XML Schema Documentation

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  - Complex Type: **NotionalStepRule**
  - Complex Type: **OptionalEarlyTermination**
  - Complex Type: **OptionalEarlyTerminationAdjustedDates**
  - Complex Type: **PaymentCalculationPeriod**
  - Complex Type: **PaymentDates**
  - Complex Type: **PaymentDatesReference**
  - Complex Type: **PriceSourceDisruption**
  - Complex Type: **PrincipalExchange**
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  - Complex Type: **ResetDates**
  - Complex Type: **ResetDatesReference**

- Complex Type: **SettlementProvision**
- Complex Type: **SettlementRateOption**
- Complex Type: **SinglePartyOption**
- Complex Type: **StubCalculationPeriodAmount**
- Complex Type: **Swap**
- Complex Type: **SwapAdditionalTerms**
- Complex Type: **Swaption**
- Complex Type: **SwaptionAdjustedDates**
- Complex Type: **ValuationPostponement**
- Complex Type: **YieldCurveMethod**
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Schema Document Properties

Target Namespace	**http://www.fpml.org/2007/FpML-4-4**
Version	$Revision: 2350 $
Element and Attribute Namespaces	• Global element and attribute declarations belong to this schema's target namespace. • By default, local element declarations belong to this schema's target namespace. • By default, local attribute declarations have no namespace.
Schema Composition	• This schema includes components from the following schema document(s): ○ fpml-mktenv-4-4.xsd

Declared Namespaces

Prefix	Namespace
Default namespace	**http://www.fpml.org/2007/FpML-4-4**
ecore	http://www.eclipse.org/emf/2002/Ecore
xml	http://www.w3.org/XML/1998/namespace
xsd	http://www.w3.org/2001/XMLSchema
fpml	**http://www.fpml.org/2007/FpML-4-4**

Schema Component Representation

```
<xsd:schema nsPrefix="fpml" package="org.fpml" documentRoot="FpML" targetNamespace="http://
www.fpml.org/2007/FpML-4-4" version="$Revision: 2350 $"
attributeFormDefault="unqualified" elementFormDefault="qualified">
   <xsd:include schemaLocation="fpml-mktenv-4-4.xsd"/>
   ...
</xsd:schema>
```

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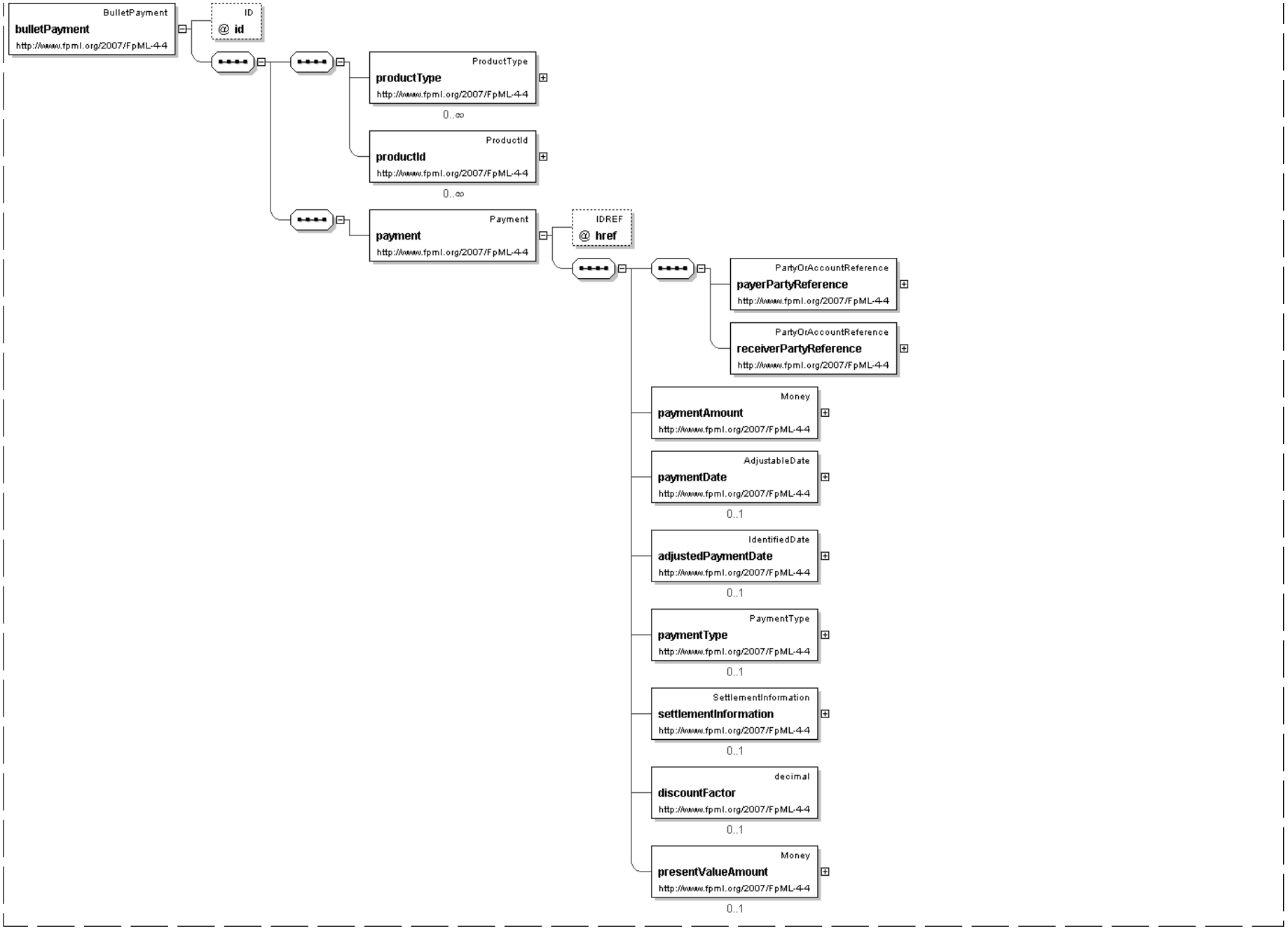
Global Declarations

Element: bulletPayment

- *This element can be used wherever the following element is referenced:*
  - product

Name	bulletPayment
Type	BulletPayment
Nillable	no
Abstract	no
Documentation	A product to represent a single known payment.

Logical Diagram

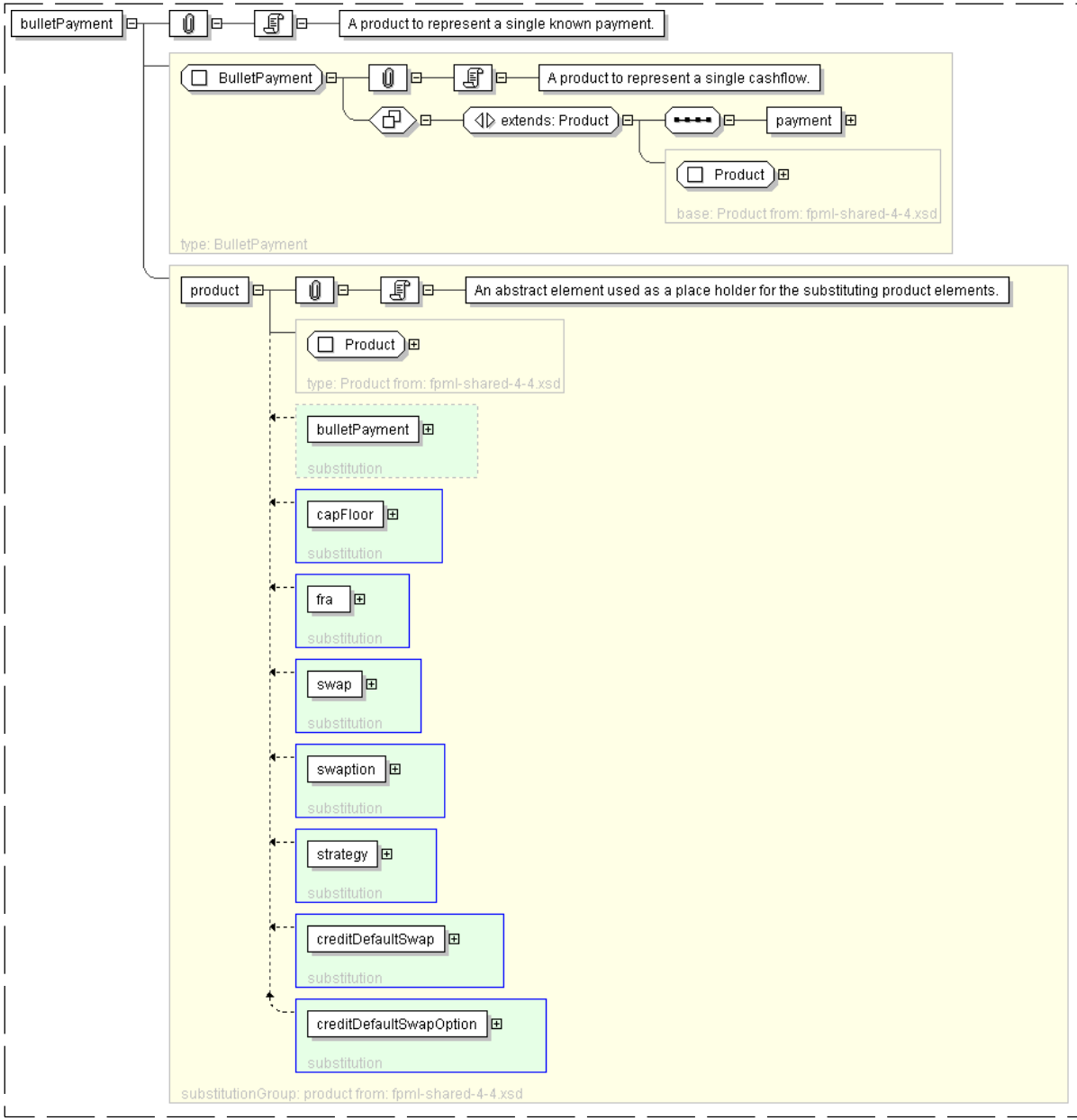


XML Instance Representation

```
<bulletPayment
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
   'A classification of the type of product. FpML defines a simple product categorization using
   a coding scheme.'

   <productId> ProductId </productId> [0..*]
```

```
    'A product reference identifier allocated by a party. FpML does not define the domain
    values associated with this element. Note that the domain values for this element are
    not strictly an enumerated list.'

    <payment> Payment </payment> [1]
    'A known payment between two parties.'

</bulletPayment>
```

Diagram



Schema Component Representation

```
<xsd:element name="bulletPayment" type=" BulletPayment " substitutionGroup="product"/>
```

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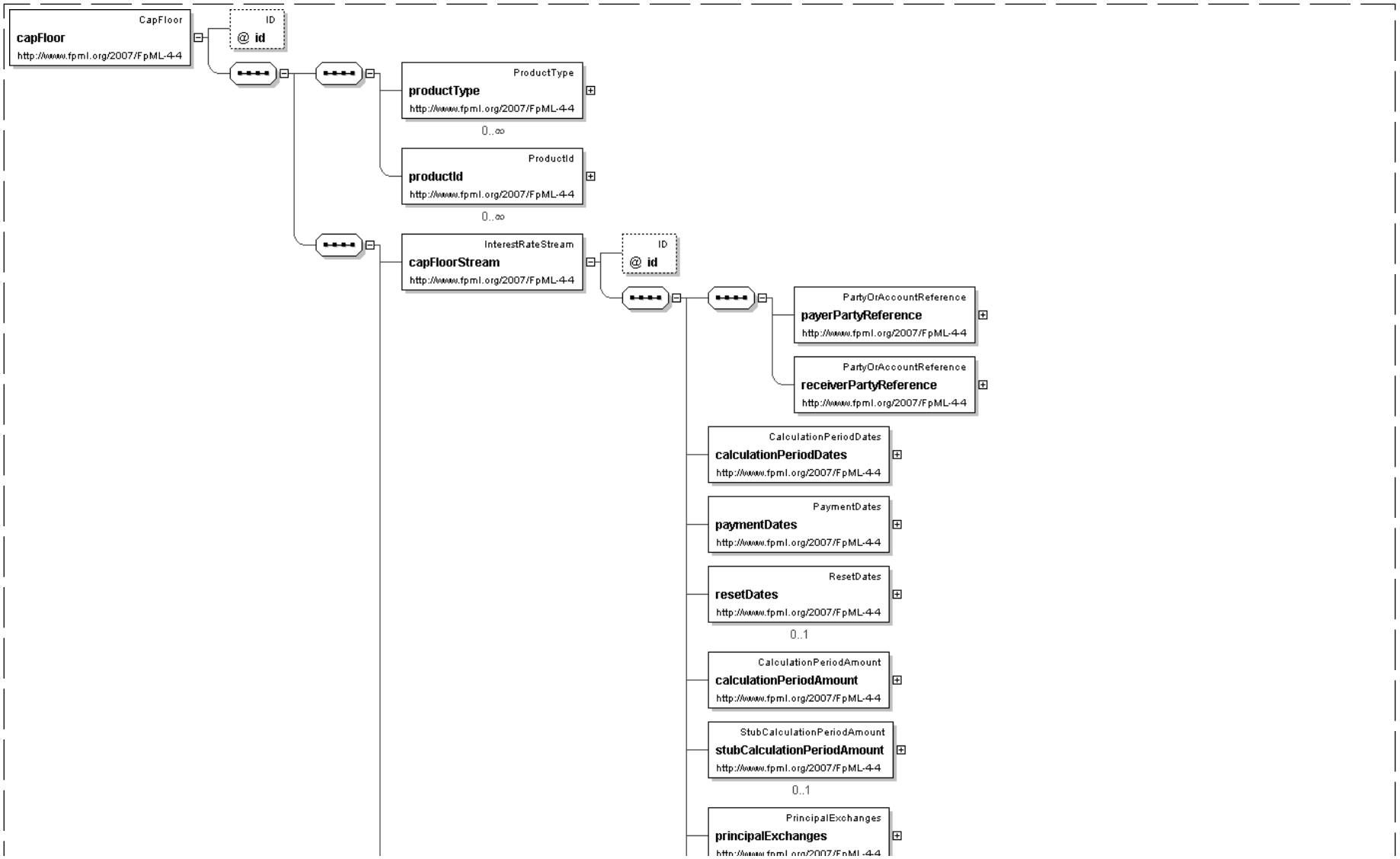
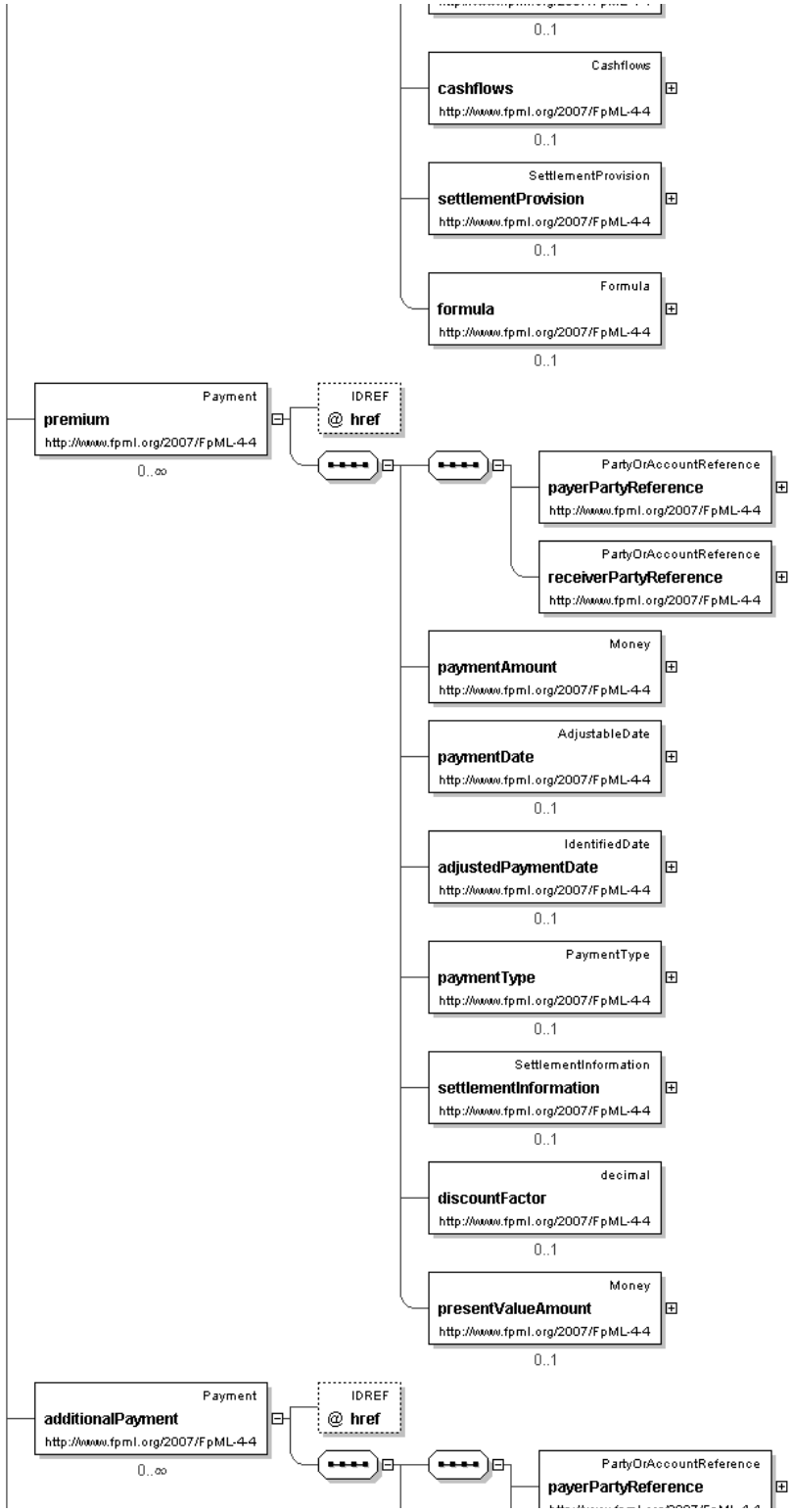
Element: capFloor

- *This element can be used wherever the following element is referenced:*
  - product

Name	capFloor
Type	CapFloor
Nillable	no
Abstract	no
Documentation	A cap, floor or cap floor structures product definition.

Logical Diagram




0..1
Cashflows
cashflows
http://www.fpml.org/2007/FpML-4-4
0..1
SettlementProvision
settlementProvision
http://www.fpml.org/2007/FpML-4-4
0..1
Formula
formula
http://www.fpml.org/2007/FpML-4-4
0..1
Payment
premium
http://www.fpml.org/2007/FpML-4-4
0..∞
IDREF
@ href
PartyOrAccountReference
payerPartyReference
http://www.fpml.org/2007/FpML-4-4
PartyOrAccountReference
receiverPartyReference
http://www.fpml.org/2007/FpML-4-4
Money
paymentAmount
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AdjustableDate
paymentDate
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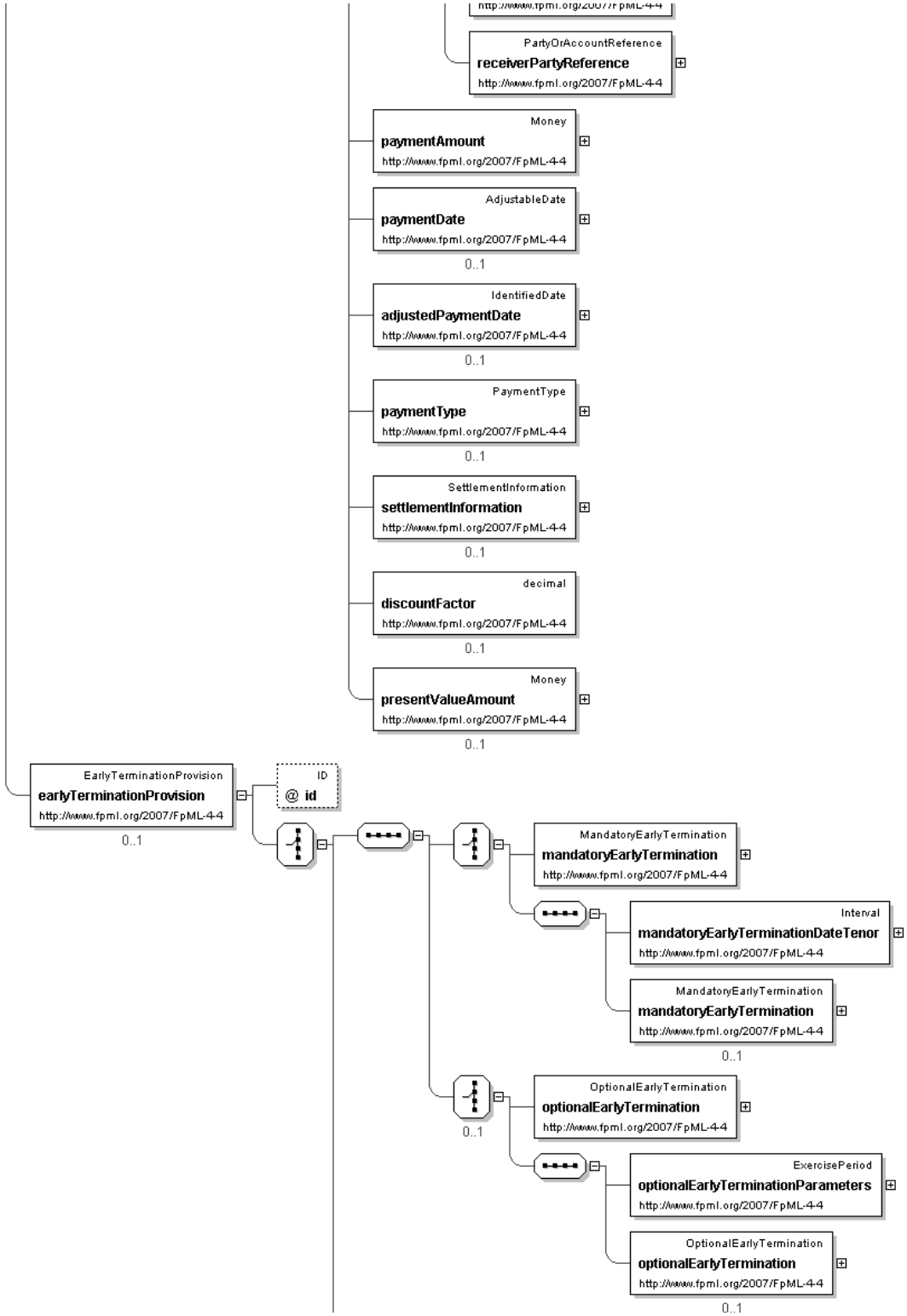
IdentifiedDate
adjustedPaymentDate
http://www.fpml.org/2007/FpML-4-4
0..1
PaymentType
paymentType
http://www.fpml.org/2007/FpML-4-4
0..1
SettlementInformation
settlementInformation
http://www.fpml.org/2007/FpML-4-4
0..1
decimal
discountFactor
http://www.fpml.org/2007/FpML-4-4
0..1
Money
presentValueAmount
http://www.fpml.org/2007/FpML-4-4
0..1
Payment
additionalPayment
http://www.fpml.org/2007/FpML-4-4
0..∞
IDREF
@ href
PartyOrAccountReference
payerPartyReference


