date relative to the reset date in
          terms of a business days offset and an associated set of
          financial business centers. Normally these offset
          calculation rules will be those specified in the ISDA
          definition for the relevant floating rate index (ISDA's
          Floating Rate Option). However, non-standard offset
          calculation rules may apply for a trade if mutually agreed
          by the principal parties to the transaction. The href
          attribute on the dateRelativeTo element should reference
          the id attribute on the resetDates element.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="rateCutOffDaysOffset" type="Offset" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the number of business days before the period end
          date when the rate cut-off date is assumed to apply. The
          financial business centers associated with determining the
          rate cut-off date are those specified in the reset dates
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          adjustments. The rate cut-off number of days must be a
          negative integer (a value of zero would imply no rate cut
          off applies in which case the rateCutOffDaysOffset element
          should not be included). The relevant rate for each reset
          date in the period from, and including, a rate cut-off date
          to, but excluding, the next applicable period end date (or,
          in the case of the last calculation period, the termination
          date) will (solely for purposes of calculating the floating
          amount payable on the next applicable payment date) be
          deemed to be the relevant rate in effect on that rate
          cut-off date. For example, if rate cut-off days for a daily
          averaging deal is -2 business days, then the refix rate
          applied on (period end date - 2 days) will also be applied
          as the reset on (period end date - 1 day), i.e. the actual
          number of reset dates remains the same but from the rate
          cut-off date until the period end date, the same refix rate
          is applied. Note that in the case of several calculation
          periods contributing to a single payment, the rate cut-off
          is assumed only to apply to the final calculation period
          contributing to that payment. The day type associated with
          the offset must imply a business days offset.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="resetFrequency" type="ResetFrequency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The frequency at which reset dates occur. In the case of a
          weekly reset frequency, also specifies the day of the week
          that the reset occurs. If the reset frequency is greater
          than the calculation period frequency then this implies
          that more than one reset date is established for each
          calculation period and some form of rate averaging is
          applicable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="resetDatesAdjustments" type="BusinessDayAdjustments">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The business day convention to apply to each reset date if
          it would otherwise fall on a day that is not a business day
          in the specified financial business centers.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID" use="required"/>
</xsd:complexType>
<xsd:complexType name="ResetDatesReference">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Reference to a reset dates component.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Reference">
      <xsd:attribute name="href" type="xsd:IDREF" use="required" ecore:reference="ResetDates"
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="SettlementProvision">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the specification of settlement terms, occuring
      when the settlement currency is different to the notional
      currency of the trade.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="settlementCurrency" type="Currency">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency that stream settles in (to support swaps that
          settle in a currency different from the notional currency).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="nonDeliverableSettlement" type="NonDeliverableSettlement" minOccurs="0
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The specification of the non-deliverable settlement
          provision.
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        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="SettlementRateOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the settlement rate options through a scheme
      reflecting the terms of the Annex A to the 1998 FX and Currency
      Option Definitions.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="settlementRateOptionScheme" type="xsd:anyURI" default="http://www.
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="SinglePartyOption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the buyer and seller of an option.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:group ref="BuyerSeller.model"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="StubCalculationPeriodAmount">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining how the initial or final stub calculation
      period amounts is calculated. For example, the rate to be
      applied to the initial or final stub calculation period may be
      the linear interpolation of two different tenors for the
      floating rate index specified in the calculation period amount
      component, e.g. A two month stub period may used the linear
      interpolation of a one month and three month floating rate. The
      different rate tenors would be specified in this component.
      Note that a maximum of two rate tenors can be specified. If a
      stub period uses a single index tenor and this is the same as
      that specified in the calculation period amount component then
      the initial stub or final stub component, as the case may be,
      must not be included.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="calculationPeriodDatesReference" type="CalculationPeriodDatesReference
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A pointer style reference to the associated calculation
          period dates component defined elsewhere in the document.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="initialStub" type="StubValue" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies how the initial stub amount is calculated. A
          single floating rate tenor different to that used for the
          regular part of the calculation periods schedule may be
          specified, or two floating tenors may be specified. If two
          floating rate tenors are specified then Linear
          Interpolation (in accordance with the 2000 ISDA
          Definitions, Section 8.3. Interpolation) is assumed to
          apply. Alternatively, an actual known stub rate or stub
          amount may be specified.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="finalStub" type="StubValue" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies how the final stub amount is calculated. A single
          floating rate tenor different to that used for the regular
          part of the calculation periods schedule may be specified,
          or two floating tenors may be specified. If two floating
          rate tenors are specified then Linear Interpolation (in
          accordance with the 2000 ISDA Definitions, Section 8.3.
          Interpolation) is assumed to apply. Alternatively, an
          actual known stub rate or stub amount may be specified.
        </xsd:documentation>
```