PartyOrAccountReference
receiverPartyReference
http://www.fpml.org/2007/FpML-4-4
Money
paymentAmount
http://www.fpml.org/2007/FpML-4-4
AdjustableDate
paymentDate
http://www.fpml.org/2007/FpML-4-4
0..1
IdentifiedDate
adjustedPaymentDate
http://www.fpml.org/2007/FpML-4-4
0..1
PaymentType
paymentType
http://www.fpml.org/2007/FpML-4-4
0..1
SettlementInformation
settlementInformation
http://www.fpml.org/2007/FpML-4-4
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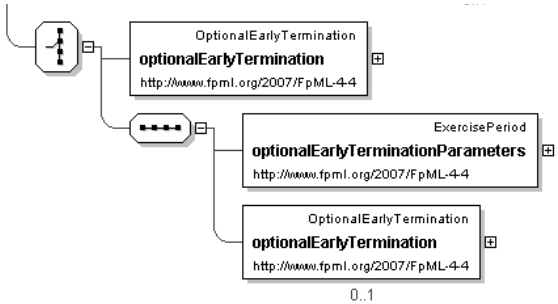
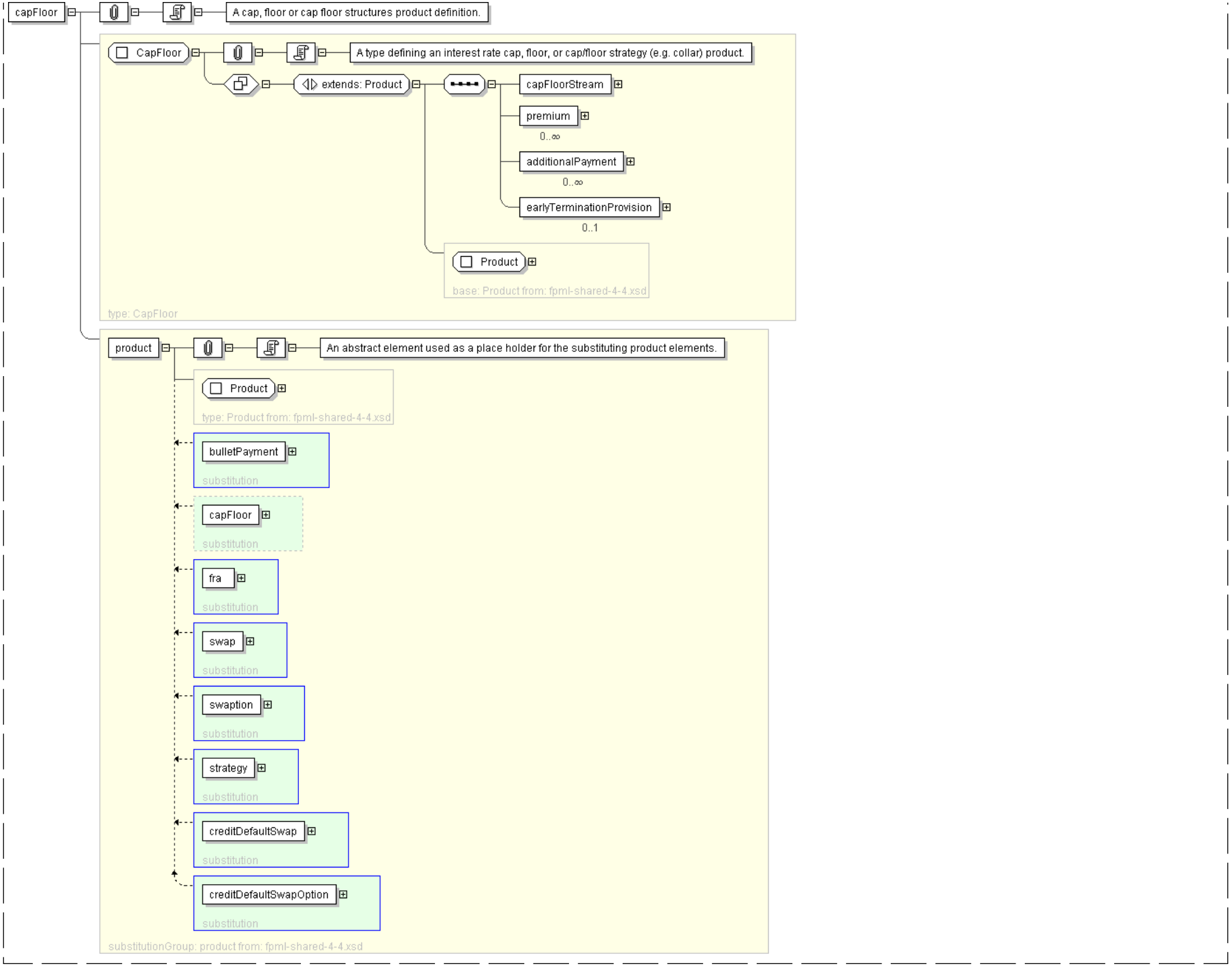
decimal
discountFactor
http://www.fpml.org/2007/FpML-4-4
0..1
Money
presentValueAmount
http://www.fpml.org/2007/FpML-4-4
0..1
EarlyTerminationProvision
earlyTerminationProvision
http://www.fpml.org/2007/FpML-4-4
0..1
ID
@ id
MandatoryEarlyTermination
mandatoryEarlyTermination
http://www.fpml.org/2007/FpML-4-4
Interval
mandatoryEarlyTerminationDateTenor
http://www.fpml.org/2007/FpML-4-4
MandatoryEarlyTermination
mandatoryEarlyTermination
http://www.fpml.org/2007/FpML-4-4
0..1
OptionalEarlyTermination
optionalEarlyTermination
http://www.fpml.org/2007/FpML-4-4
0..1
ExercisePeriod
optionalEarlyTerminationParameters
http://www.fpml.org/2007/FpML-4-4
OptionalEarlyTermination
optionalEarlyTermination
http://www.fpml.org/2007/FpML-4-4
0..1



XML Instance Representation

```
<capFloor
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
   'A classification of the type of product. FpML defines a simple product categorization using
   a coding scheme.'

   <productId> ProductId </productId> [0..*]
   'A product reference identifier allocated by a party. FpML does not define the domain
   values associated with this element. Note that the domain values for this element are
   not strictly an enumerated list.'

   <capFloorStream> InterestRateStream </capFloorStream> [1]
   <premium> Payment </premium> [0..*]
   'The option premium amount payable by buyer to seller on the specified payment date.'

   <additionalPayment> Payment </additionalPayment> [0..*]
   'Additional payments between the principal parties.'

   <earlyTerminationProvision> EarlyTerminationProvision </earlyTerminationProvision> [0..1]
   'Parameters specifying provisions relating to the optional and mandatory early terminarion of
   a CapFloor transaction.'

</capFloor>
```

Diagram



Schema Component Representation

```
<xsd:element name="capFloor" type=" CapFloor " substitutionGroup="product"/>
```

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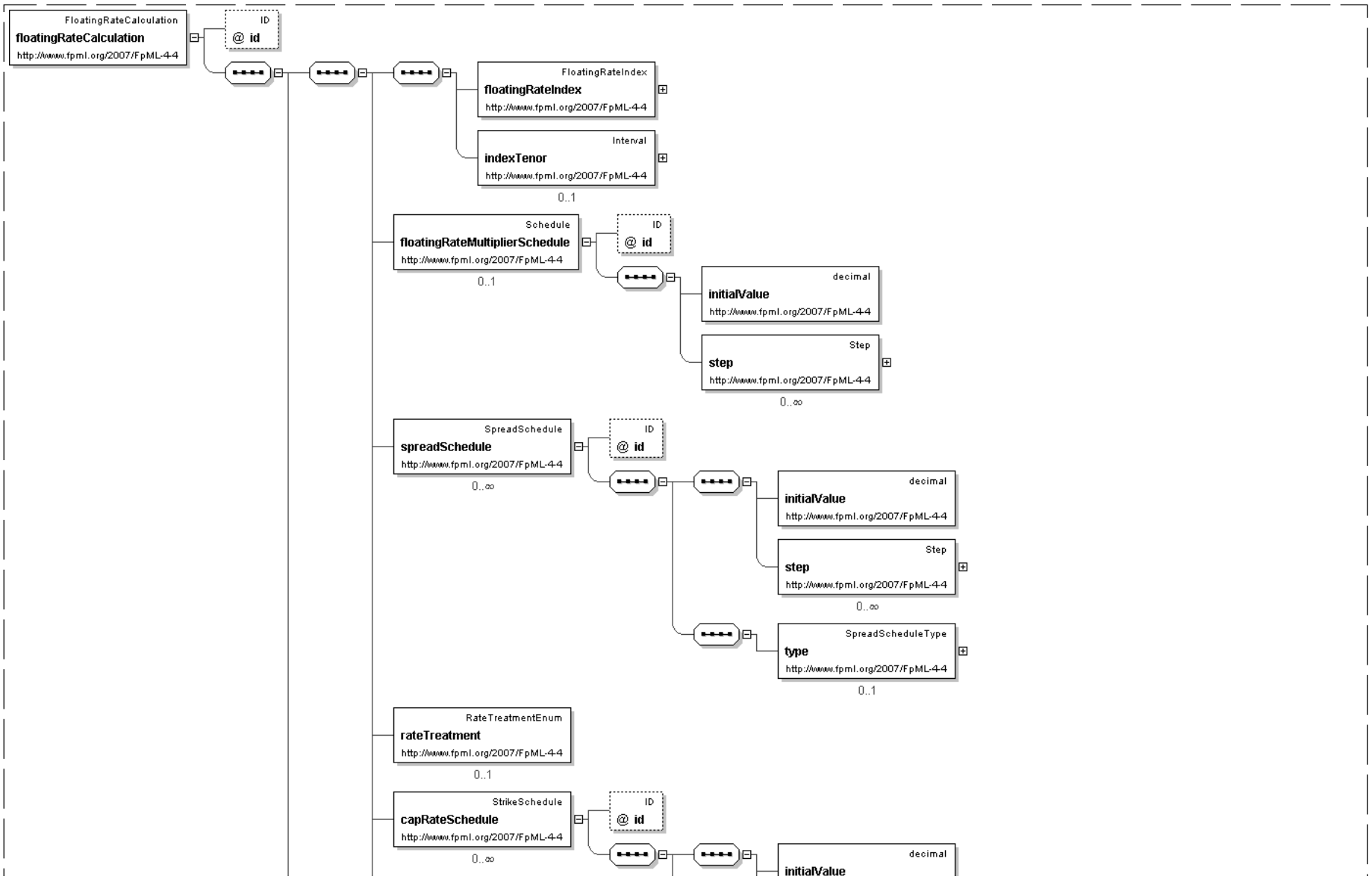
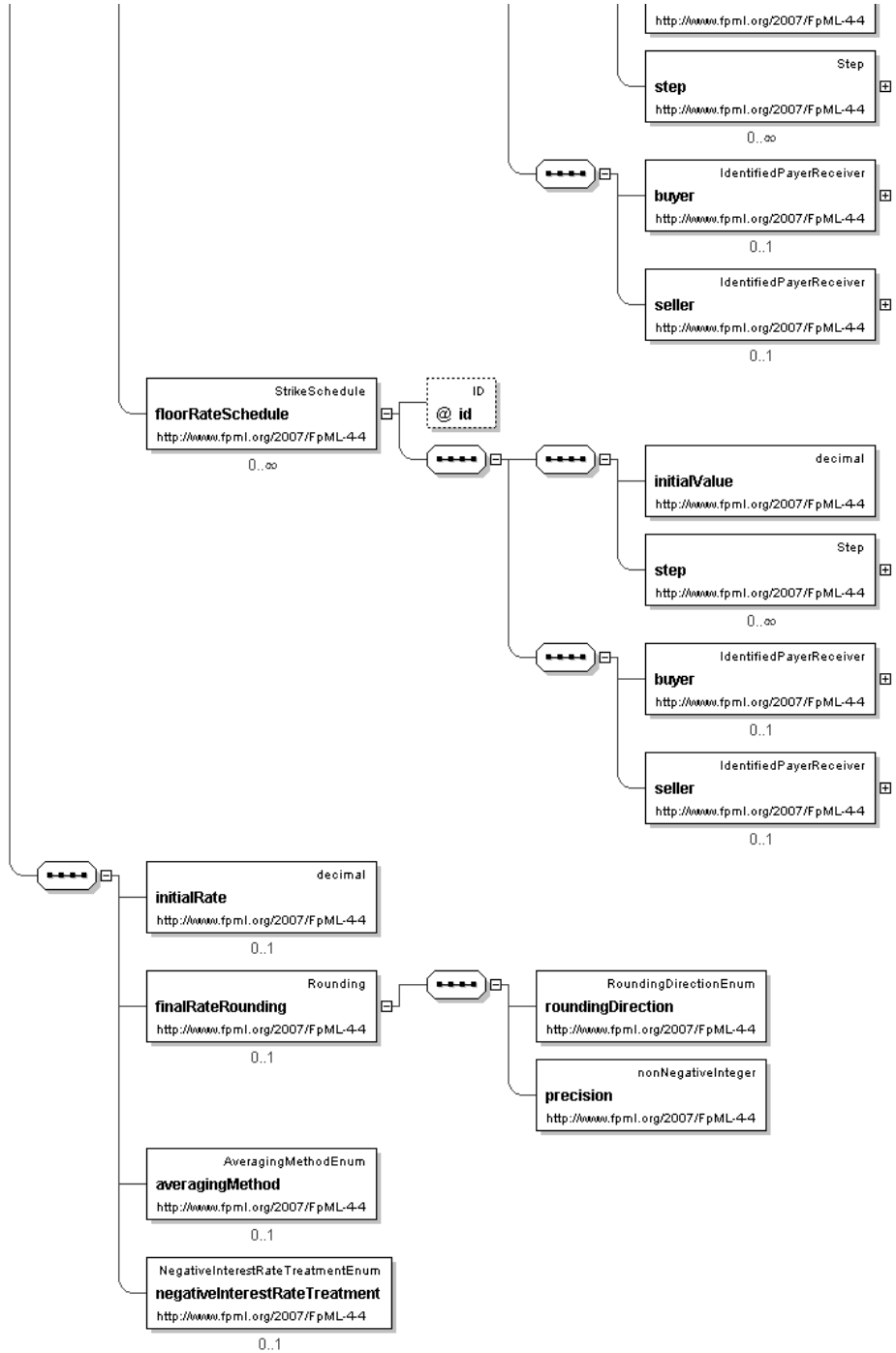
Element: floatingRateCalculation

- *This element can be used wherever the following element is referenced:*
  - rateCalculation

Name	floatingRateCalculation
Type	FloatingRateCalculation
Nillable	no
Abstract	no
Documentation	A floating rate calculation definition.

Logical Diagram





XML Instance Representation

```
<floatingRateCalculation
id=" xsd:ID [0..1]">
   <floatingRateIndex> FloatingRateIndex </floatingRateIndex> [1]
```

<indexTenor> Interval </indexTenor> [0..1]

'The ISDA Designated Maturity, i.e. the tenor of the floating rate.'

<floatingRateMultiplierSchedule> Schedule </floatingRateMultiplierSchedule> [0..1]

'A rate multiplier or multiplier schedule to apply to the floating rate. A multiplier schedule is expressed as explicit multipliers and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in the calculationPeriodDatesAdjustments. The multiplier can be a positive or negative decimal. This element should only be included if the multiplier is not equal to 1 (one) for the term of the stream.'

<spreadSchedule> SpreadSchedule </spreadSchedule> [0..*]

'The ISDA Spread or a Spread schedule expressed as explicit spreads and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments. 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.'

<rateTreatment> RateTreatmentEnum </rateTreatment> [0..1]

'The specification of any rate conversion which needs to be applied to the observed rate before being used in any calculations. The two common conversions are for securities quoted on a bank discount basis which will need to be converted to either a Money Market Yield or Bond Equivalent Yield. See the Annex to the 2000 ISDA Definitions, Section 7.3. Certain General Definitions Relating to Floating Rate Options, paragraphs (g) and (h) for definitions of these terms.'

<capRateSchedule> StrikeSchedule </capRateSchedule> [0..*]

'The cap rate or cap rate schedule, if any, which applies to the floating rate. The cap rate (strike) is only required where the floating rate on a swap stream is capped at a certain level. A cap rate schedule is expressed as explicit cap rates and dates and the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments. 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.'

<floorRateSchedule> StrikeSchedule </floorRateSchedule> [0..*]

'The floor rate or floor rate schedule, if any, which applies to the floating rate. The floor rate (strike) is only required where the floating rate on a swap stream is floored at a certain strike level. A floor rate schedule is expressed as explicit floor rates and dates and the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments. The floor rate is assumed to be exclusive of any spread and is a per annum rate, expressed as a decimal. A floor rate of 5% would be represented as 0.05.'

<initialRate> xsd:decimal </initialRate> [0..1]

'The initial floating rate reset agreed between the principal parties involved in the trade. This is assumed to be the first required reset rate for the first regular calculation period. It should only be included when the rate is not equal to the rate published on the source implied by the floating rate index. An initial rate of 5% would be represented as 0.05.'

<finalRateRounding> Rounding </finalRateRounding> [0..1]

'The rounding convention to apply to the final rate used in determination of a calculation period amount.'

<averagingMethod> AveragingMethodEnum </averagingMethod> [0..1]

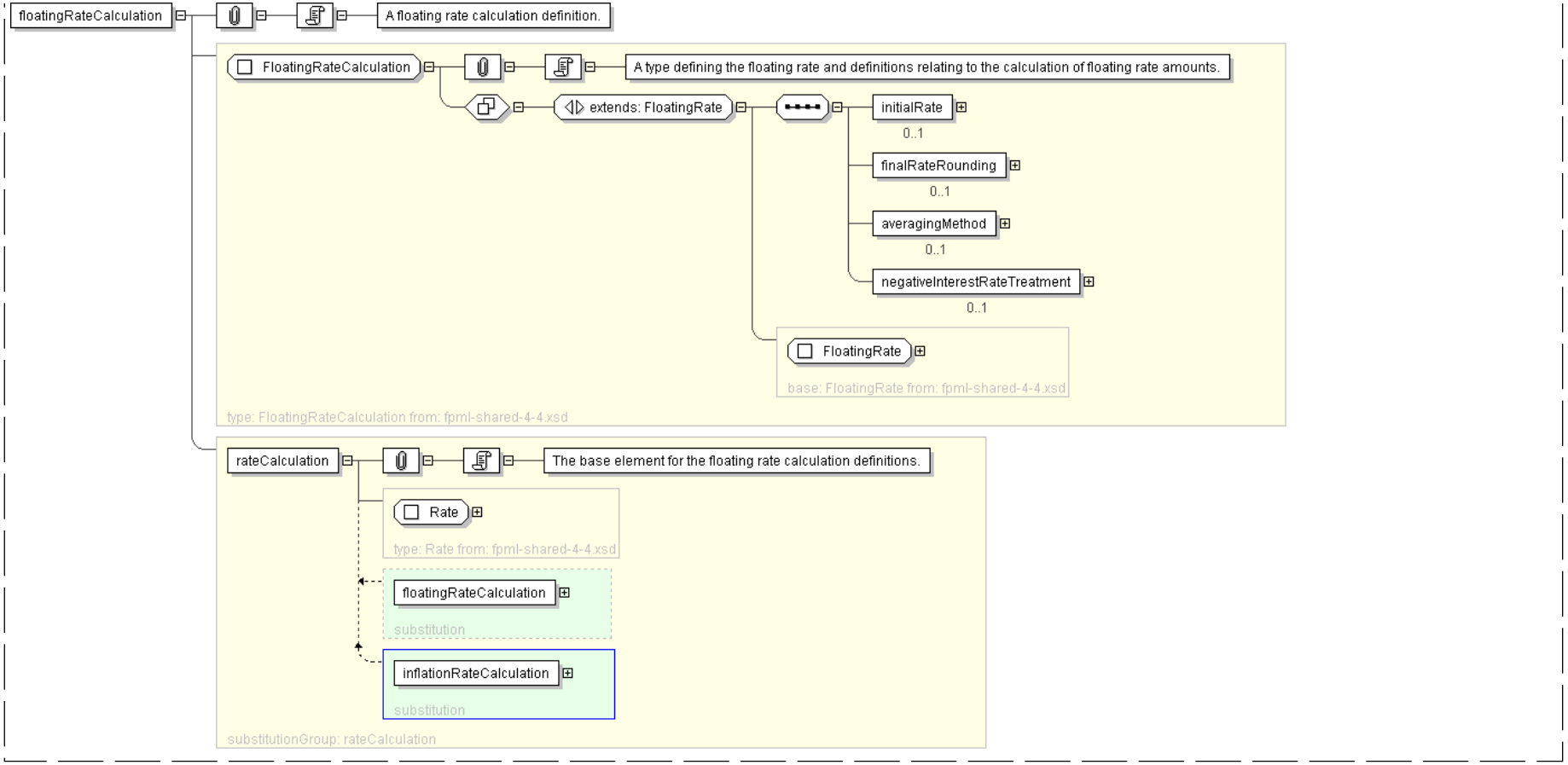
'If averaging is applicable, this component specifies whether a weighted or unweighted average method of calculation is to be used. The component must only be included when averaging applies.'

<negativeInterestRateTreatment> NegativeInterestRateTreatmentEnum
</negativeInterestRateTreatment> [0..1]

'The specification of any provisions for calculating payment obligations when a floating rate is negative (either due to a quoted negative floating rate or by operation of a spread that is subtracted from the floating rate).'

</floatingRateCalculation>

Diagram



Schema Component Representation

```
<xsd:element name="floatingRateCalculation" type=" FloatingRateCalculation
" substitutionGroup="rateCalculation"/>
```

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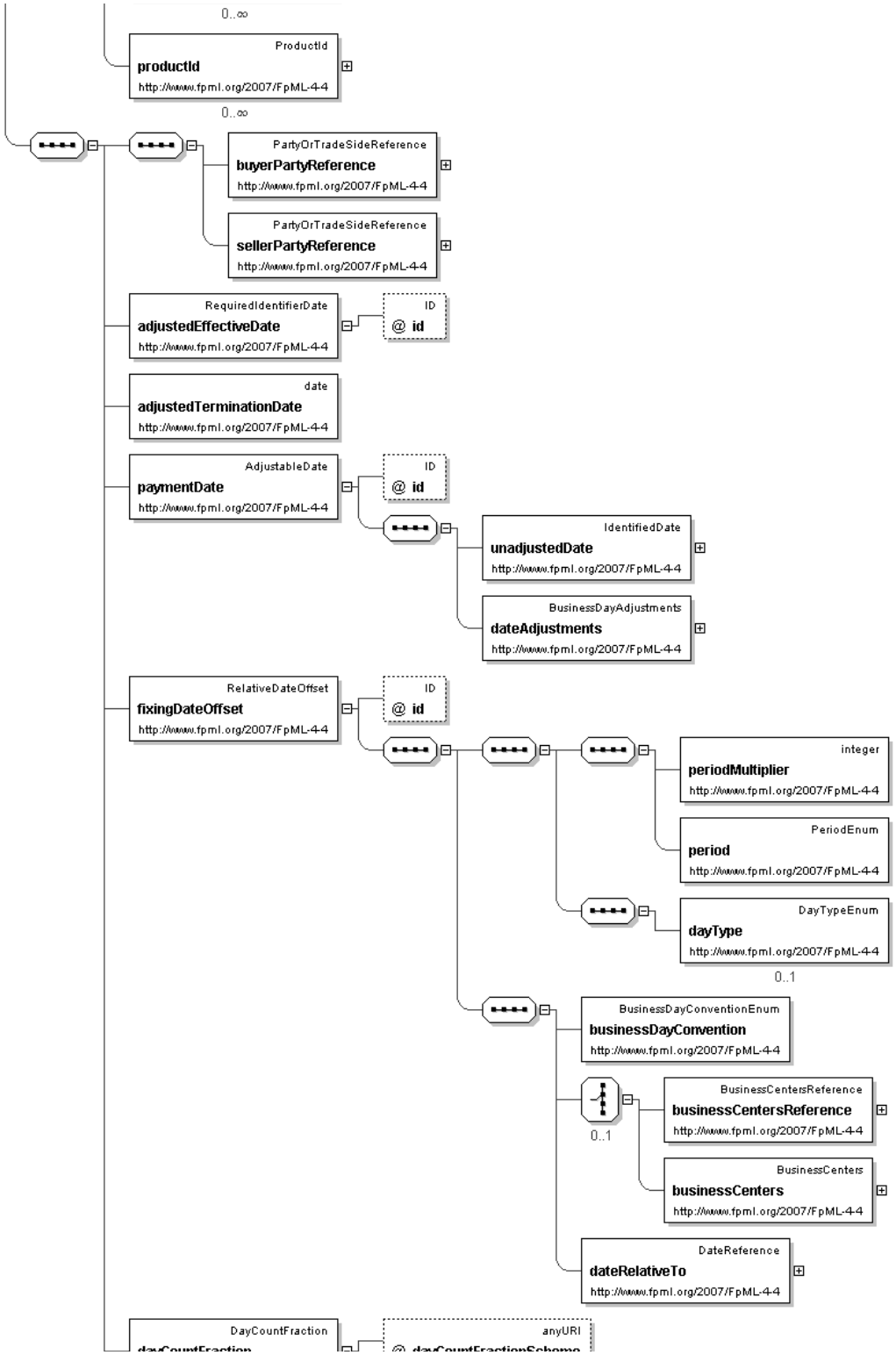
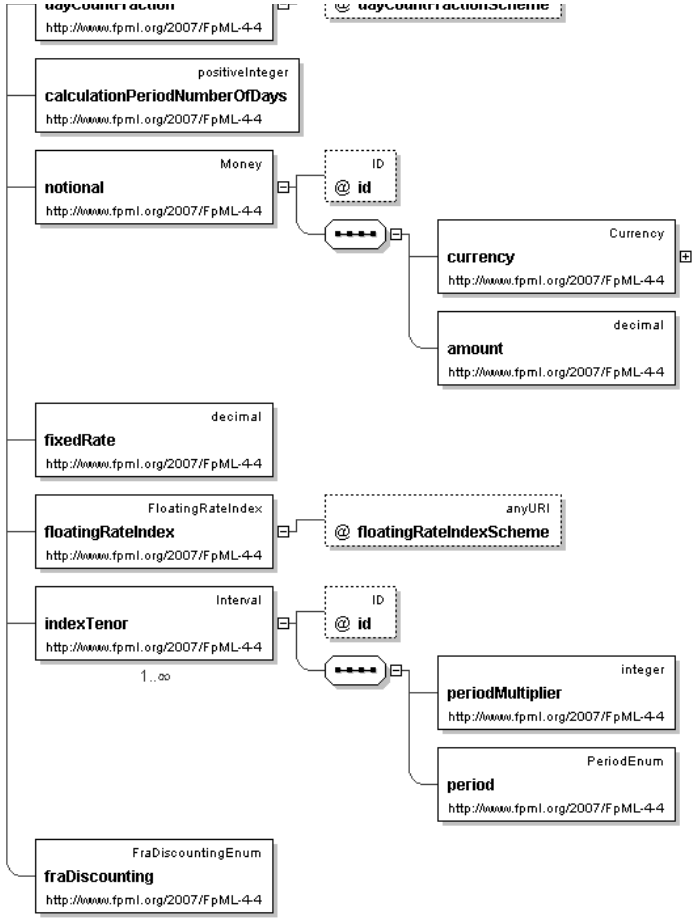
Element: fra

- *This element can be used wherever the following element is referenced:*
  - product

Name	fra
Type	Fra
Nillable	no
Abstract	no
Documentation	A forward rate agreement product definition.

Logical Diagram


0..∞
ProductId
productId
http://www.fpml.org/2007/FpML-4-4
0..∞
PartyOrTradeSideReference
buyerPartyReference
http://www.fpml.org/2007/FpML-4-4
PartyOrTradeSideReference
sellerPartyReference
http://www.fpml.org/2007/FpML-4-4
RequiredIdentifierDate
adjustedEffectiveDate
http://www.fpml.org/2007/FpML-4-4
ID
@ id
date
adjustedTerminationDate
http://www.fpml.org/2007/FpML-4-4
AdjustableDate
paymentDate
http://www.fpml.org/2007/FpML-4-4
ID
@ id
IdentifiedDate
unadjustedDate
http://www.fpml.org/2007/FpML-4-4
BusinessDayAdjustments
dateAdjustments
http://www.fpml.org/2007/FpML-4-4
RelativeDateOffset
fixingDateOffset
http://www.fpml.org/2007/FpML-4-4
ID
@ id
integer
periodMultiplier
http://www.fpml.org/2007/FpML-4-4
PeriodEnum
period
http://www.fpml.org/2007/FpML-4-4
DayTypeEnum
dayType
http://www.fpml.org/2007/FpML-4-4
0..1
BusinessDayConventionEnum
businessDayConvention
http://www.fpml.org/2007/FpML-4-4
0..1
BusinessCentersReference
businessCentersReference
http://www.fpml.org/2007/FpML-4-4
BusinessCenters
businessCenters
http://www.fpml.org/2007/FpML-4-4
DateReference
dateRelativeTo
http://www.fpml.org/2007/FpML-4-4
DayCountFraction
anyURI



XML Instance Representation

```
<fra
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
```

'A classification of the type of product. FpML defines a simple product categorization using a coding scheme.'

```
   <productId> ProductId </productId> [0..*]
```

'A product reference identifier allocated by a party. FpML does not define the domain values associated with this element. Note that the domain values for this element are not strictly an enumerated list.'

```
   <buyerPartyReference> PartyOrTradeSideReference </buyerPartyReference> [1]
```

'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> PartyOrTradeSideReference </sellerPartyReference> [1]
```

'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> RequiredIdentifierDate </adjustedEffectiveDate> [1]
```

'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> xsd:date </adjustedTerminationDate> [1]

'The end date of the calculation period. This date should already be adjusted for any applicable business day convention.'

<paymentDate> AdjustableDate </paymentDate> [1]

'The payment date. This date is subject to adjustment in accordance with any applicable business day convention.'

<fixingDateOffset> RelativeDateOffset </fixingDateOffset> [1]

'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> DayCountFraction </dayCountFraction> [1]

'The day count fraction.'

<calculationPeriodNumberOfDays> xsd:positiveInteger </calculationPeriodNumberOfDays> [1]

'The number of days from the adjusted effective date to the adjusted termination date calculated in accordance with the applicable day count fraction.'

<notional> Money </notional> [1]

'The notional amount.'

<fixedRate> xsd:decimal </fixedRate> [1]

'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> FloatingRateIndex </floatingRateIndex> [1]
<indexTenor> Interval </indexTenor> [1..*]

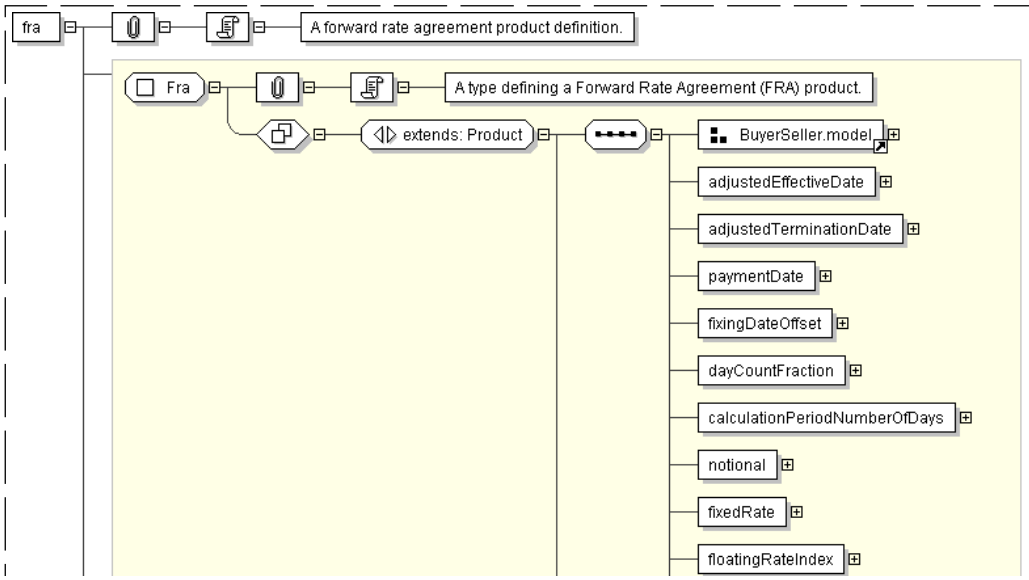
'The ISDA Designated Maturity, i.e. the tenor of the floating rate.'

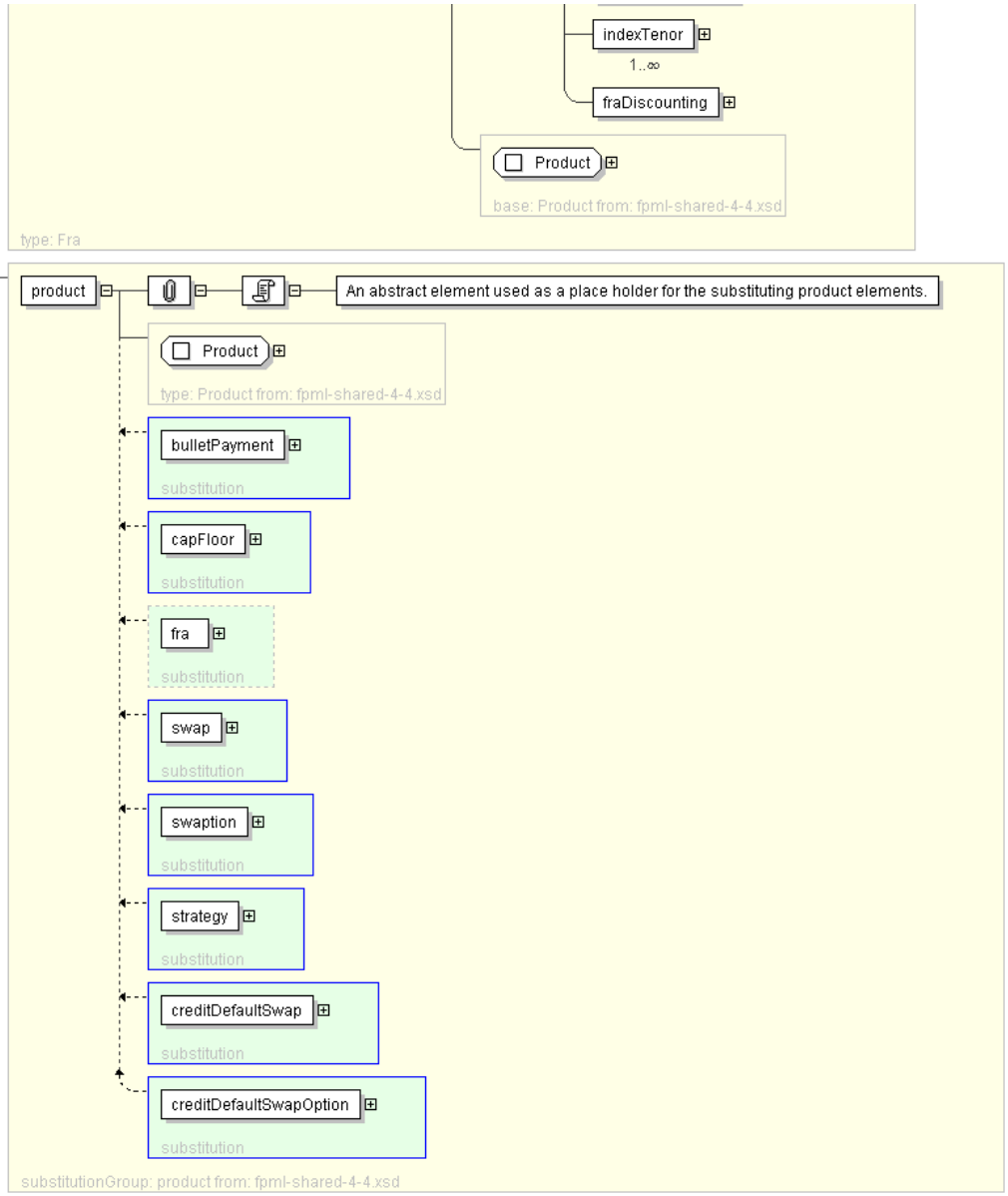
<fraDiscounting> FraDiscountingEnum </fraDiscounting> [1]

'Specifies whether discounting applies and, if so, what type.'

</fra>

Diagram





Schema Component Representation

```
<xsd:element name="fra" type=" Fra " substitutionGroup="product"/>
```

top

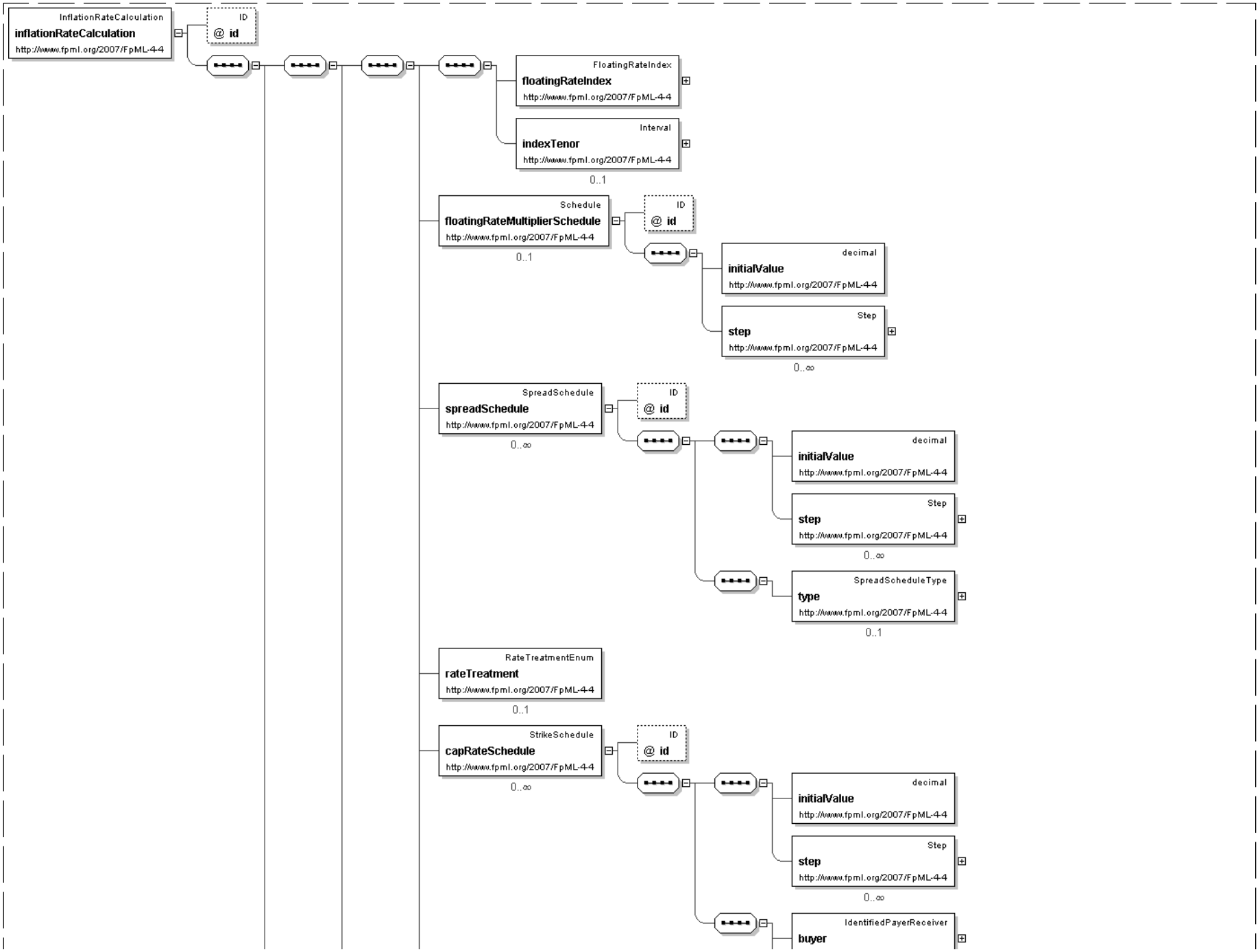
Element: inflationRateCalculation

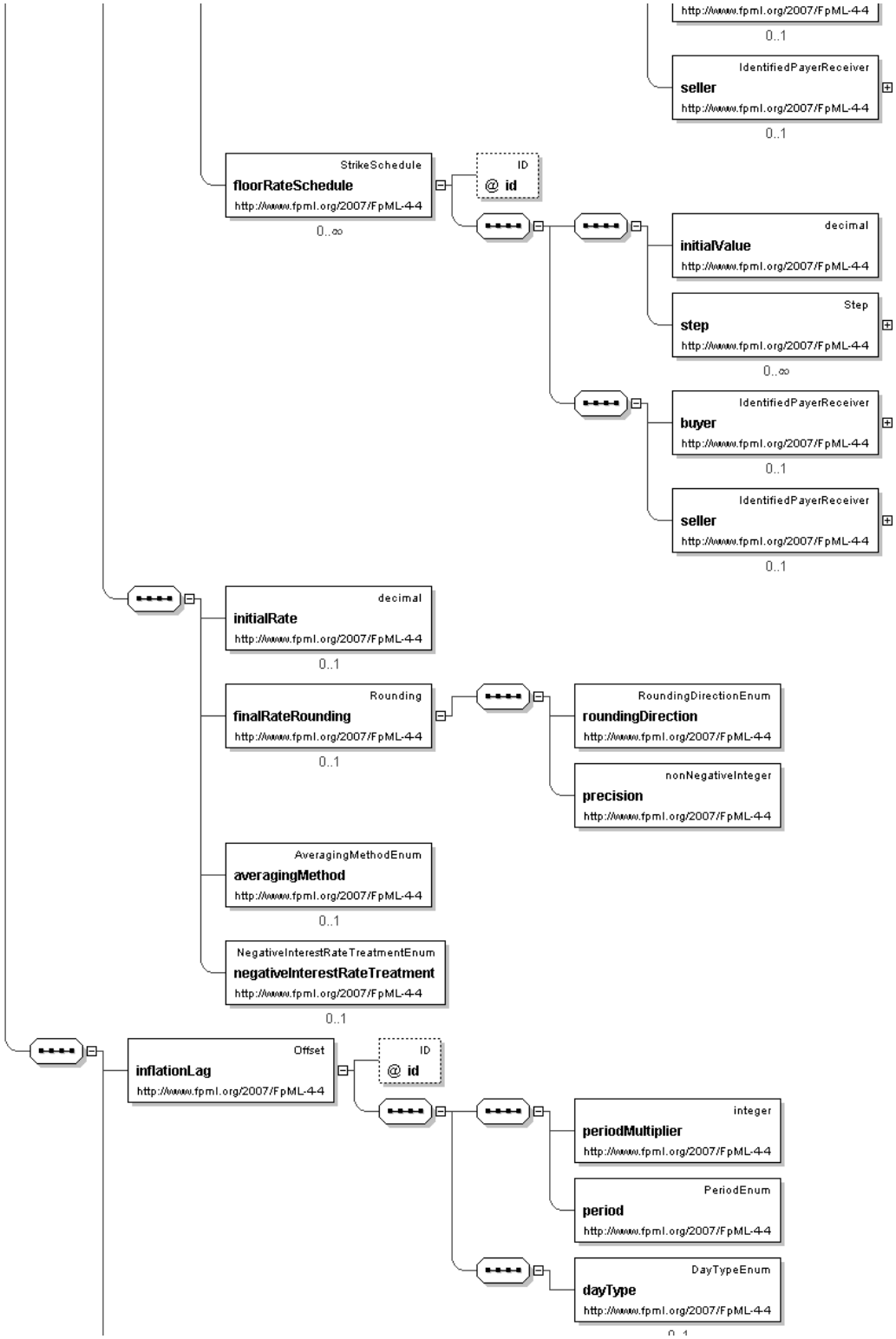
- *This element can be used wherever the following element is referenced:*
  - rateCalculation

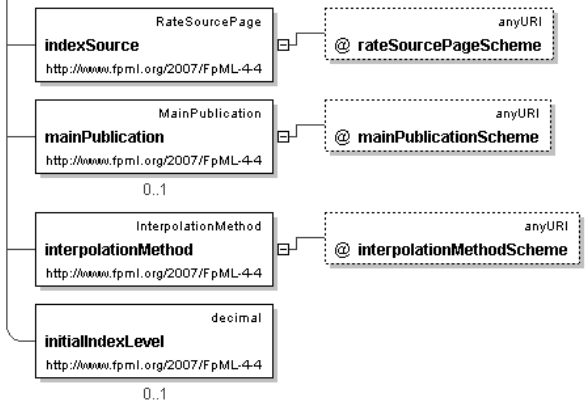
Name	inflationRateCalculation

Type	InflationRateCalculation
Nillable	no
Abstract	no
Documentation	An inflation rate calculation definition.

Logical Diagram




http://www.fpml.org/2007/FpML-4-4
0..1
IdentifiedPayerReceiver
seller
http://www.fpml.org/2007/FpML-4-4
0..1
StrikeSchedule
floorRateSchedule
http://www.fpml.org/2007/FpML-4-4
0..∞
ID
@ id
decimal
initialValue
http://www.fpml.org/2007/FpML-4-4
Step
step
http://www.fpml.org/2007/FpML-4-4
0..∞
IdentifiedPayerReceiver
buyer
http://www.fpml.org/2007/FpML-4-4
0..1
IdentifiedPayerReceiver
seller
http://www.fpml.org/2007/FpML-4-4
0..1
decimal
initialRate
http://www.fpml.org/2007/FpML-4-4
0..1
Rounding
finalRateRounding
http://www.fpml.org/2007/FpML-4-4
0..1
RoundingDirectionEnum
roundingDirection
http://www.fpml.org/2007/FpML-4-4
nonNegativeInteger
precision
http://www.fpml.org/2007/FpML-4-4
AveragingMethodEnum
averagingMethod
http://www.fpml.org/2007/FpML-4-4
0..1
NegativeInterestRateTreatmentEnum
negativeInterestRateTreatment
http://www.fpml.org/2007/FpML-4-4
0..1
Offset
inflationLag
http://www.fpml.org/2007/FpML-4-4
ID
@ id
integer
periodMultiplier
http://www.fpml.org/2007/FpML-4-4
PeriodEnum
period
http://www.fpml.org/2007/FpML-4-4
DayTypeEnum
dayType
http://www.fpml.org/2007/FpML-4-4



XML Instance Representation

```
<inflationRateCalculation
id=" xsd:ID [0..1]">
   <floatingRateIndex> FloatingRateIndex </floatingRateIndex> [1]
   <indexTenor> Interval </indexTenor> [0..1]
   'The ISDA Designated Maturity, i.e. the tenor of the floating rate.'

   <floatingRateMultiplierSchedule> Schedule </floatingRateMultiplierSchedule> [0..1]
   'A rate multiplier or multiplier schedule to apply to the floating rate. A multiplier
   schedule is expressed as explicit multipliers and dates. In the case of a schedule, the
   step dates may be subject to adjustment in accordance with any adjustments specified in
   the calculationPeriodDatesAdjustments. The multiplier can be a positive or negative
   decimal. This element should only be included if the multiplier is not equal to 1 (one) for
   the term of the stream.'

   <spreadSchedule> SpreadSchedule </spreadSchedule> [0..*]
   'The ISDA Spread or a Spread schedule expressed as explicit spreads and dates. In the case of
   a schedule, the step dates may be subject to adjustment in accordance with any
   adjustments specified in calculationPeriodDatesAdjustments. 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.'

   <rateTreatment> RateTreatmentEnum </rateTreatment> [0..1]
   'The specification of any rate conversion which needs to be applied to the observed rate
   before being used in any calculations. The two common conversions are for securities quoted
   on a bank discount basis which will need to be converted to either a Money Market Yield or
   Bond Equivalent Yield. See the Annex to the 2000 ISDA Definitions, Section 7.3. Certain
   General Definitions Relating to Floating Rate Options, paragraphs (g) and (h) for
   definitions of these terms.'

   <capRateSchedule> StrikeSchedule </capRateSchedule> [0..*]
   'The cap rate or cap rate schedule, if any, which applies to the floating rate. The cap
   rate (strike) is only required where the floating rate on a swap stream is capped at a
   certain level. A cap rate schedule is expressed as explicit cap rates and dates and the
   step dates may be subject to adjustment in accordance with any adjustments specified
   in calculationPeriodDatesAdjustments. 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.'

   <floorRateSchedule> StrikeSchedule </floorRateSchedule> [0..*]
   'The floor rate or floor rate schedule, if any, which applies to the floating rate. The
   floor rate (strike) is only required where the floating rate on a swap stream is floored at
   a certain strike level. A floor rate schedule is expressed as explicit floor rates and
   dates and the step dates may be subject to adjustment in accordance with any
   adjustments specified in calculationPeriodDatesAdjustments. The floor rate is assumed to
   be exclusive of any spread and is a per annum rate, expressed as a decimal. A floor rate of
   5% would be represented as 0.05.'

   <initialRate> xsd:decimal </initialRate> [0..1]
```

'The initial floating rate reset agreed between the principal parties involved in the trade. This is assumed to be the first required reset rate for the first regular calculation period. It should only be included when the rate is not equal to the rate published on the source implied by the floating rate index. An initial rate of 5% would be represented as 0.05.'

<finalRateRounding> Rounding </finalRateRounding> [0..1]

'The rounding convention to apply to the final rate used in determination of a calculation period amount.'