```
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Swap">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining swap streams and additional payments between
      the principal parties involved in the swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:element name="swapStream" type="InterestRateStream" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The swap streams.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="earlyTerminationProvision" type="EarlyTerminationProvision" minOcc
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Parameters specifying provisions relating to the
              optional and mandatory early terminarion of a swap
              transaction.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="cancelableProvision" type="CancelableProvision" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A provision that allows the specification of an
              embedded option within a swap giving the buyer of the
              option the right to terminate the swap, in whole or in
              part, on the early termination date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="extendibleProvision" type="ExtendibleProvision" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A provision that allows the specification of an
              embedded option with a swap giving the buyer of the
              option the right to extend the swap, in whole or in
              part, to the extended termination date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="additionalPayment" type="Payment" minOccurs="0" maxOccurs="unbound
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Additional payments between the principal parties.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="additionalTerms" type="SwapAdditionalTerms" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Contains any additional terms to the swap contract.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="SwapAdditionalTerms">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Additional terms to a swap contract.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="bondReference" type="BondReference" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Reference to a bond underlyer to represent an asset swap or
          Condition Precedent Bond.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

```
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Swaption">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type to define an option on a swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="Product">
      <xsd:sequence>
        <xsd:group ref="BuyerSeller.model"/>
        <xsd:element name="premium" type="Payment" minOccurs="0" maxOccurs="unbounded">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The option premium amount payable by buyer to seller on
              the specified payment date.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element ref="exercise"/>
        <xsd:element name="exerciseProcedure" type="ExerciseProcedure" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A set of parameters defining procedures associated with
              the exercise.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="calculationAgent" type="CalculationAgent" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The ISDA Calculation Agent responsible for performing
              duties associated with an optional early termination.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="cashSettlement" type="CashSettlement" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              If specified, this means that cash settlement is
              applicable to the transaction and defines the
              parameters associated with the cash settlement
              prodcedure. If not specified, then physical settlement
              is applicable.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="swaptionStraddle" type="xsd:boolean">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Whether the option is a swaption or a swaption
              straddle.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="swaptionAdjustedDates" type="SwaptionAdjustedDates" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The adjusted dates associated with swaption exercise.
              These dates have been adjusted for any applicable
              business day convention.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element ref="swap"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="SwaptionAdjustedDates">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the adjusted dates associated with swaption
      exercise and settlement.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="exerciseEvent" type="ExerciseEvent" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The adjusted dates associated with an individual swaption
          exercise date.
```

```
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="ValuationPostponement">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Specifies how long to wait to get a quote from a settlement
      rate option upon a price source disruption.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="maximumDaysOfPostponement" type="xsd:positiveInteger">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The maximum number of days to wait for a quote from the
          disrupted settlement rate option before proceding to the
          next method.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="YieldCurveMethod">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining the parameters required for each of the ISDA
      defined yield curve methods for cash settlement.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:sequence>
      <xsd:element name="settlementRateSource" type="SettlementRateSource" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The method for obtaining a settlement rate. This may be
            from some information source (e.g. Reuters) or from a set
            of reference banks.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="quotationRateType" type="QuotationRateTypeEnum">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Which rate quote is to be observed, either Bid, Mid,
            Offer or Exercising Party Pays. The meaning of Exercising
            Party Pays is defined in the 2000 ISDA Definitions,
            Section 17.2. Certain Definitions Relating to Cash
            Settlement, paragraph (j)
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="bulletPayment" type="BulletPayment" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A product to represent a single known payment.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="capFloor" type="CapFloor" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A cap, floor or cap floor structures product definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="floatingRateCalculation" type="FloatingRateCalculation" substitutionGroup=
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A floating rate calculation definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="fra" type="Fra" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A forward rate agreement product definition.
    </xsd:documentation>
  </xsd:annotation>
```

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</xsd:element>
<xsd:element name="inflationRateCalculation" type="InflationRateCalculation" substitutionGrou
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An inflation rate calculation definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="rateCalculation" type="Rate" abstract="true">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      The base element for the floating rate calculation definitions.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="swap" type="Swap" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A swap product definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="swaption" type="Swaption" substitutionGroup="product">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A swaption product definition.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:group name="MandatoryEarlyTermination.model">
  <xsd:choice>
    <xsd:element name="mandatoryEarlyTermination" type="MandatoryEarlyTermination">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A mandatory early termination provision to terminate the
          swap at fair value.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:sequence>
      <xsd:element name="mandatoryEarlyTerminationDateTenor" type="Interval">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Period after trade date of the mandatory early
            termination date.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="mandatoryEarlyTermination" type="MandatoryEarlyTermination" minOccur
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A mandatory early termination provision to terminate the
            swap at fair value.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:choice>
</xsd:group>
<xsd:group name="OptionalEarlyTermination.model">
  <xsd:choice>
    <xsd:element name="optionalEarlyTermination" type="OptionalEarlyTermination">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An option for either or both parties to terminate the swap
          at fair value.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:sequence>
      <xsd:element name="optionalEarlyTerminationParameters" type="ExercisePeriod">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Definition of the first early termination date and the
            frequency of the termination dates subsequent to that.
            American exercise is defined by having a frequency of one
            day.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="optionalEarlyTermination" type="OptionalEarlyTermination" minOccurs=
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
```

```
                An option for either or both parties to terminate the
                swap at fair value.
              </xsd:documentation>
            </xsd:annotation>
          </xsd:element>
        </xsd:sequence>
      </xsd:choice>
    </xsd:group>
</xsd:schema>
```