<averagingMethod> AveragingMethodEnum </averagingMethod> [0..1]

'If averaging is applicable, this component specifies whether a weighted or unweighted average method of calculation is to be used. The component must only be included when averaging applies.'

<negativeInterestRateTreatment> NegativeInterestRateTreatmentEnum
</negativeInterestRateTreatment> [0..1]

'The specification of any provisions for calculating payment obligations when a floating rate is negative (either due to a quoted negative floating rate or by operation of a spread that is subtracted from the floating rate).'

<inflationLag> Offset </inflationLag> [1]

'an offsetting period from the payment date which determines the reference period for which the inflation index is onserved.'

<indexSource> RateSourcePage </indexSource> [1]

'The reference source such as Reuters or Bloomberg.'

<mainPublication> MainPublication </mainPublication> [0..1]

'The current main publication source such as relevant web site or a government body.'

<interpolationMethod> InterpolationMethod </interpolationMethod> [1]

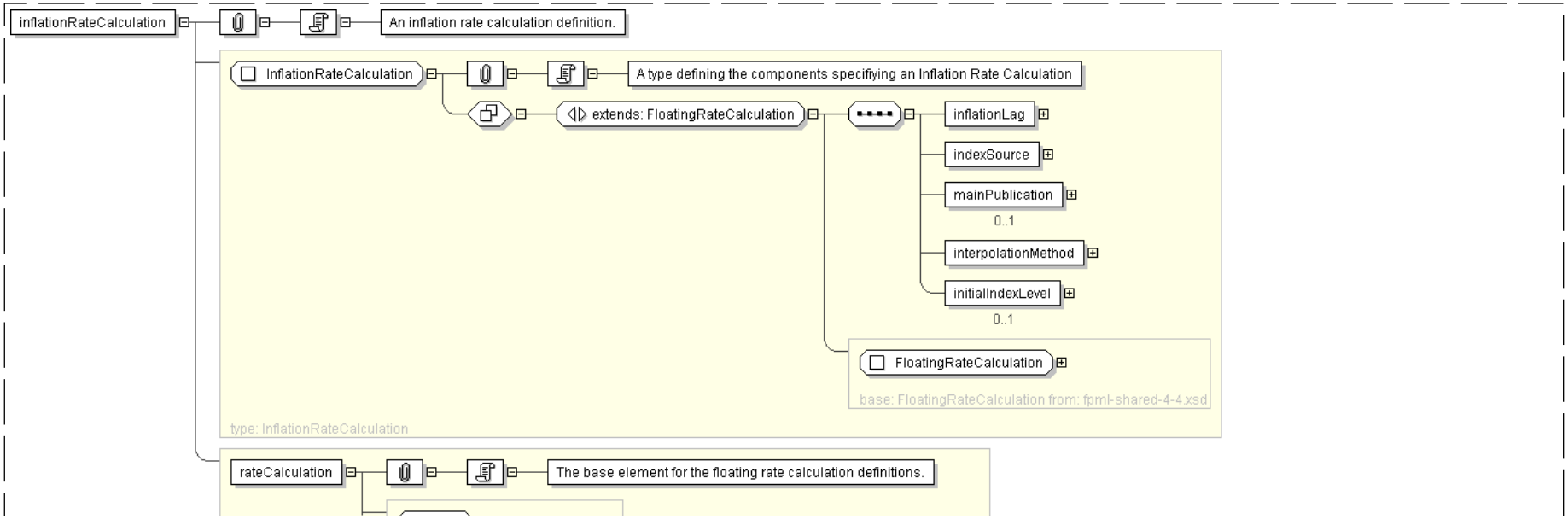
'The method used when calculating the Inflation Index Level from multiple points - the most common is Linear.'

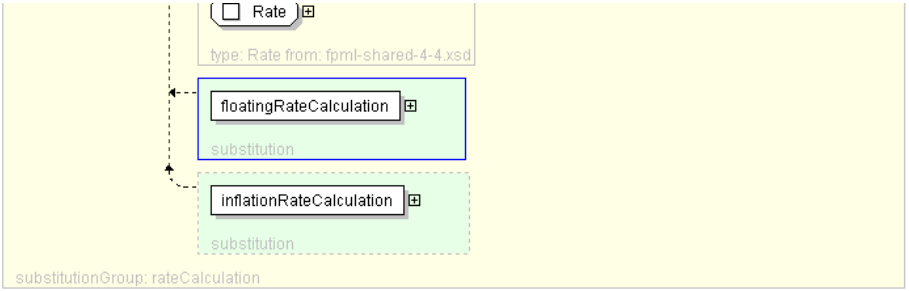
<initialIndexLevel> xsd:decimal </initialIndexLevel> [0..1]

'initial known index level for the first calculation period.'

</inflationRateCalculation>

Diagram





Schema Component Representation

```
<xsd:element name="inflationRateCalculation" type=" InflationRateCalculation
" substitutionGroup="rateCalculation"/>
```

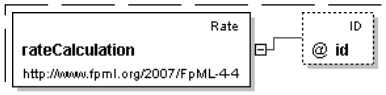
top

Element: rateCalculation

- *The following elements can be used wherever this element is referenced:*
  - floatingRateCalculation
  - inflationRateCalculation

Name	rateCalculation
Used by (from the same schema document)	Complex Type **Calculation**
Type	Rate
Nillable	no
Abstract	yes
Documentation	The base element for the floating rate calculation definitions.

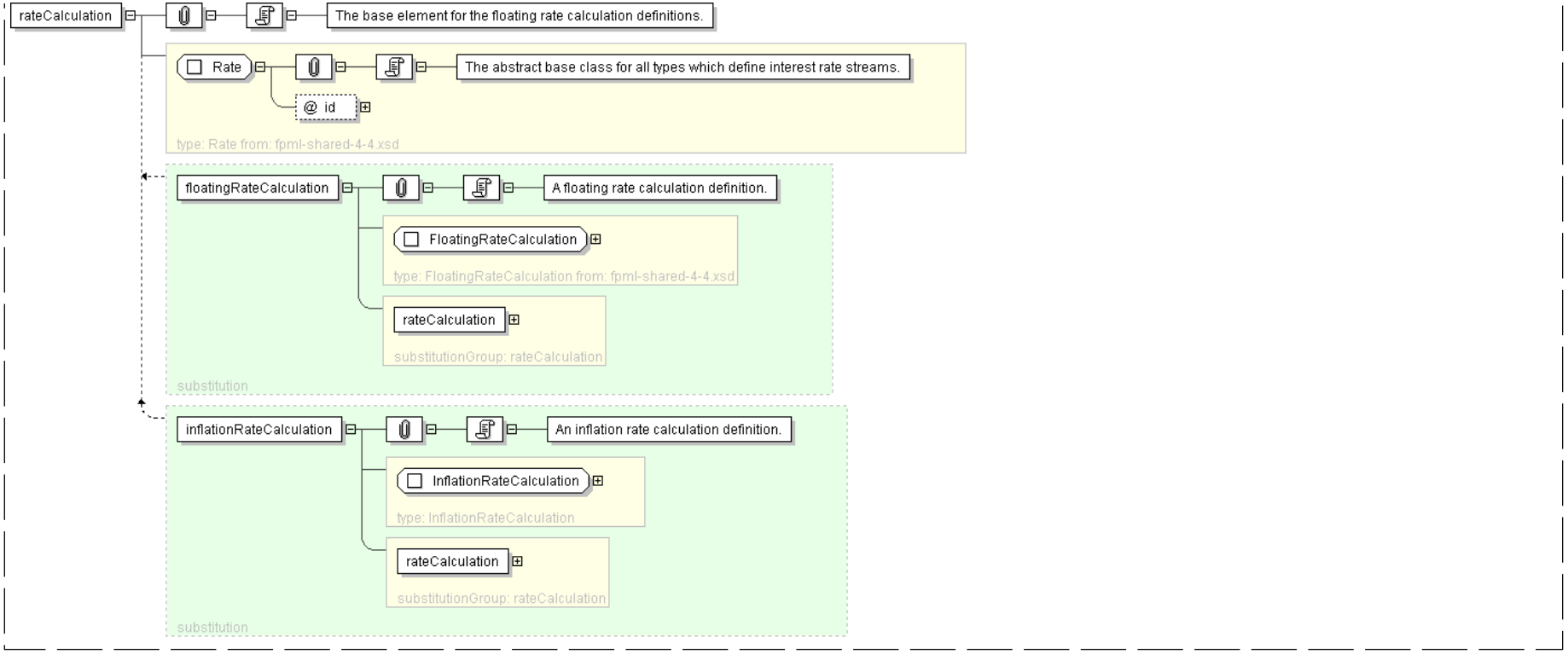
Logical Diagram



XML Instance Representation

```
<rateCalculation
id=" xsd:ID [0..1]"/>
```

Diagram



Schema Component Representation

```
<xsd:element name="rateCalculation" type=" Rate " abstract="true"/>
```

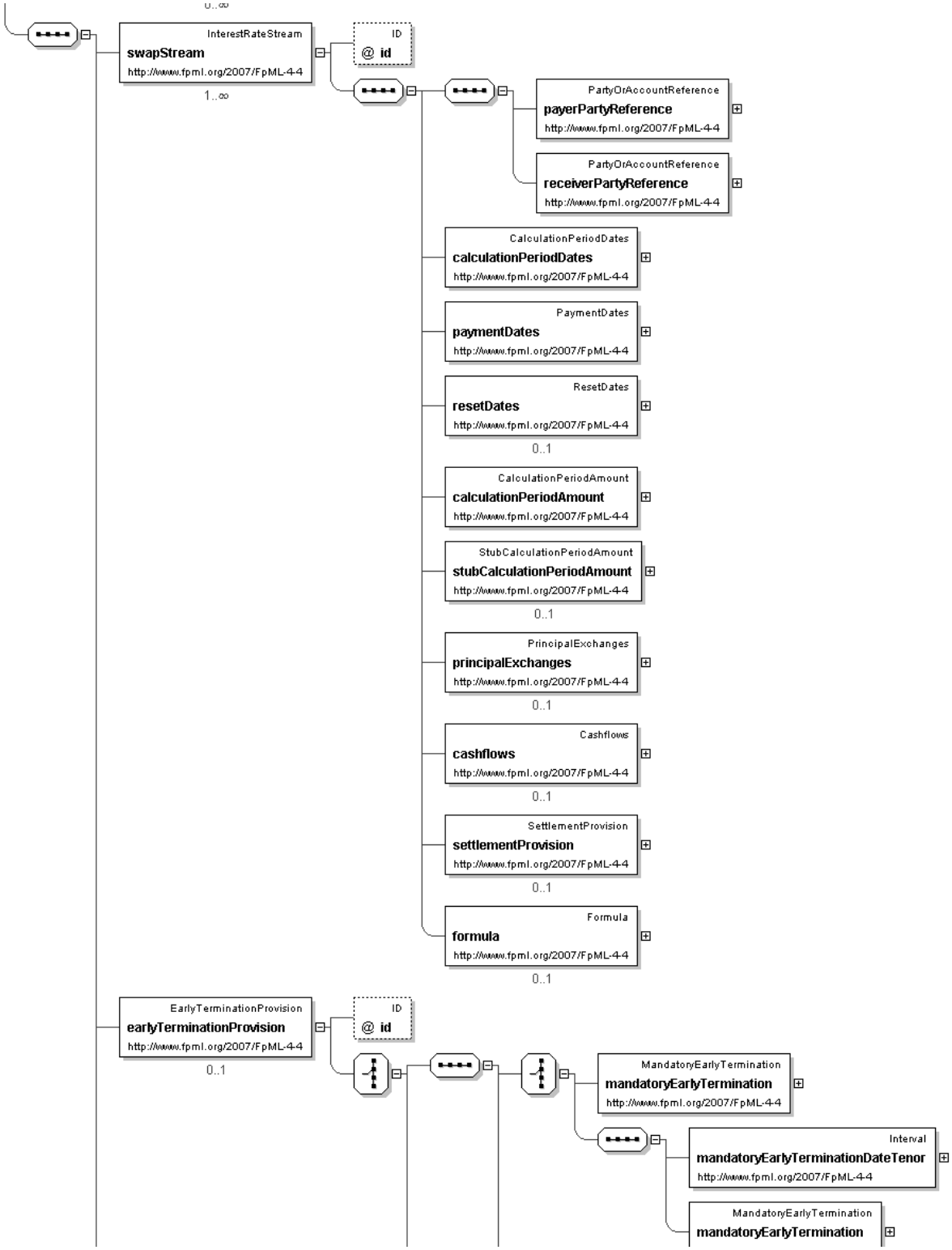
top

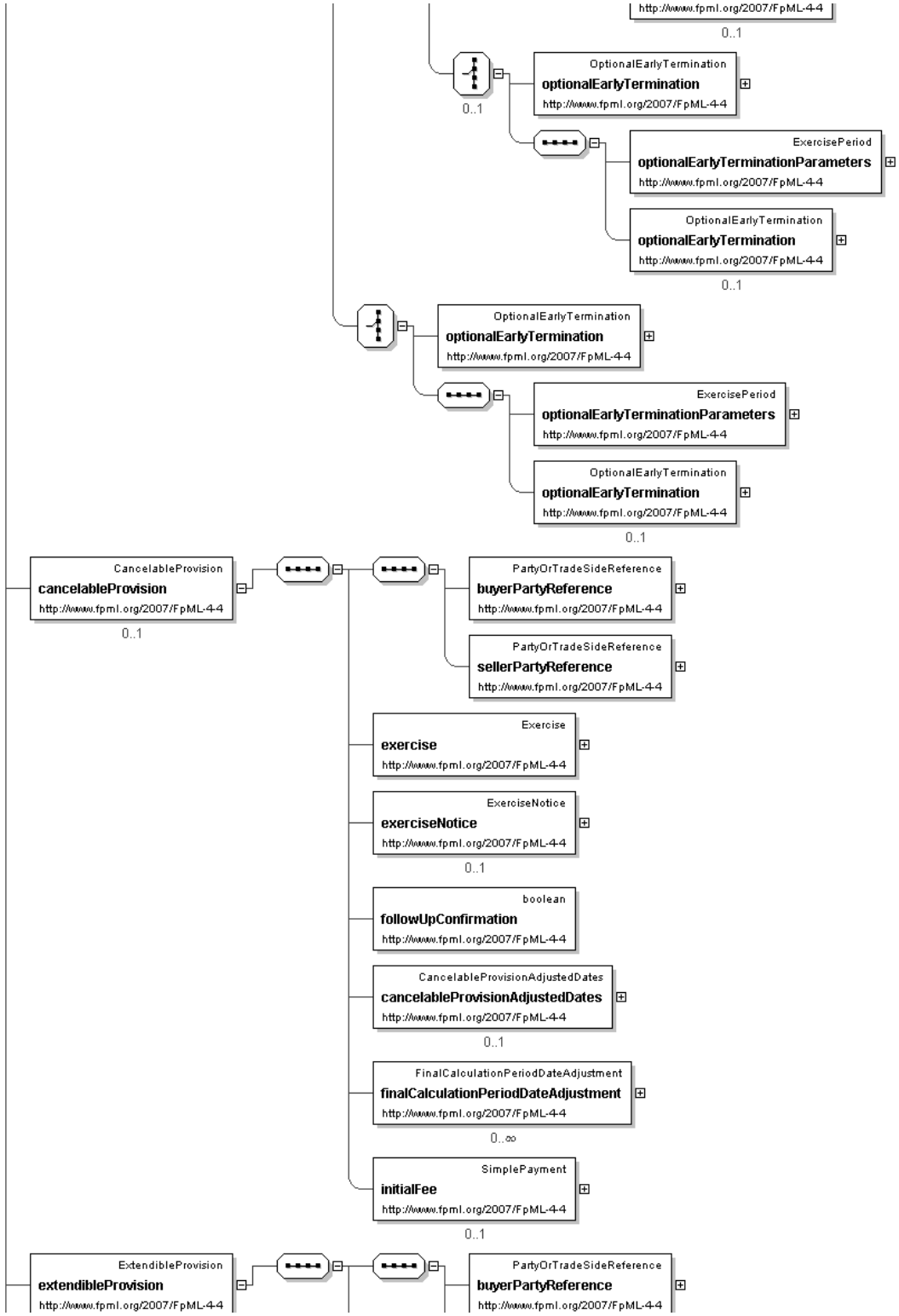
Element: swap

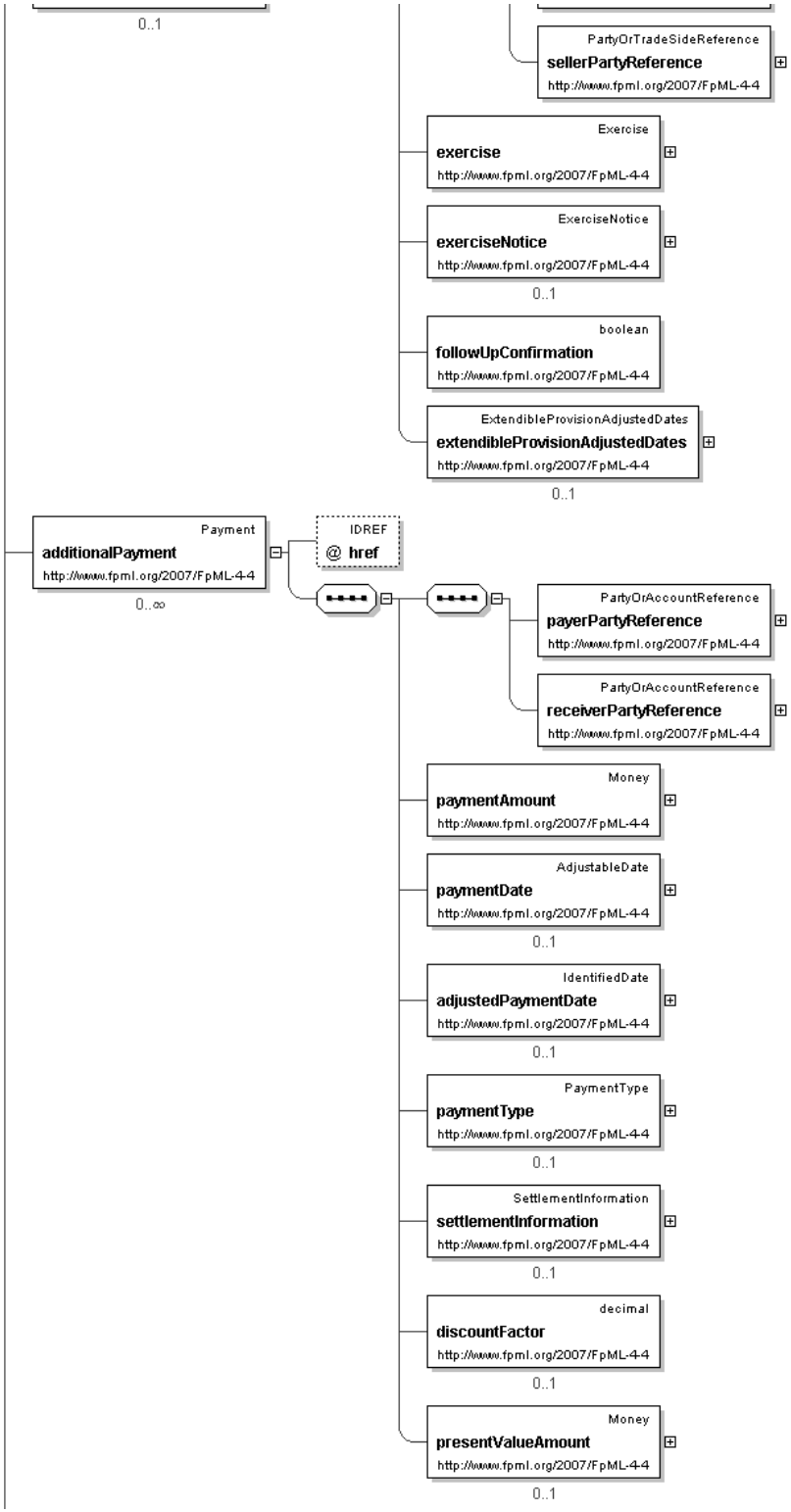
- *This element can be used wherever the following element is referenced:*
  - product

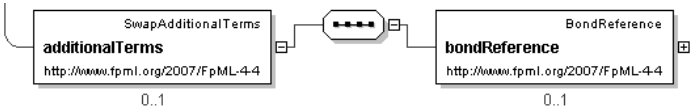
Name	swap
Used by (from the same schema document)	Complex Type **Swaption**
Type	Swap
Nillable	no
Abstract	no
Documentation	A swap product definition.

Logical Diagram


0..∞
InterestRateStream
swapStream
http://www.fpml.org/2007/FpML-4-4
1..∞
ID
@ id
PartyOrAccountReference
payerPartyReference
http://www.fpml.org/2007/FpML-4-4
PartyOrAccountReference
receiverPartyReference
http://www.fpml.org/2007/FpML-4-4
CalculationPeriodDates
calculationPeriodDates
http://www.fpml.org/2007/FpML-4-4
PaymentDates
paymentDates
http://www.fpml.org/2007/FpML-4-4
ResetDates
resetDates
http://www.fpml.org/2007/FpML-4-4
0..1
CalculationPeriodAmount
calculationPeriodAmount
http://www.fpml.org/2007/FpML-4-4
StubCalculationPeriodAmount
stubCalculationPeriodAmount
http://www.fpml.org/2007/FpML-4-4
0..1
PrincipalExchanges
principalExchanges
http://www.fpml.org/2007/FpML-4-4
0..1
Cashflows
cashflows
http://www.fpml.org/2007/FpML-4-4
0..1
SettlementProvision
settlementProvision
http://www.fpml.org/2007/FpML-4-4
0..1
Formula
formula
http://www.fpml.org/2007/FpML-4-4
0..1
EarlyTerminationProvision
earlyTerminationProvision
http://www.fpml.org/2007/FpML-4-4
0..1
ID
@ id
MandatoryEarlyTermination
mandatoryEarlyTermination
http://www.fpml.org/2007/FpML-4-4
Interval
mandatoryEarlyTerminationDateTenor
http://www.fpml.org/2007/FpML-4-4
MandatoryEarlyTermination
mandatoryEarlyTermination


http://www.fpml.org/2007/FpML-4-4
0..1
OptionalEarlyTermination
optionalEarlyTermination
http://www.fpml.org/2007/FpML-4-4
0..1
ExercisePeriod
optionalEarlyTerminationParameters
http://www.fpml.org/2007/FpML-4-4
OptionalEarlyTermination
optionalEarlyTermination
http://www.fpml.org/2007/FpML-4-4
0..1
OptionalEarlyTermination
optionalEarlyTermination
http://www.fpml.org/2007/FpML-4-4
ExercisePeriod
optionalEarlyTerminationParameters
http://www.fpml.org/2007/FpML-4-4
OptionalEarlyTermination
optionalEarlyTermination
http://www.fpml.org/2007/FpML-4-4
0..1
CancelableProvision
cancelableProvision
http://www.fpml.org/2007/FpML-4-4
0..1
PartyOrTradeSideReference
buyerPartyReference
http://www.fpml.org/2007/FpML-4-4
PartyOrTradeSideReference
sellerPartyReference
http://www.fpml.org/2007/FpML-4-4
Exercise
exercise
http://www.fpml.org/2007/FpML-4-4
ExerciseNotice
exerciseNotice
http://www.fpml.org/2007/FpML-4-4
0..1
boolean
followUpConfirmation
http://www.fpml.org/2007/FpML-4-4
CancelableProvisionAdjustedDates
cancelableProvisionAdjustedDates
http://www.fpml.org/2007/FpML-4-4
0..1
FinalCalculationPeriodDateAdjustment
finalCalculationPeriodDateAdjustment
http://www.fpml.org/2007/FpML-4-4
0..∞
SimplePayment
initialFee
http://www.fpml.org/2007/FpML-4-4
0..1
ExtendibleProvision
extendibleProvision
http://www.fpml.org/2007/FpML-4-4
PartyOrTradeSideReference
buyerPartyReference
http://www.fpml.org/2007/FpML-4-4

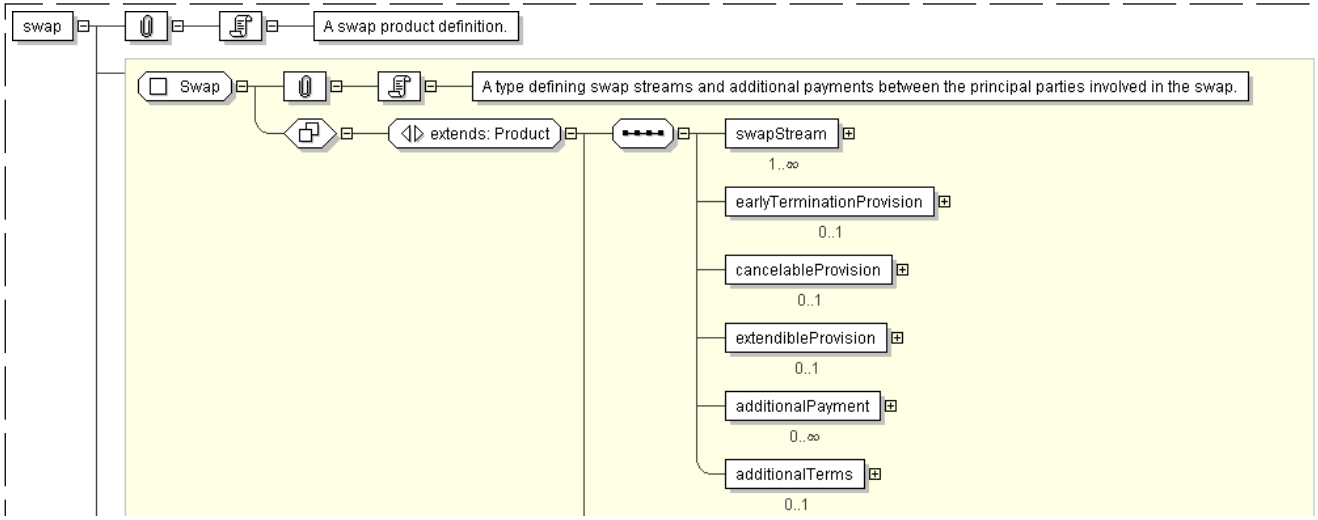

0..1
PartyOrTradeSideReference
sellerPartyReference
http://www.fpml.org/2007/FpML-4-4
Exercise
exercise
http://www.fpml.org/2007/FpML-4-4
ExerciseNotice
exerciseNotice
http://www.fpml.org/2007/FpML-4-4
0..1
boolean
followUpConfirmation
http://www.fpml.org/2007/FpML-4-4
ExtendibleProvisionAdjustedDates
extendibleProvisionAdjustedDates
http://www.fpml.org/2007/FpML-4-4
0..1
Payment
additionalPayment
http://www.fpml.org/2007/FpML-4-4
0..∞
IDREF
@ href
PartyOrAccountReference
payerPartyReference
http://www.fpml.org/2007/FpML-4-4
PartyOrAccountReference
receiverPartyReference
http://www.fpml.org/2007/FpML-4-4
Money
paymentAmount
http://www.fpml.org/2007/FpML-4-4
AdjustableDate
paymentDate
http://www.fpml.org/2007/FpML-4-4
0..1
IdentifiedDate
adjustedPaymentDate
http://www.fpml.org/2007/FpML-4-4
0..1
PaymentType
paymentType
http://www.fpml.org/2007/FpML-4-4
0..1
SettlementInformation
settlementInformation
http://www.fpml.org/2007/FpML-4-4
0..1
decimal
discountFactor
http://www.fpml.org/2007/FpML-4-4
0..1
Money
presentValueAmount
http://www.fpml.org/2007/FpML-4-4
0..1

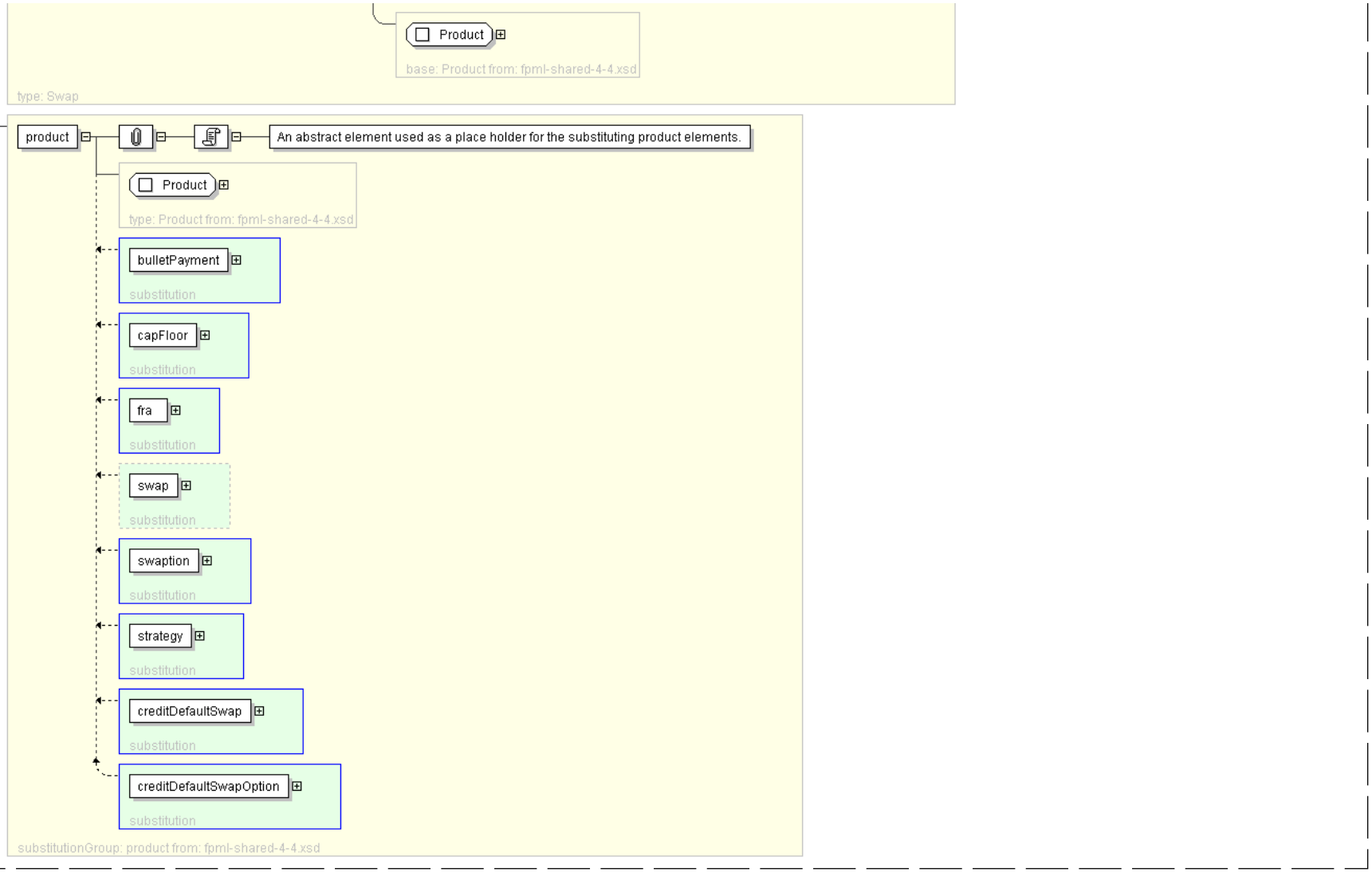


XML Instance Representation

```
<swap
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
   'A classification of the type of product. FpML defines a simple product categorization using
   a coding scheme.'

   <productId> ProductId </productId> [0..*]
   'A product reference identifier allocated by a party. FpML does not define the domain
   values associated with this element. Note that the domain values for this element are
   not strictly an enumerated list.'

   <swapStream> InterestRateStream </swapStream> [1..*]
   'The swap streams.'

   <earlyTerminationProvision> EarlyTerminationProvision </earlyTerminationProvision> [0..1]
   'Parameters specifying provisions relating to the optional and mandatory early terminarion of
   a swap transaction.'

   <cancelableProvision> CancelableProvision </cancelableProvision> [0..1]
   '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> ExtendibleProvision </extendibleProvision> [0..1]
   '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> Payment </additionalPayment> [0..*]
   'Additional payments between the principal parties.'

   <additionalTerms> SwapAdditionalTerms </additionalTerms> [0..1]
   'Contains any additional terms to the swap contract.'

</swap>
```

Diagram





Schema Component Representation

```
<xsd:element name="swap" type=" Swap " substitutionGroup="product"/>
```

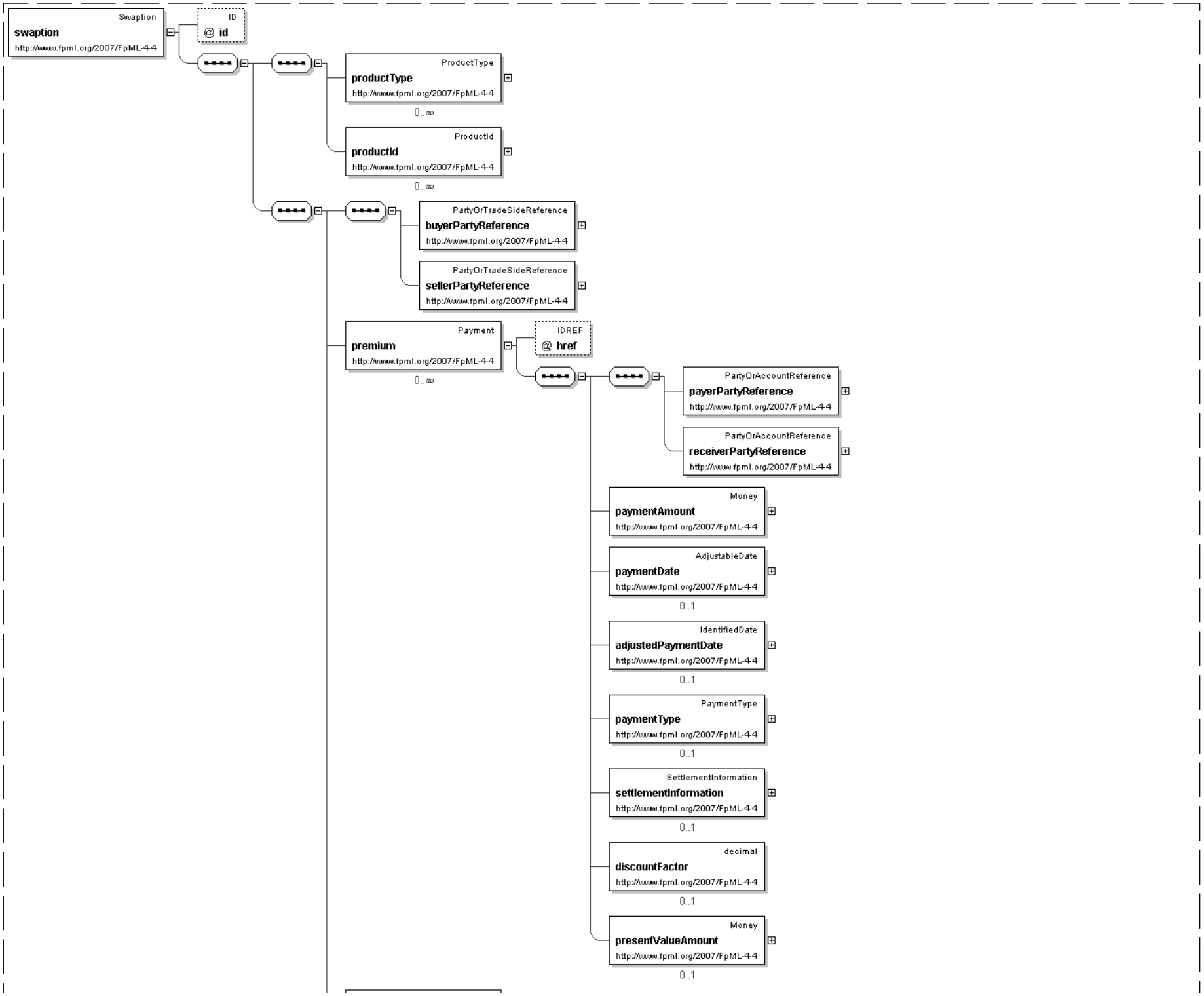
top

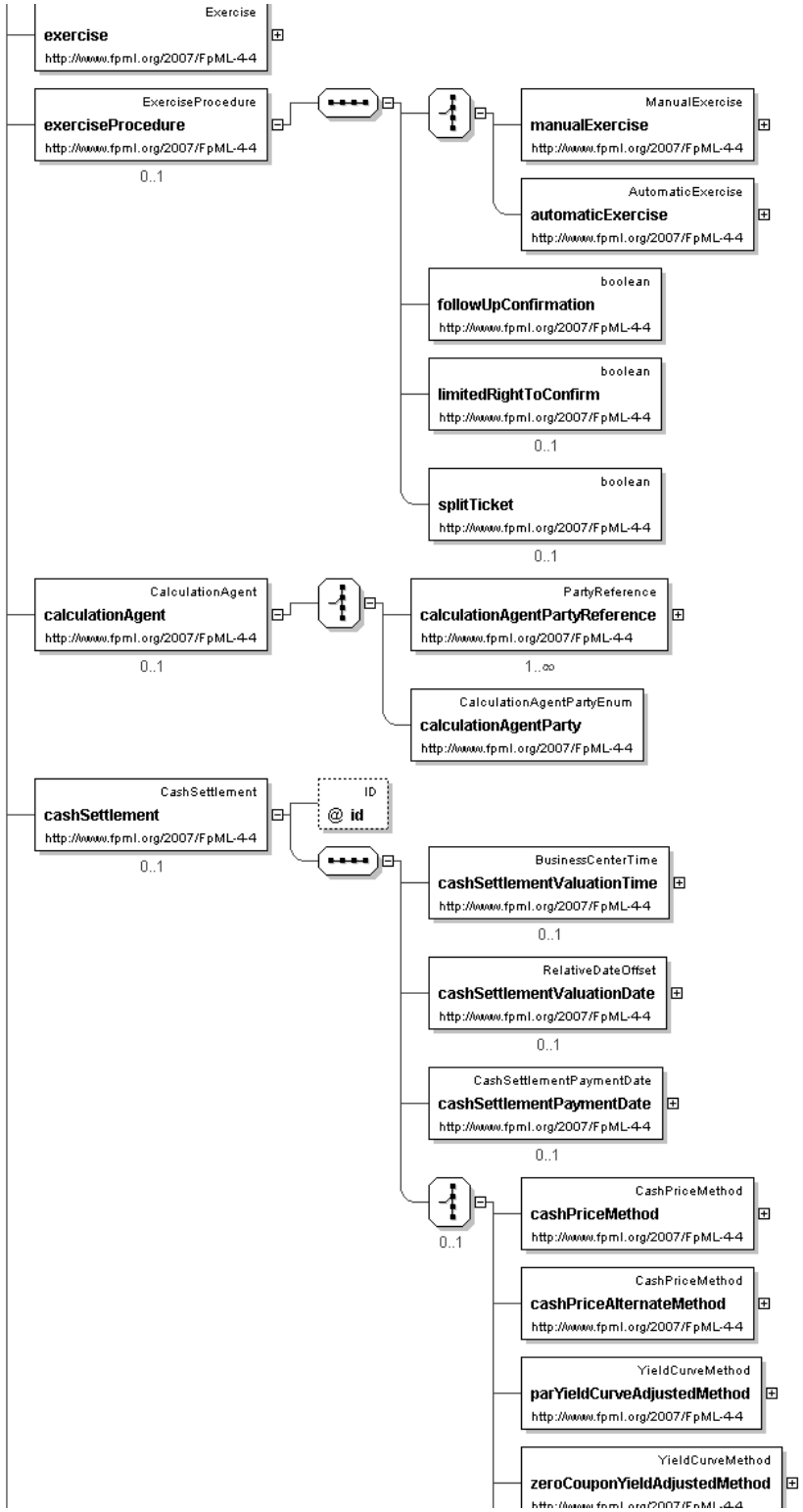
Element: swaption

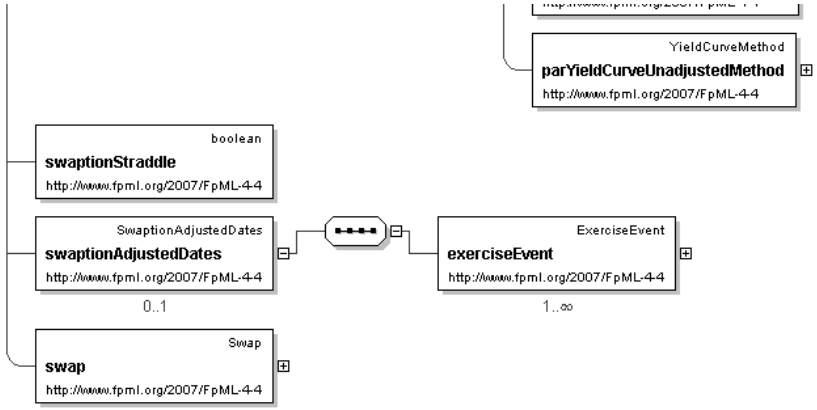
- *This element can be used wherever the following element is referenced:*
  - product

Name	swaption
Type	Swaption
Nillable	no
Abstract	no
Documentation	A swaption product definition.

Logical Diagram



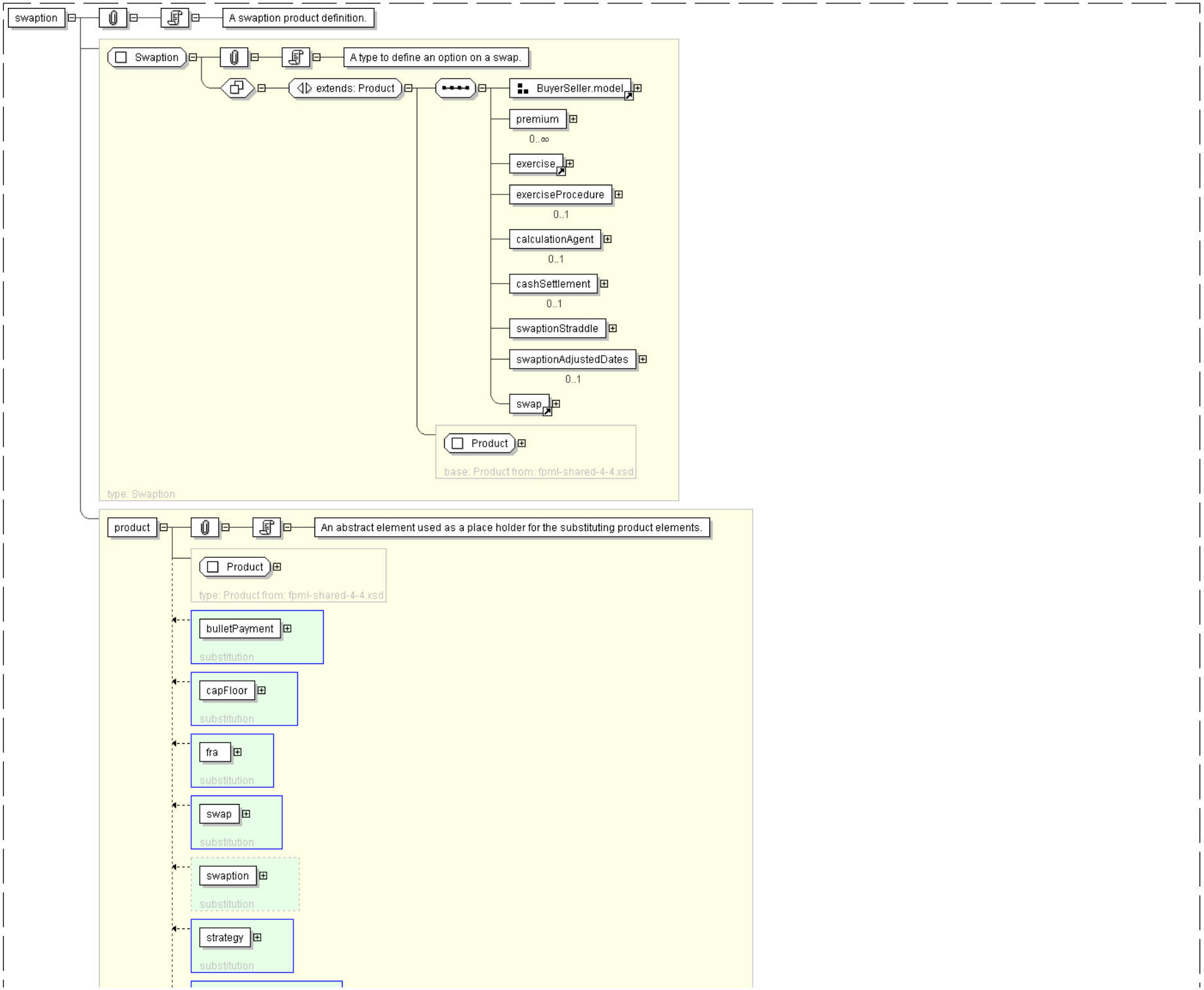

Exercise
exercise
http://www.fpml.org/2007/FpML-4-4
ExerciseProcedure
exerciseProcedure
http://www.fpml.org/2007/FpML-4-4
0..1
ManualExercise
manualExercise
http://www.fpml.org/2007/FpML-4-4
AutomaticExercise
automaticExercise
http://www.fpml.org/2007/FpML-4-4
boolean
followUpConfirmation
http://www.fpml.org/2007/FpML-4-4
boolean
limitedRightToConfirm
http://www.fpml.org/2007/FpML-4-4
0..1
boolean
splitTicket
http://www.fpml.org/2007/FpML-4-4
0..1
CalculationAgent
calculationAgent
http://www.fpml.org/2007/FpML-4-4
0..1
PartyReference
calculationAgentPartyReference
http://www.fpml.org/2007/FpML-4-4
1..∞
CalculationAgentPartyEnum
calculationAgentParty
http://www.fpml.org/2007/FpML-4-4
CashSettlement
cashSettlement
http://www.fpml.org/2007/FpML-4-4
0..1
ID
@ id
BusinessCenterTime
cashSettlementValuationTime
http://www.fpml.org/2007/FpML-4-4
0..1
RelativeDateOffset
cashSettlementValuationDate
http://www.fpml.org/2007/FpML-4-4
0..1
CashSettlementPaymentDate
cashSettlementPaymentDate
http://www.fpml.org/2007/FpML-4-4
0..1
0..1
CashPriceMethod
cashPriceMethod
http://www.fpml.org/2007/FpML-4-4
CashPriceMethod
cashPriceAlternateMethod
http://www.fpml.org/2007/FpML-4-4
YieldCurveMethod
parYieldCurveAdjustedMethod
http://www.fpml.org/2007/FpML-4-4
YieldCurveMethod
zeroCouponYieldAdjustedMethod

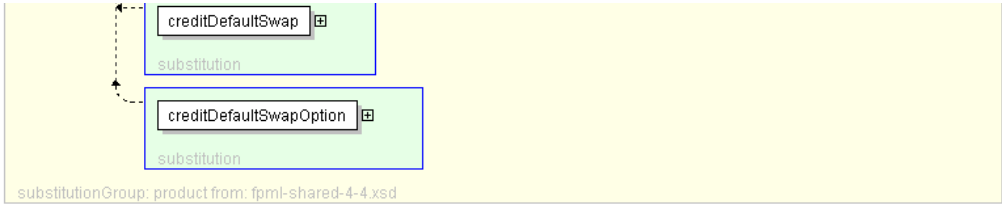


XML Instance Representation

```
<swaption
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
   'A classification of the type of product. FpML defines a simple product categorization using
   a coding scheme.'

   <productId> ProductId </productId> [0..*]
   'A product reference identifier allocated by a party. FpML does not define the domain
   values associated with this element. Note that the domain values for this element are
   not strictly an enumerated list.'

   <buyerPartyReference> PartyOrTradeSideReference </buyerPartyReference> [1]
   '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> PartyOrTradeSideReference </sellerPartyReference> [1]
   '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> Payment </premium> [0..*]
   'The option premium amount payable by buyer to seller on the specified payment date.'

   <exercise> ... </exercise> [1]
   <exerciseProcedure> ExerciseProcedure </exerciseProcedure> [0..1]
   'A set of parameters defining procedures associated with the exercise.'

   <calculationAgent> CalculationAgent </calculationAgent> [0..1]
   'The ISDA Calculation Agent responsible for performing duties associated with an optional
   early termination.'

   <cashSettlement> CashSettlement </cashSettlement> [0..1]
   '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> xsd:boolean </swaptionStraddle> [1]
   'Whether the option is a swaption or a swaption straddle.'

   <swaptionAdjustedDates> SwaptionAdjustedDates </swaptionAdjustedDates> [0..1]
   'The adjusted dates associated with swaption exercise. These dates have been adjusted for
   any applicable business day convention.'

   <swap> ... </swap> [1]
</swaption>
```

Diagram


swaption
A swaption product definition.
Swaption
A type to define an option on a swap.
extends: Product
BuyerSeller.model
premium
0..∞
exercise
exerciseProcedure
0..1
calculationAgent
0..1
cashSettlement
0..1
swaptionStraddle
swaptionAdjustedDates
0..1
swap
Product
base: Product from: fpml-shared-4-4.xsd
type: Swaption
product
An abstract element used as a place holder for the substituting product elements.
Product
type: Product from: fpml-shared-4-4.xsd
bulletPayment
substitution
capFloor
substitution
fra
substitution
swap
substitution
swaption
substitution
strategy
substitution



Schema Component Representation

```
<xsd:element name="swaption" type=" Swaption " substitutionGroup="product"/>
```

top

Global Definitions

Complex Type: BondReference

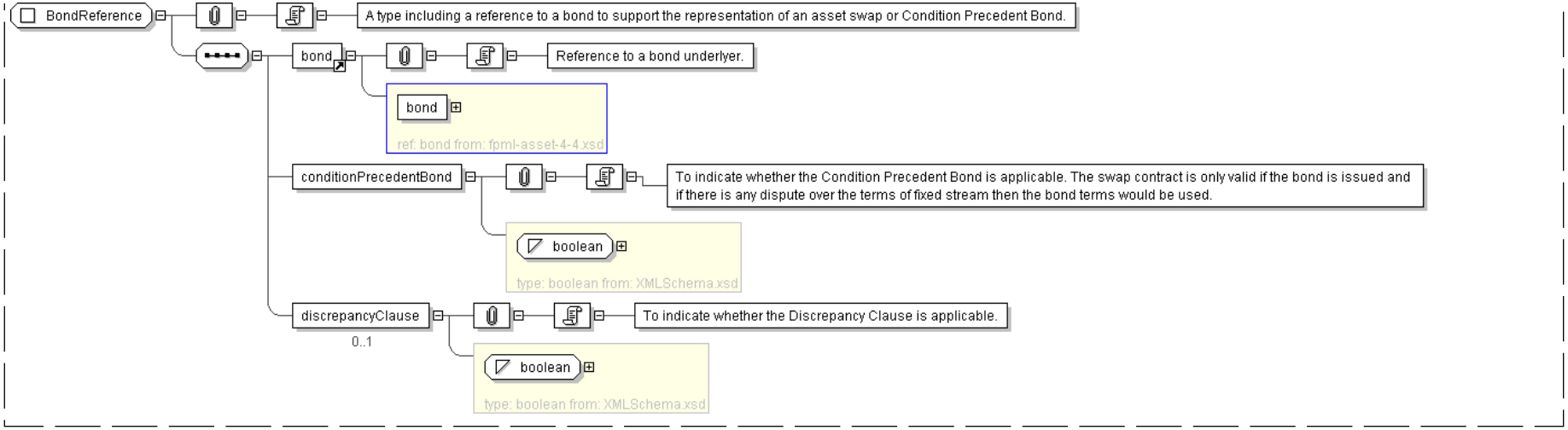
Super-types:	None
Sub-types:	None

Name	BondReference
Used by (from the same schema document)	Complex Type **SwapAdditionalTerms**
Abstract	no
Documentation	A type including a reference to a bond to support the representation of an asset swap or Condition Precedent Bond.

XML Instance Representation

```
<...>
   <bond> ... </bond> [1]
   'Reference to a bond underlyer.'

   <conditionPrecedentBond> xsd:boolean </conditionPrecedentBond> [1]
   '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> xsd:boolean </discrepancyClause> [0..1]
   'To indicate whether the Discrepancy Clause is applicable.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="BondReference">
   <xsd:sequence>
      <xsd:element ref=" bond "/>
      <xsd:element name="conditionPrecedentBond" type=" xsd:boolean "/>
      <xsd:element name="discrepancyClause" type=" xsd:boolean " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: BulletPayment

Super-types:	Product < **BulletPayment** (by extension)
Sub-types:	None

Name	BulletPayment
Used by (from the same schema document)	Element **bulletPayment**
Abstract	no
Documentation	A product to represent a single cashflow.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
   'A classification of the type of product. FpML defines a simple product categorization using
   a coding scheme.'

   <productId> ProductId </productId> [0..*]
   'A product reference identifier allocated by a party. FpML does not define the domain
   values associated with this element. Note that the domain values for this element are
   not strictly an enumerated list.'

   <payment> Payment </payment> [1]
   'A known payment between two parties.'

</...>
```

Diagram

Schema Component Representation

```
<xsd:complexType name="BulletPayment">
   <xsd:complexContent>
      <xsd:extension base=" Product ">
         <xsd:sequence>
            <xsd:element name="payment" type=" Payment "/>
         </xsd:sequence>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: Calculation

Super-types:	None
Sub-types:	None

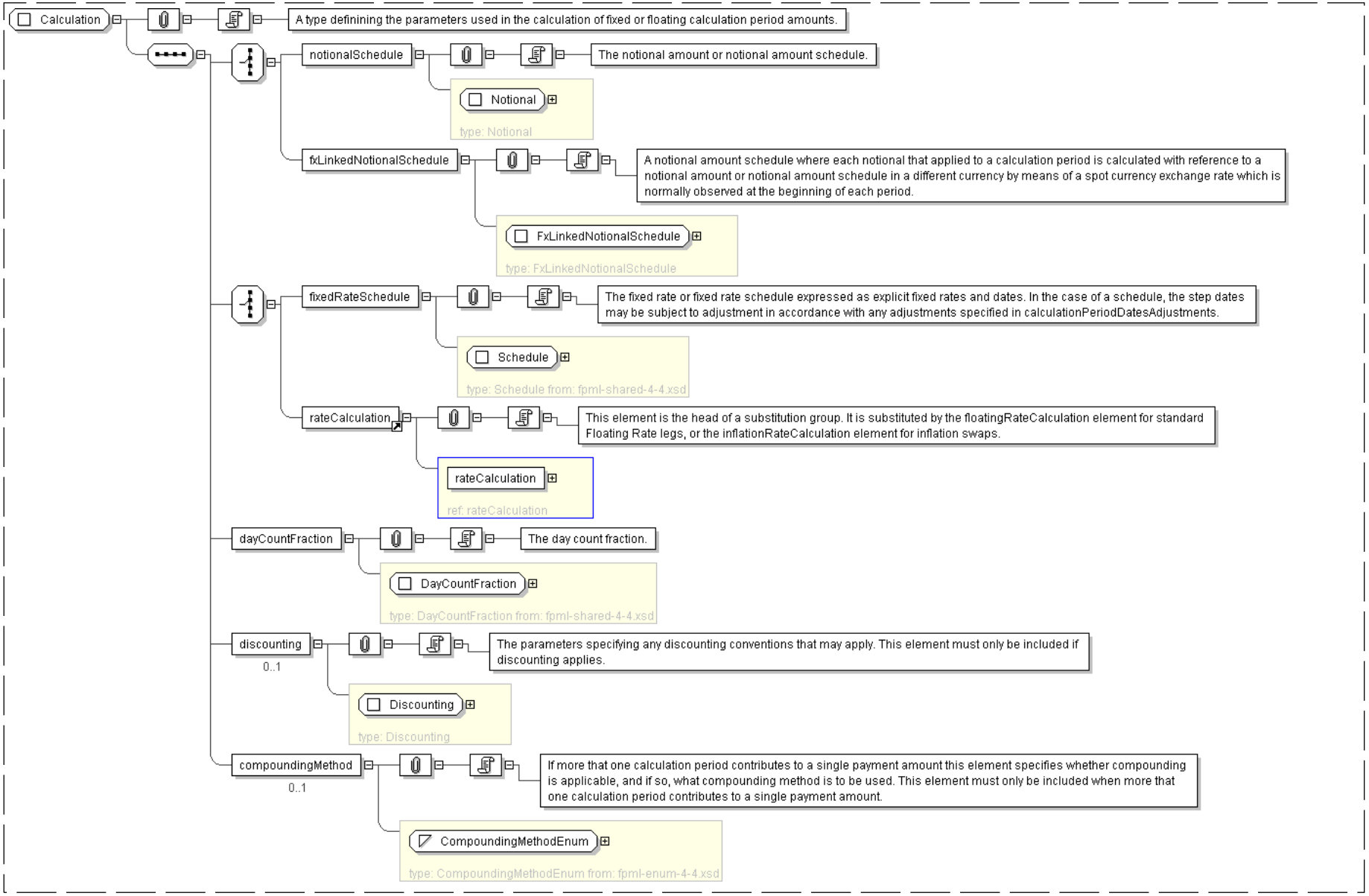
Name	Calculation
Used by (from the same schema document)	Complex Type **CalculationPeriodAmount**
Abstract	no
Documentation	A type definining the parameters used in the calculation of fixed or floating calculation period amounts.

XML Instance Representation

```
<...>
Start Choice [1]
      <notionalSchedule> Notional </notionalSchedule> [1]
      'The notional amount or notional amount schedule.'

      <fxLinkedNotionalSchedule> FxLinkedNotionalSchedule </fxLinkedNotionalSchedule> [1]
      '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.'

End Choice
Start Choice [1]
      <fixedRateSchedule> Schedule </fixedRateSchedule> [1]
      '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.'

      <rateCalculation> ... </rateCalculation> [1]
      '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.'

End Choice
   <dayCountFraction> DayCountFraction </dayCountFraction> [1]
   'The day count fraction.'

   <discounting> Discounting </discounting> [0..1]
   'The parameters specifying any discounting conventions that may apply. This element must
   only be included if discounting applies.'

   <compoundingMethod> CompoundingMethodEnum </compoundingMethod> [0..1]
```

```
'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.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="Calculation">
   <xsd:sequence>
      <xsd:choice>
         <xsd:element name="notionalSchedule" type=" Notional "/>
         <xsd:element name="fxLinkedNotionalSchedule" type=" FxLinkedNotionalSchedule "/>
```

```
      </xsd:choice>
      <xsd:choice>
         <xsd:element name="fixedRateSchedule" type=" Schedule "/>
         <xsd:element ref=" rateCalculation "/>
      </xsd:choice>
      <xsd:element name="dayCountFraction" type=" DayCountFraction "/>
      <xsd:element name="discounting" type=" Discounting " minOccurs="0"/>
      <xsd:element name="compoundingMethod" type=" CompoundingMethodEnum " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: CalculationPeriod

Super-types:	None
Sub-types:	None

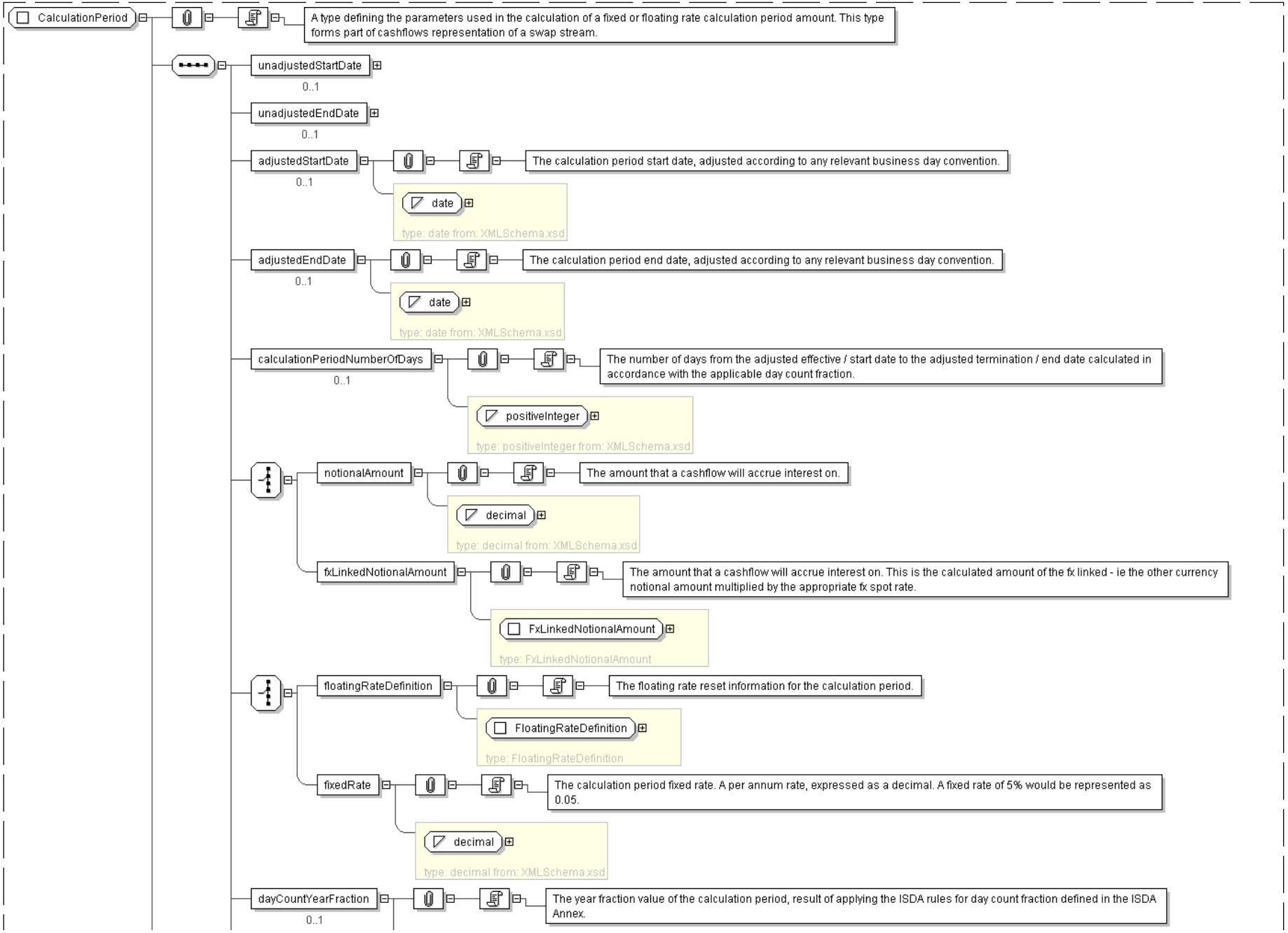
Name	CalculationPeriod
Used by (from the same schema document)	Complex Type **PaymentCalculationPeriod**
Abstract	no
Documentation	A type defining the parameters used in the calculation of a fixed or floating rate calculation period amount. This type forms part of cashflows representation of a swap stream.

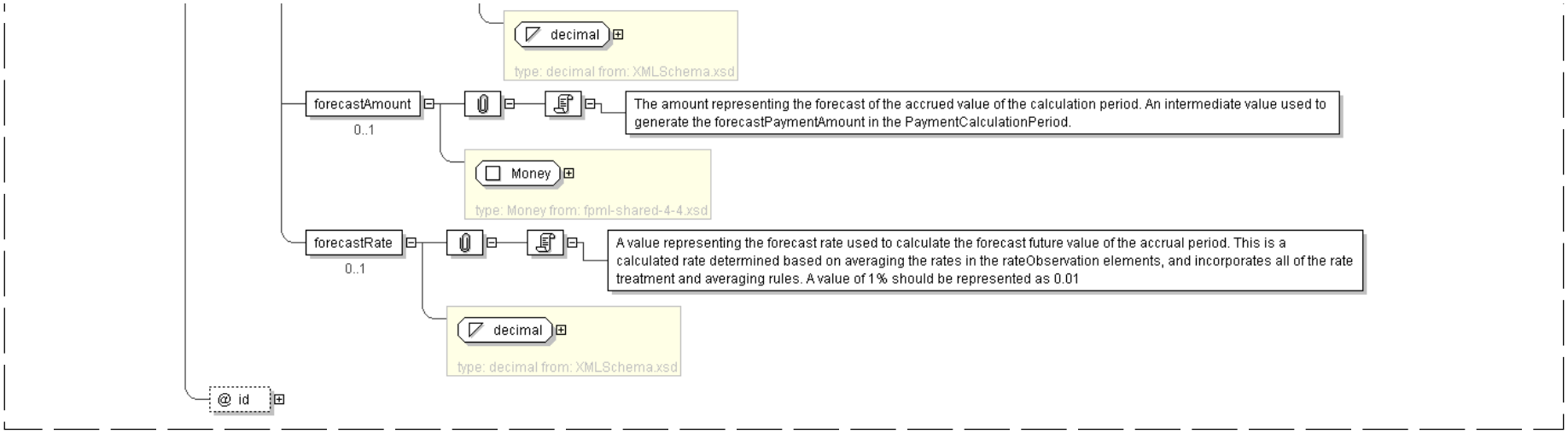
XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <unadjustedStartDate> xsd:date </unadjustedStartDate> [0..1]
   <unadjustedEndDate> xsd:date </unadjustedEndDate> [0..1]
   <adjustedStartDate> xsd:date </adjustedStartDate> [0..1]
   'The calculation period start date, adjusted according to any relevant business day convention.'

   <adjustedEndDate> xsd:date </adjustedEndDate> [0..1]
   'The calculation period end date, adjusted according to any relevant business day convention.'

   <calculationPeriodNumberOfDays> xsd:positiveInteger </calculationPeriodNumberOfDays> [0..1]
   '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.'

Start Choice [1]
      <notionalAmount> xsd:decimal </notionalAmount> [1]
      'The amount that a cashflow will accrue interest on.'

      <fxLinkedNotionalAmount> FxLinkedNotionalAmount </fxLinkedNotionalAmount> [1]
      '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.'

End Choice
Start Choice [1]
      <floatingRateDefinition> FloatingRateDefinition </floatingRateDefinition> [1]
      'The floating rate reset information for the calculation period.'

      <fixedRate> xsd:decimal </fixedRate> [1]
      'The calculation period fixed rate. A per annum rate, expressed as a decimal. A fixed rate
      of 5% would be represented as 0.05.'

End Choice
   <dayCountYearFraction> xsd:decimal </dayCountYearFraction> [0..1]
   'The year fraction value of the calculation period, result of applying the ISDA rules for
   day count fraction defined in the ISDA Annex.'

   <forecastAmount> Money </forecastAmount> [0..1]
   '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> xsd:decimal </forecastRate> [0..1]
'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'

</...>
```

Diagram





Schema Component Representation

```
<xsd:complexType name="CalculationPeriod">
   <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:element name="adjustedEndDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="calculationPeriodNumberOfDays" type=" xsd:positiveInteger " minOccurs="0"/>
      <xsd:choice>
         <xsd:element name="notionalAmount" type=" xsd:decimal "/>
         <xsd:element name="fxLinkedNotionalAmount" type=" FxLinkedNotionalAmount "/>
      </xsd:choice>
      <xsd:choice>
         <xsd:element name="floatingRateDefinition" type=" FloatingRateDefinition "/>
         <xsd:element name="fixedRate" type=" xsd:decimal "/>
      </xsd:choice>
      <xsd:element name="dayCountYearFraction" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="forecastAmount" type=" Money " minOccurs="0"/>
      <xsd:element name="forecastRate" type=" xsd:decimal " minOccurs="0"/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: CalculationPeriodAmount

Super-types:	None
Sub-types:	None

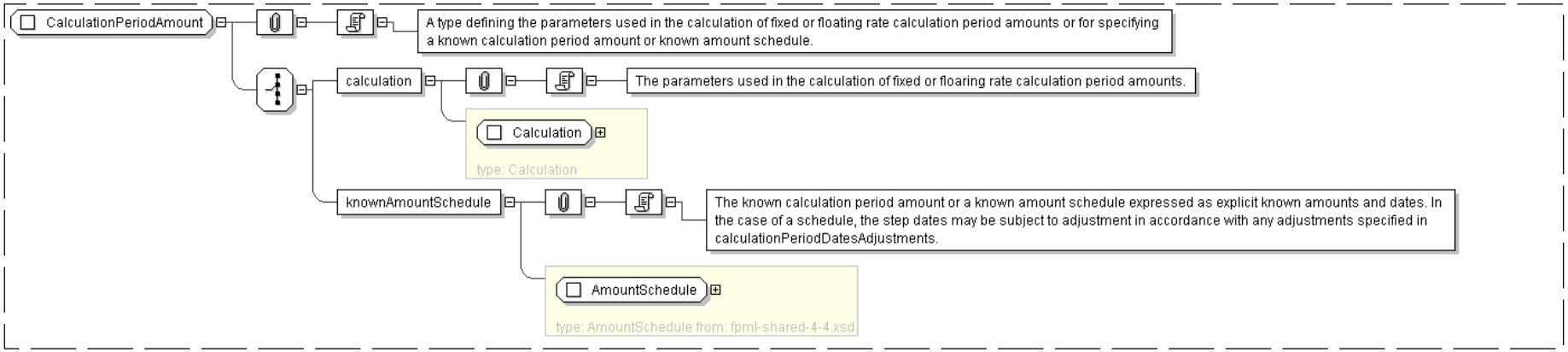
Name	CalculationPeriodAmount
Used by (from the same schema document)	Complex Type **InterestRateStream**
Abstract	no
Documentation	A type defining the parameters used in the calculation of fixed or floating rate calculation period amounts or for specifying a known calculation period amount or known amount schedule.

XML Instance Representation

```
<...>
Start Choice [1]
      <calculation> Calculation </calculation> [1]
      'The parameters used in the calculation of fixed or floaring rate calculation period amounts.'

      <knownAmountSchedule> AmountSchedule </knownAmountSchedule> [1]
```

```
        '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.'

End Choice
</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="CalculationPeriodAmount">
   <xsd:choice>
      <xsd:element name="calculation" type=" Calculation "/>
      <xsd:element name="knownAmountSchedule" type=" AmountSchedule "/>
   </xsd:choice>
</xsd:complexType>
```

top

Complex Type: CalculationPeriodDates

Super-types:	None
Sub-types:	None

Name	CalculationPeriodDates
Used by (from the same schema document)	Complex Type **InterestRateStream**
Abstract	no
Documentation	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.

XML Instance Representation

```
<...
id=" xsd:ID [1]">
Start Choice [1]
      <effectiveDate> AdjustableDate </effectiveDate> [1]
      'The first day of the term of the trade. This day may be subject to adjustment in
      accordance with a business day convention.'

      <relativeEffectiveDate> AdjustedRelativeDateOffset </relativeEffectiveDate> [1]
      'Defines the effective date.'

End Choice
Start Choice [1]
      <terminationDate> AdjustableDate </terminationDate> [1]
      'The last day of the term of the trade. This day may be subject to adjustment in
```

accordance with a business day convention.'

<relativeTerminationDate> RelativeDateOffset </relativeTerminationDate> [1]

'The term/maturity of the swap, express as a tenor (typically in years).'

End Choice

<calculationPeriodDatesAdjustments> BusinessDayAdjustments </calculationPeriodDatesAdjustments> [1]

'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> AdjustableDate </firstPeriodStartDate> [0..1]

'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> xsd:date </firstRegularPeriodStartDate> [0..1]

'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> xsd:date </firstCompoundingPeriodEndDate> [0..1]

'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> xsd:date </lastRegularPeriodEndDate> [0..1]

'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> StubPeriodTypeEnum </stubPeriodType> [0..1]

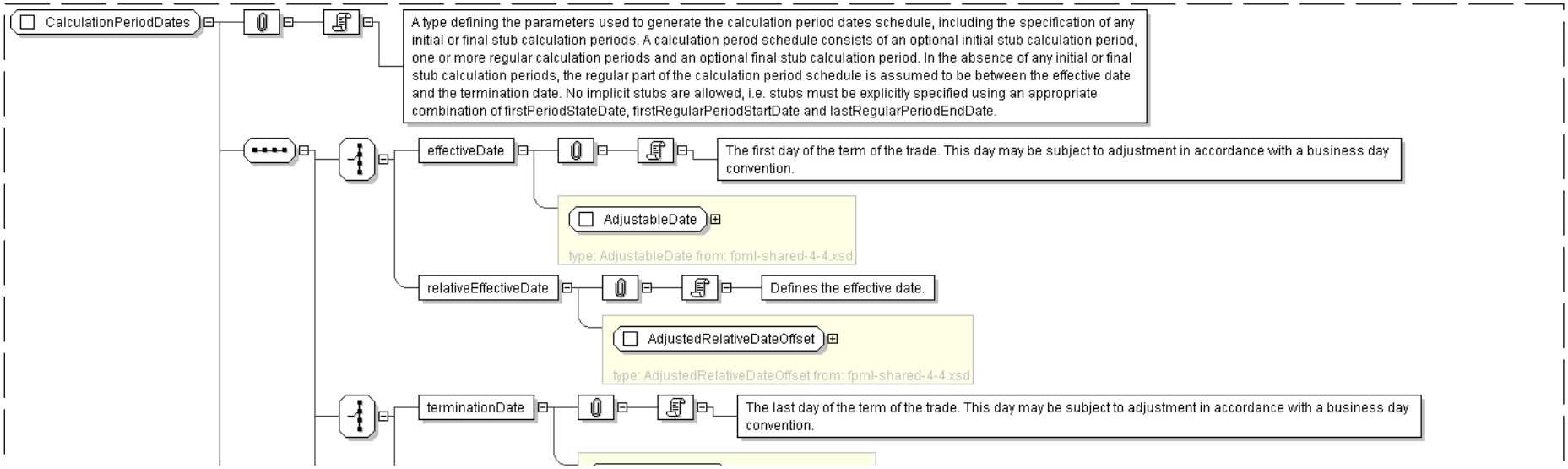
'Method to allocate any irregular period remaining after regular periods have been allocated between the effective and termination date.'

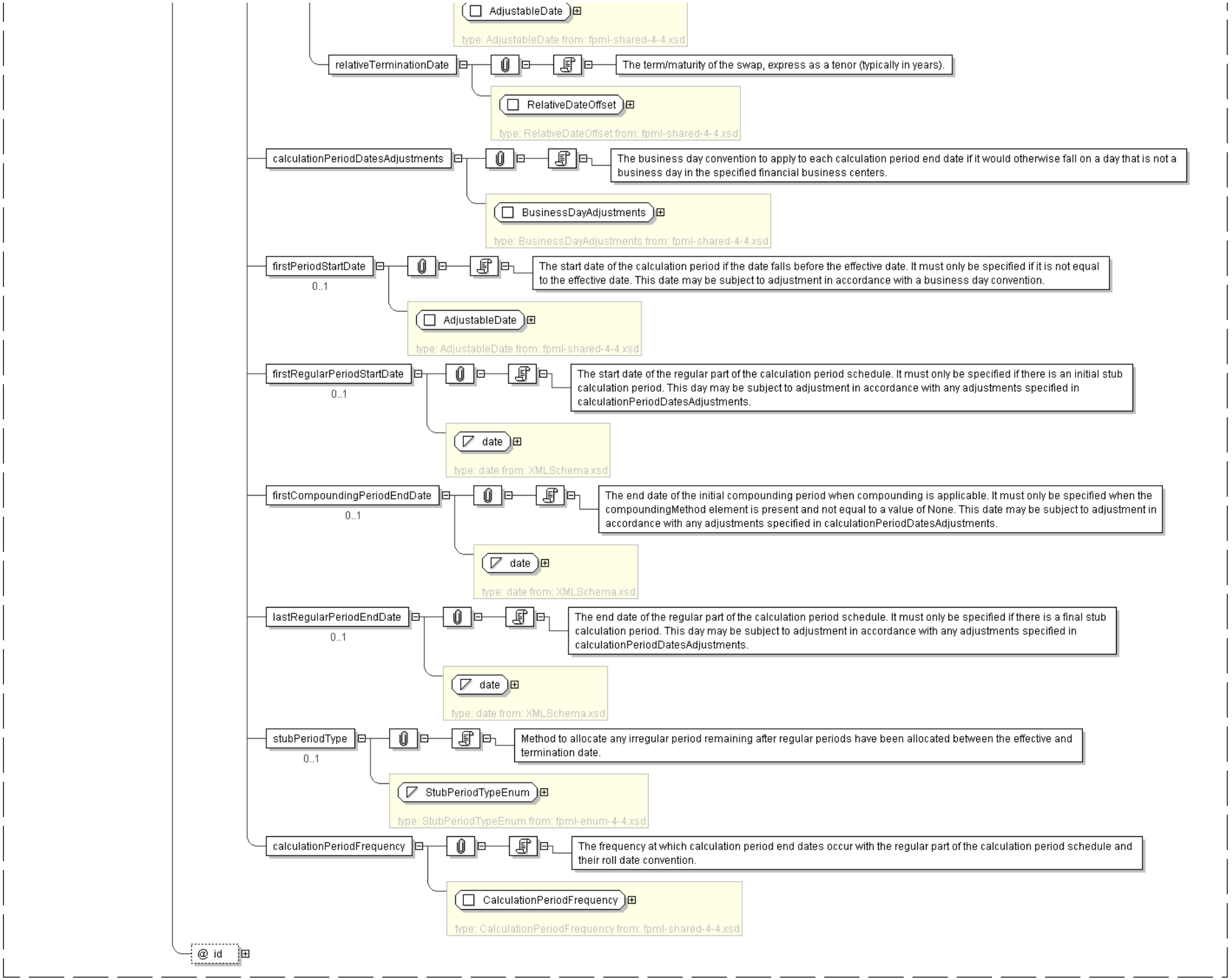
<calculationPeriodFrequency> CalculationPeriodFrequency </calculationPeriodFrequency> [1]

'The frequency at which calculation period end dates occur with the regular part of the calculation period schedule and their roll date convention.'

</...>

Diagram





Schema Component Representation

```
<xsd:complexType name="CalculationPeriodDates">
   <xsd:sequence>
      <xsd:choice>
         <xsd:element name="effectiveDate" type=" AdjustableDate "/>
         <xsd:element name="relativeEffectiveDate" type=" AdjustedRelativeDateOffset "/>
      </xsd:choice>
      <xsd:choice>
         <xsd:element name="terminationDate" type=" AdjustableDate "/>
         <xsd:element name="relativeTerminationDate" type=" RelativeDateOffset "/>
      </xsd:choice>
      <xsd:element name="calculationPeriodDatesAdjustments" type=" BusinessDayAdjustments "/>
      <xsd:element name="firstPeriodStartDate" type=" AdjustableDate " minOccurs="0"/>
      <xsd:element name="firstRegularPeriodStartDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="firstCompoundingPeriodEndDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="lastRegularPeriodEndDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="stubPeriodType" type=" StubPeriodTypeEnum " minOccurs="0"/>
      <xsd:element name="calculationPeriodFrequency" type=" CalculationPeriodFrequency "/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID " use="required"/>
</xsd:complexType>
```

top

Complex Type: CalculationPeriodDatesReference

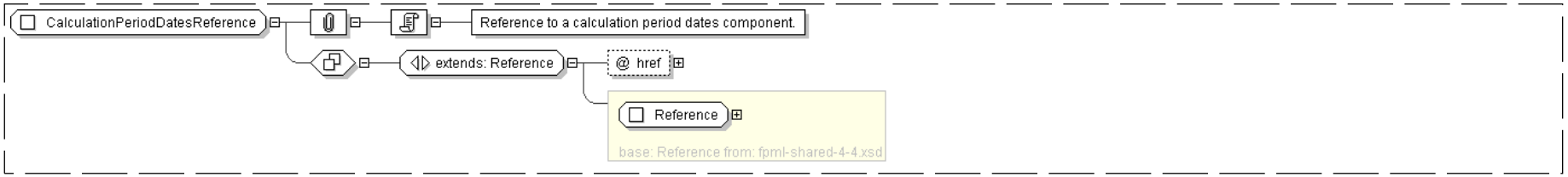
Super-types:	Reference < **CalculationPeriodDatesReference** (by extension)
Sub-types:	None

Name	CalculationPeriodDatesReference
Used by (from the same schema document)	Complex Type **NotionalStepRule** , Complex Type **PaymentDates** , Complex Type **ResetDates** , Complex Type **StubCalculationPeriodAmount**
Abstract	no
Documentation	Reference to a calculation period dates component.

XML Instance Representation

```
<...
href=" xsd:IDREF [1]"/>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="CalculationPeriodDatesReference">
   <xsd:complexContent>
      <xsd:extension base=" Reference ">
         <xsd:attribute name="href" type=" xsd:IDREF " use="required"
         reference="CalculationPeriodDates"/>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: CancelableProvision

Super-types:	None

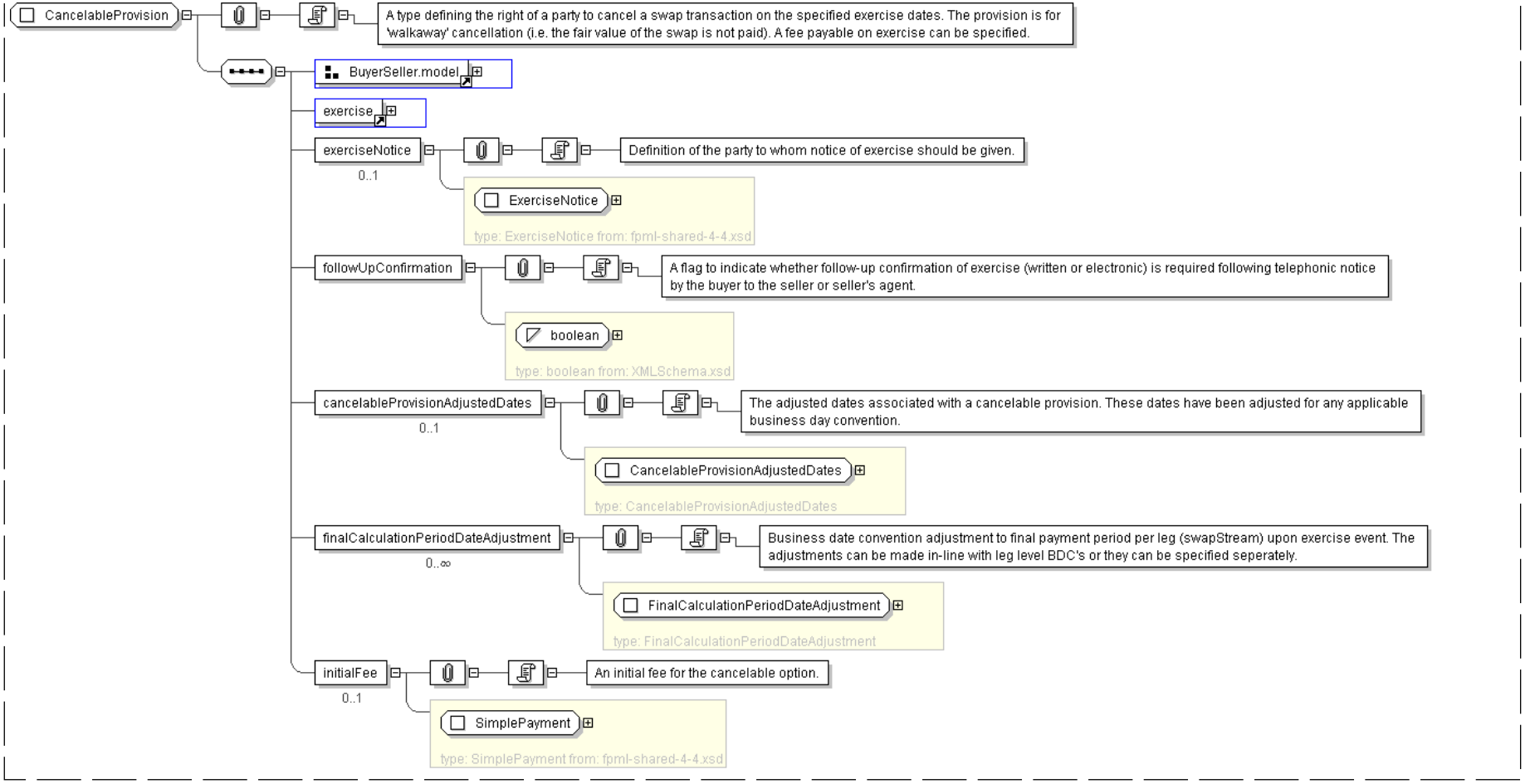
Sub-types:	None

Name	CancelableProvision
Used by (from the same schema document)	Complex Type **Swap**
Abstract	no
Documentation	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.

XML Instance Representation

```
<...>
   <buyerPartyReference> PartyOrTradeSideReference </buyerPartyReference> [1]
   '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> PartyOrTradeSideReference </sellerPartyReference> [1]
   '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> ... </exercise> [1]
   <exerciseNotice> ExerciseNotice </exerciseNotice> [0..1]
   'Definition of the party to whom notice of exercise should be given.'

   <followUpConfirmation> xsd:boolean </followUpConfirmation> [1]
   '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> CancelableProvisionAdjustedDates
   </cancelableProvisionAdjustedDates> [0..1]
   'The adjusted dates associated with a cancelable provision. These dates have been adjusted
   for any applicable business day convention.'

   <finalCalculationPeriodDateAdjustment> FinalCalculationPeriodDateAdjustment
   </finalCalculationPeriodDateAdjustment> [0..*]
   '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.'

   <initialFee> SimplePayment </initialFee> [0..1]
   'An initial fee for the cancelable option.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="CancelableProvision">
   <xsd:sequence>
      <xsd:group ref=" BuyerSeller.model "/>
      <xsd:element ref=" exercise "/>
      <xsd:element name="exerciseNotice" type=" ExerciseNotice " minOccurs="0"/>
      <xsd:element name="followUpConfirmation" type=" xsd:boolean "/>
      <xsd:element name="cancelableProvisionAdjustedDates" type=" CancelableProvisionAdjustedDates
      " minOccurs="0"/>
      <xsd:element name="finalCalculationPeriodDateAdjustment"
      type=" FinalCalculationPeriodDateAdjustment " minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element name="initialFee" type=" SimplePayment " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: CancelableProvisionAdjustedDates

Super-types:	None
Sub-types:	None

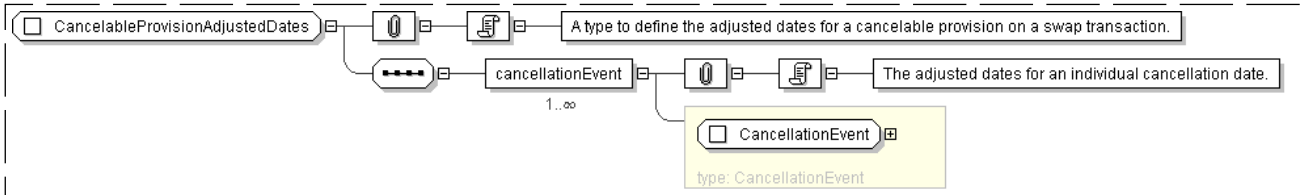
Name	CancelableProvisionAdjustedDates
Used by (from the same schema document)	Complex Type **CancelableProvision**

Abstract	no
Documentation	A type to define the adjusted dates for a cancelable provision on a swap transaction.

XML Instance Representation

```
<...>
   <cancellationEvent> CancellationEvent </cancellationEvent> [1..*]
   'The adjusted dates for an individual cancellation date.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="CancelableProvisionAdjustedDates">
   <xsd:sequence>
      <xsd:element name="cancellationEvent" type=" CancellationEvent " maxOccurs="unbounded"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: CancellationEvent

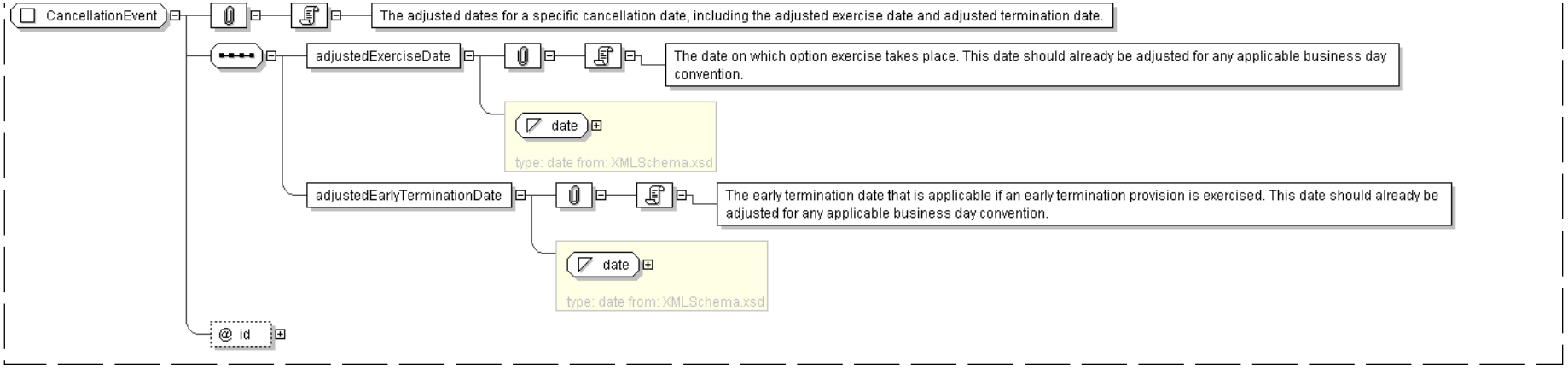
Super-types:	None
Sub-types:	None

Name	CancellationEvent
Used by (from the same schema document)	Complex Type **CancelableProvisionAdjustedDates**
Abstract	no
Documentation	The adjusted dates for a specific cancellation date, including the adjusted exercise date and adjusted termination date.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <adjustedExerciseDate> xsd:date </adjustedExerciseDate> [1]
   'The date on which option exercise takes place. This date should already be adjusted for
   any applicable business day convention.'

   <adjustedEarlyTerminationDate> xsd:date </adjustedEarlyTerminationDate> [1]
   '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.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="CancellationEvent">
   <xsd:sequence>
      <xsd:element name="adjustedExerciseDate" type=" xsd:date "/>
      <xsd:element name="adjustedEarlyTerminationDate" type=" xsd:date "/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: CapFloor

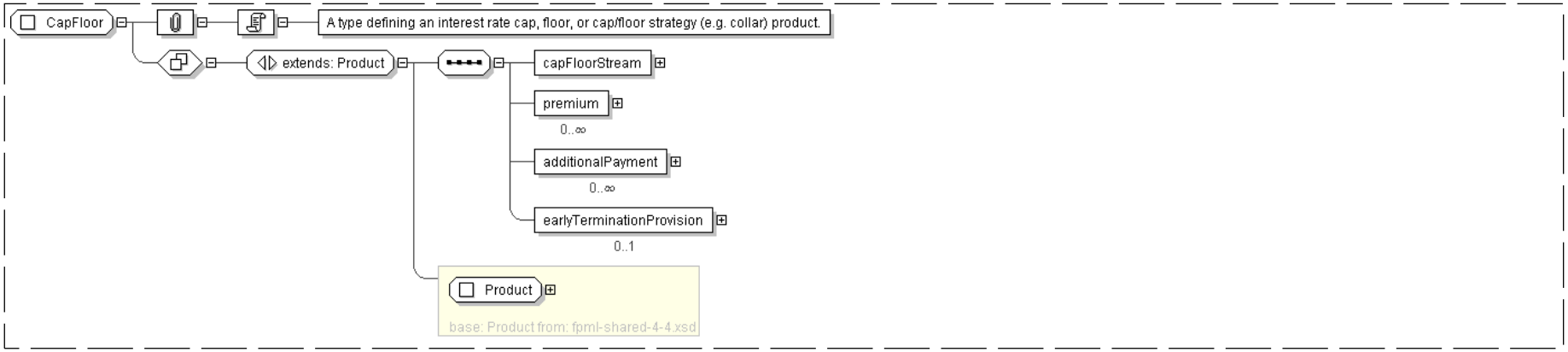
Super-types:	Product < **CapFloor** (by extension)
Sub-types:	None

Name	CapFloor
Used by (from the same schema document)	Element **capFloor**
Abstract	no
Documentation	A type defining an interest rate cap, floor, or cap/floor strategy (e.g. collar) product.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
   'A classification of the type of product. FpML defines a simple product categorization using
   a coding scheme.'

   <productId> ProductId </productId> [0..*]
   'A product reference identifier allocated by a party. FpML does not define the domain
   values associated with this element. Note that the domain values for this element are
   not strictly an enumerated list.'

   <capFloorStream> InterestRateStream </capFloorStream> [1]
   <premium> Payment </premium> [0..*]
   'The option premium amount payable by buyer to seller on the specified payment date.'

   <additionalPayment> Payment </additionalPayment> [0..*]
   'Additional payments between the principal parties.'

   <earlyTerminationProvision> EarlyTerminationProvision </earlyTerminationProvision> [0..1]
   'Parameters specifying provisions relating to the optional and mandatory early terminarion of
   a CapFloor transaction.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="CapFloor">
   <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:element name="additionalPayment" type=" Payment " minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element name="earlyTerminationProvision" type=" EarlyTerminationProvision " minOccurs="0"/>
         </xsd:sequence>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: CashPriceMethod

Super-types:	None
Sub-types:	None

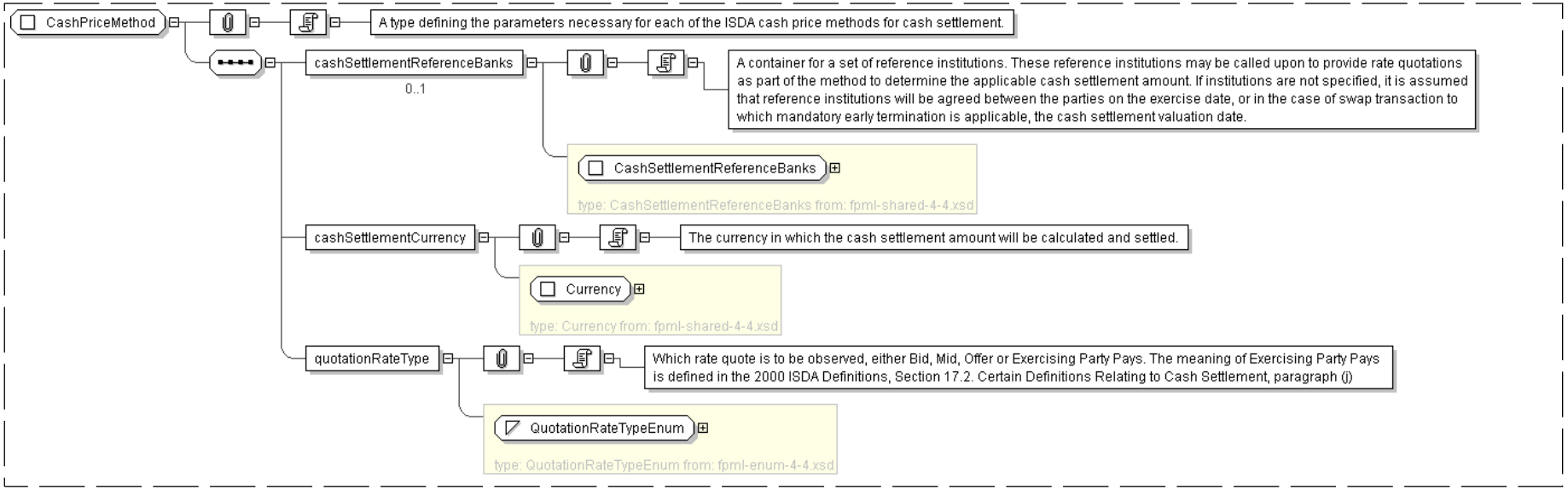
Name	CashPriceMethod
Used by (from the same schema document)	Complex Type **CashSettlement** , Complex Type **CashSettlement**
Abstract	no
Documentation	A type defining the parameters necessary for each of the ISDA cash price methods for cash settlement.

XML Instance Representation

```
<...>
   <cashSettlementReferenceBanks> CashSettlementReferenceBanks </
   cashSettlementReferenceBanks> [0..1]
   '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> Currency </cashSettlementCurrency> [1]
   'The currency in which the cash settlement amount will be calculated and settled.'

   <quotationRateType> QuotationRateTypeEnum </quotationRateType> [1]
   '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)'
```

```
</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="CashPriceMethod">
   <xsd:sequence>
      <xsd:element name="cashSettlementReferenceBanks" type=" CashSettlementReferenceBanks
      " minOccurs="0"/>
      <xsd:element name="cashSettlementCurrency" type=" Currency "/>
      <xsd:element name="quotationRateType" type=" QuotationRateTypeEnum "/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: CashSettlement

Super-types:	None
Sub-types:	None

Name	CashSettlement
Used by (from the same schema document)	Complex Type **MandatoryEarlyTermination** , Complex Type **OptionalEarlyTermination** , Complex Type **Swaption**
Abstract	no
Documentation	A type to define the cash settlement terms for a product where cash settlement is applicable.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <cashSettlementValuationTime> BusinessCenterTime </cashSettlementValuationTime> [0..1]
   '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> RelativeDateOffset </cashSettlementValuationDate> [0..1]
   '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> CashSettlementPaymentDate </cashSettlementPaymentDate> [0..1]
```

'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.'

Start Choice [0..1]

<cashPriceMethod> CashPriceMethod </cashPriceMethod> [1]

'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).'

<cashPriceAlternateMethod> CashPriceMethod </cashPriceAlternateMethod> [1]

'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).'

<parYieldCurveAdjustedMethod> YieldCurveMethod </parYieldCurveAdjustedMethod> [1]

'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).'

<zeroCouponYieldAdjustedMethod> YieldCurveMethod </zeroCouponYieldAdjustedMethod> [1]

'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).'

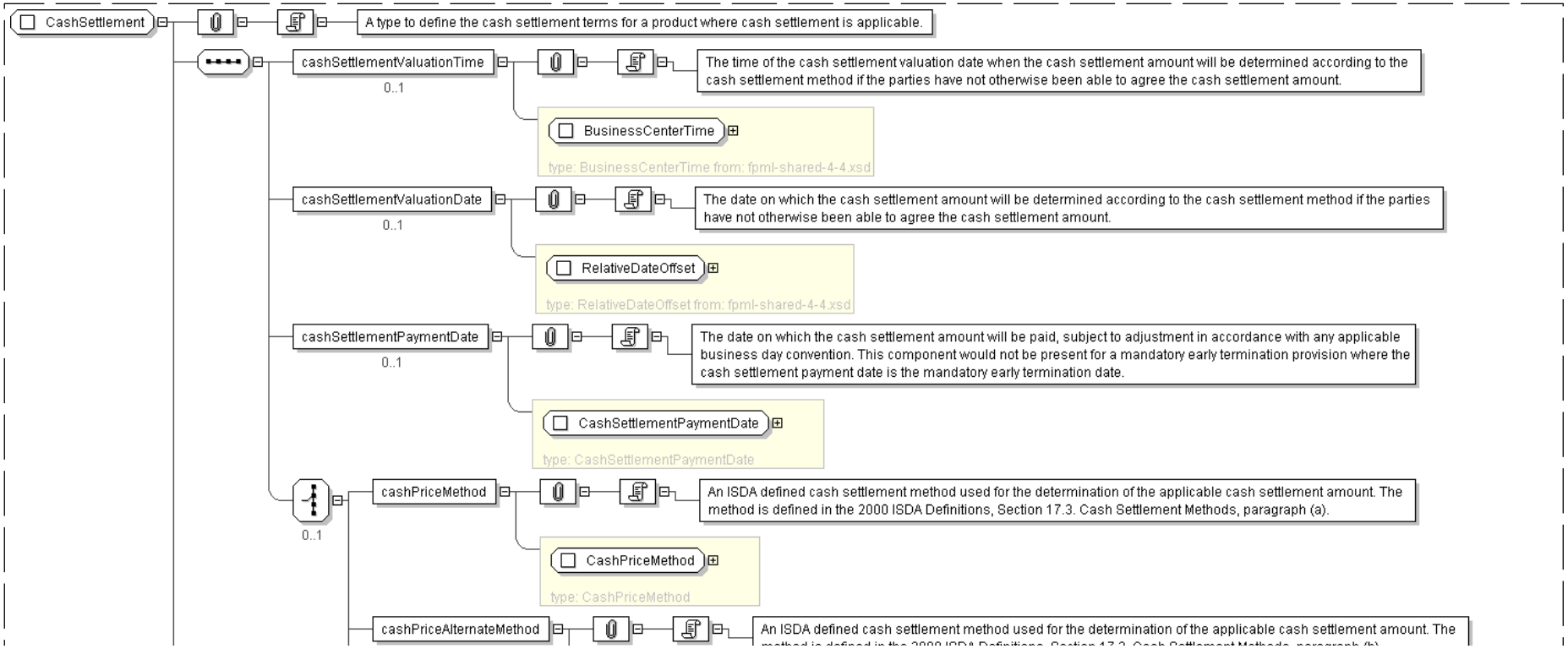
<parYieldCurveUnadjustedMethod> YieldCurveMethod </parYieldCurveUnadjustedMethod> [1]

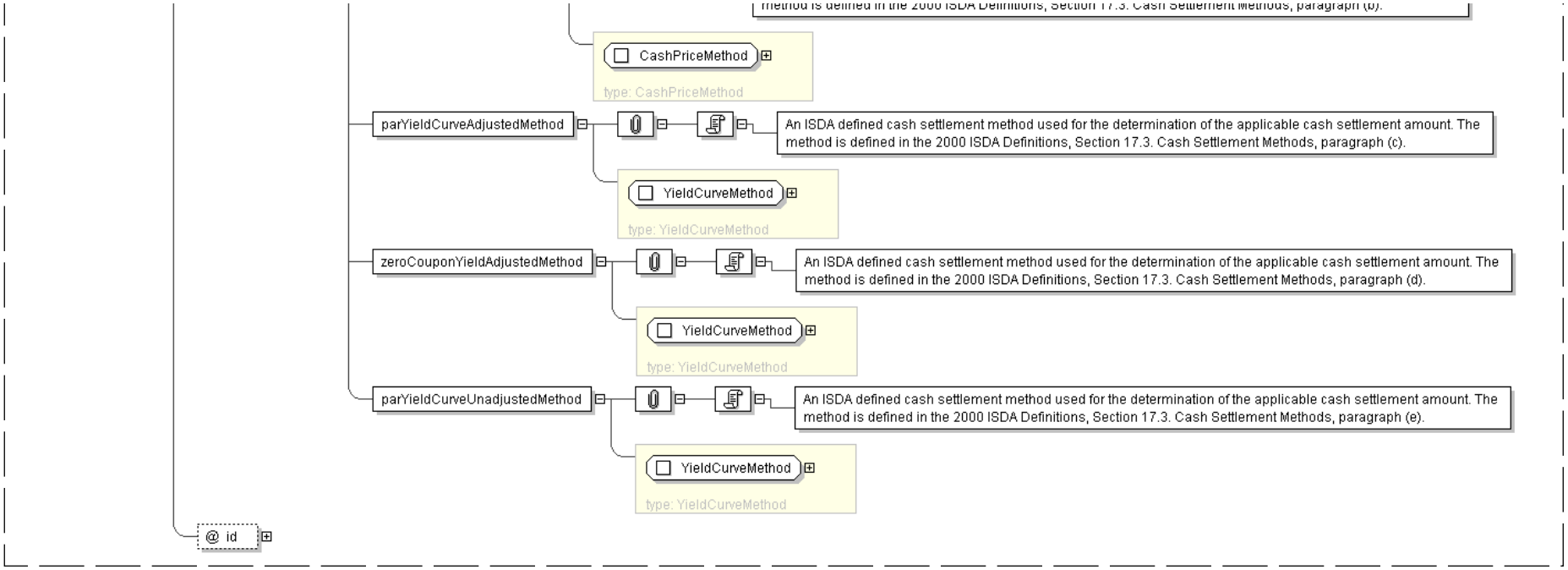
'An ISDA defined cash settlement method used for the determination of the applicable cash settlement amount. The method is defined in the 2000 ISDA Definitions, Section 17.3. Cash Settlement Methods, paragraph (e).'

End Choice

</...>

Diagram





Schema Component Representation

```
<xsd:complexType name="CashSettlement">
   <xsd:sequence>
      <xsd:element name="cashSettlementValuationTime" type=" BusinessCenterTime " minOccurs="0"/>
      <xsd:element name="cashSettlementValuationDate" type=" RelativeDateOffset " minOccurs="0"/>
      <xsd:element name="cashSettlementPaymentDate" type=" CashSettlementPaymentDate " minOccurs="0"/>
      <xsd:choice minOccurs="0">
         <xsd:element name="cashPriceMethod" type=" CashPriceMethod "/>
         <xsd:element name="cashPriceAlternateMethod" type=" CashPriceMethod "/>
         <xsd:element name="parYieldCurveAdjustedMethod" type=" YieldCurveMethod "/>
         <xsd:element name="zeroCouponYieldAdjustedMethod" type=" YieldCurveMethod "/>
         <xsd:element name="parYieldCurveUnadjustedMethod" type=" YieldCurveMethod "/>
      </xsd:choice>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: CashSettlementPaymentDate

Super-types:	None
Sub-types:	None

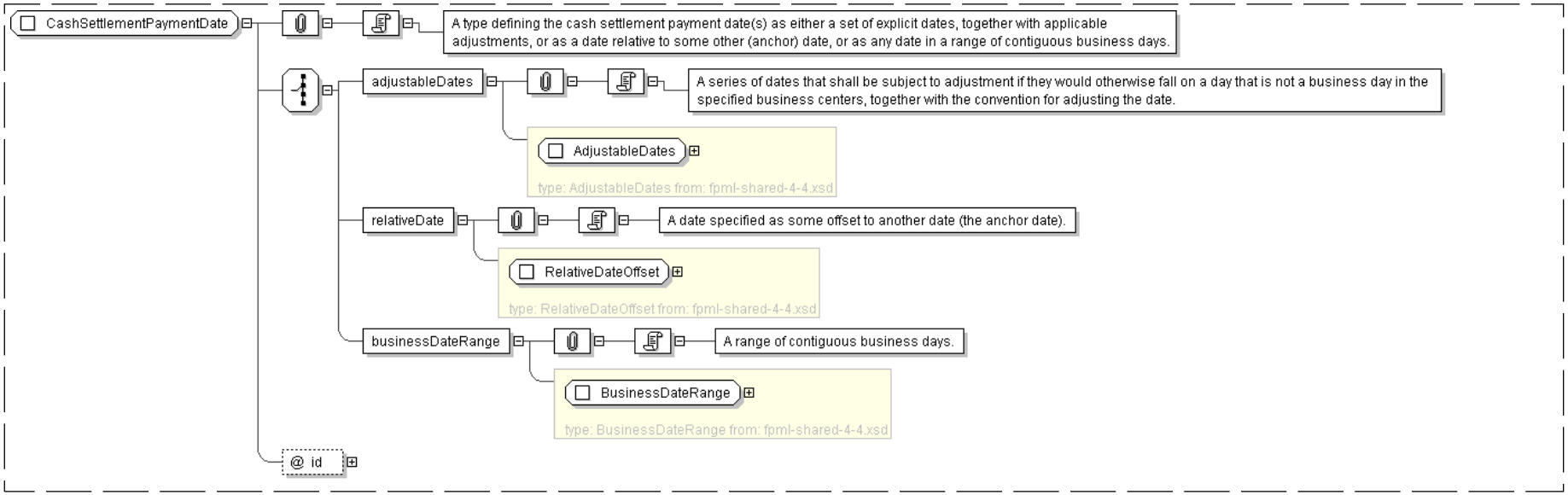
Name	CashSettlementPaymentDate
Used by (from the same schema document)	Complex Type **CashSettlement**
Abstract	no
Documentation	A type defining the cash settlement payment date(s) as either a set of explicit dates, together with applicable adjustments, or as a date relative to some other (anchor) date, or as any date in a range of contiguous business days.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
Start Choice [1]
      <adjustableDates> AdjustableDates </adjustableDates> [1]
```

```
        '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.'

        <relativeDate> RelativeDateOffset </relativeDate> [1]
        'A date specified as some offset to another date (the anchor date).'

        <businessDateRange> BusinessDateRange </businessDateRange> [1]
        'A range of contiguous business days.'

 End Choice
 </...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="CashSettlementPaymentDate">
   <xsd:choice>
      <xsd:element name="adjustableDates" type=" AdjustableDates "/>
      <xsd:element name="relativeDate" type=" RelativeDateOffset "/>
      <xsd:element name="businessDateRange" type=" BusinessDateRange "/>
   </xsd:choice>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: Cashflows

Super-types:	None
Sub-types:	None

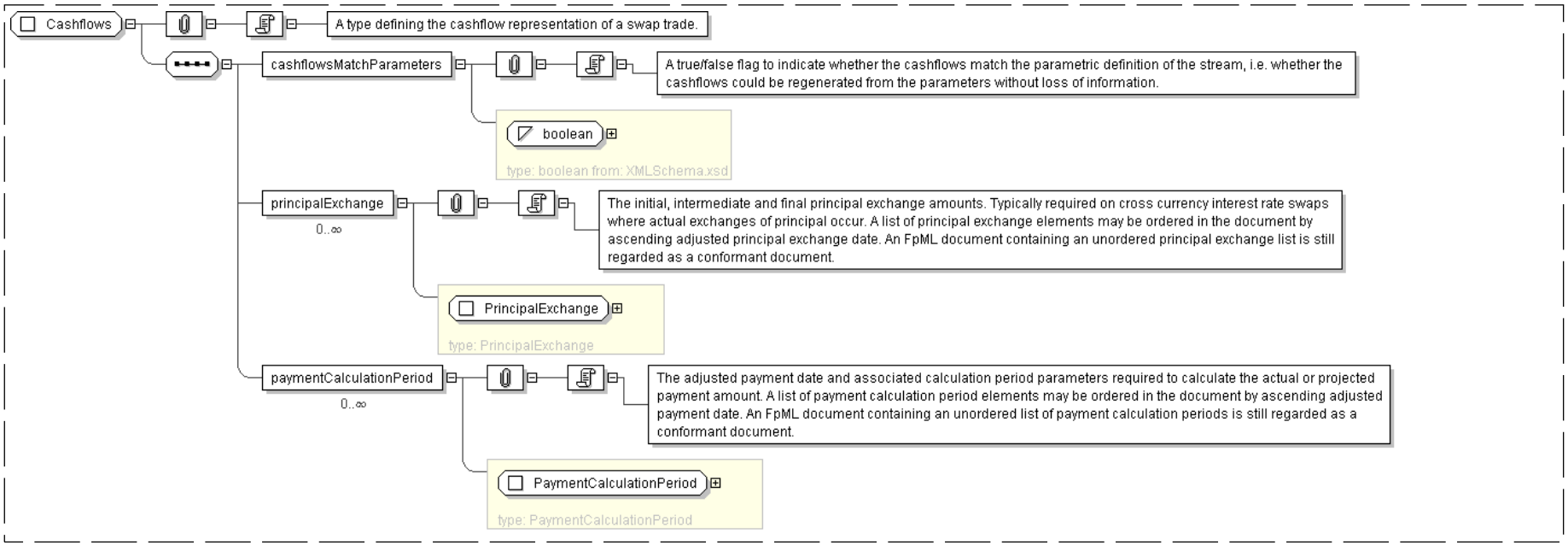
Name	Cashflows
Used by (from the same schema document)	Complex Type **InterestRateStream**
Abstract	no
Documentation	A type defining the cashflow representation of a swap trade.

XML Instance Representation

```
<...>
   <cashflowsMatchParameters> xsd:boolean </cashflowsMatchParameters> [1]
```

```
'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> PrincipalExchange </principalExchange> [0..*]
'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> PaymentCalculationPeriod </paymentCalculationPeriod> [0..*]
'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.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="Cashflows">
   <xsd:sequence>
      <xsd:element name="cashflowsMatchParameters" type=" xsd:boolean "/>
      <xsd:element name="principalExchange" type=" PrincipalExchange "
      minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element name="paymentCalculationPeriod" type=" PaymentCalculationPeriod "
      minOccurs="0" maxOccurs="unbounded"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: DateRelativeToPaymentDates

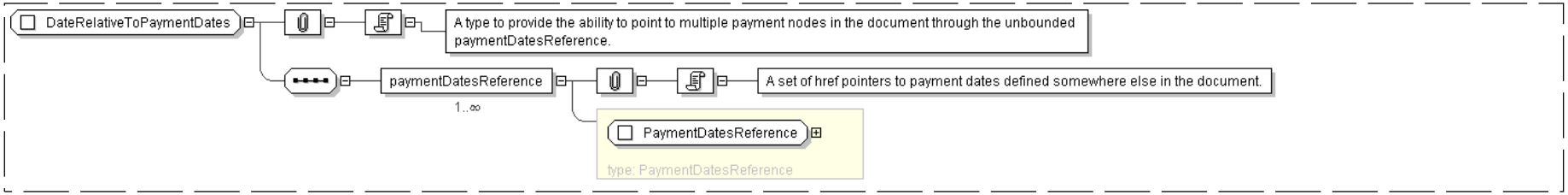
Super-types:	None
Sub-types:	None

Name	DateRelativeToPaymentDates
Used by (from the same schema document)	Complex Type **FxFixingDate**
Abstract	no
Documentation	A type to provide the ability to point to multiple payment nodes in the document through the unbounded paymentDatesReference.

XML Instance Representation

```
<...>
   <paymentDatesReference> PaymentDatesReference </paymentDatesReference> [1..*]
   'A set of href pointers to payment dates defined somewhere else in the document.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="DateRelativeToPaymentDates">
   <xsd:sequence>
      <xsd:element name="paymentDatesReference" type=" PaymentDatesReference " maxOccurs="unbounded"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: Discounting

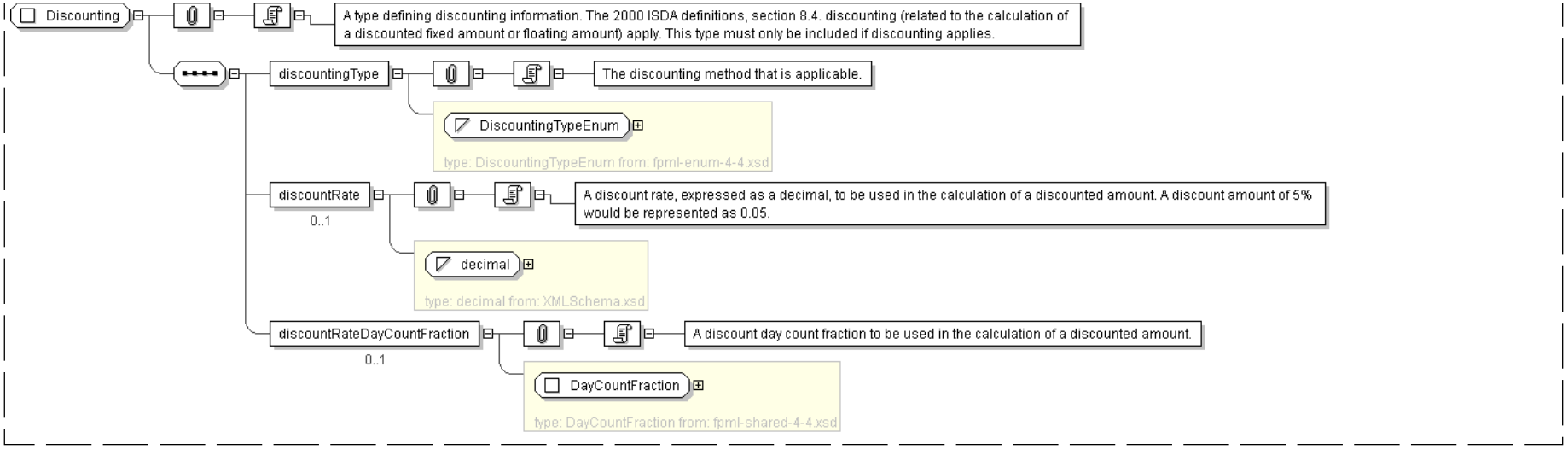
Super-types:	None
Sub-types:	None

Name	Discounting
Used by (from the same schema document)	Complex Type **Calculation**
Abstract	no
Documentation	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.

XML Instance Representation

```
<...>
   <discountingType> DiscountingTypeEnum </discountingType> [1]
   'The discounting method that is applicable.'

   <discountRate> xsd:decimal </discountRate> [0..1]
   '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> DayCountFraction </discountRateDayCountFraction> [0..1]
   'A discount day count fraction to be used in the calculation of a discounted amount.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="Discounting">
   <xsd:sequence>
      <xsd:element name="discountingType" type=" DiscountingTypeEnum "/>
      <xsd:element name="discountRate" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="discountRateDayCountFraction" type=" DayCountFraction " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: EarlyTerminationEvent

Super-types:	None
Sub-types:	None

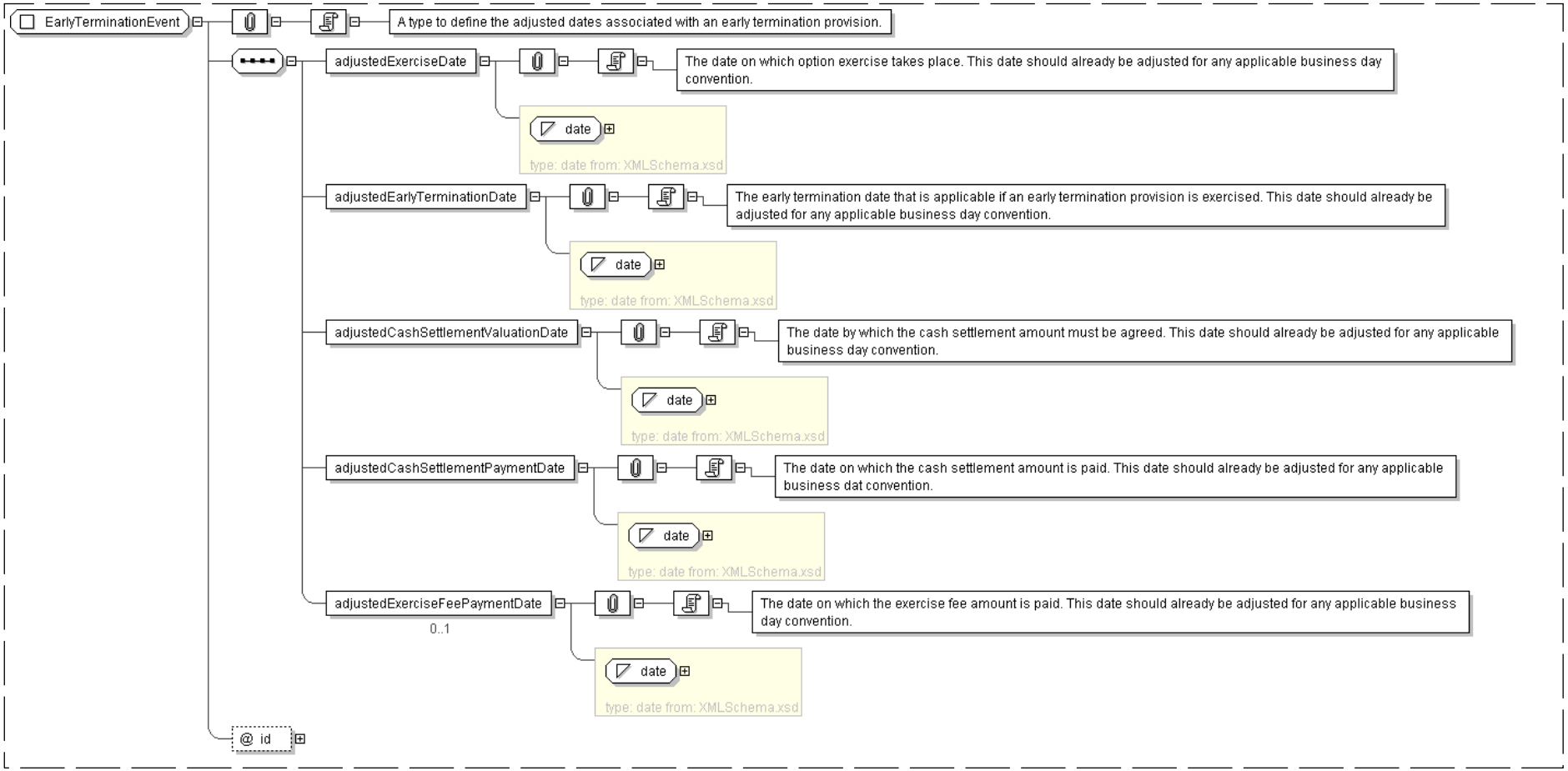
Name	EarlyTerminationEvent
Used by (from the same schema document)	Complex Type **OptionalEarlyTerminationAdjustedDates**
Abstract	no
Documentation	A type to define the adjusted dates associated with an early termination provision.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <adjustedExerciseDate> xsd:date </adjustedExerciseDate> [1]
   'The date on which option exercise takes place. This date should already be adjusted for
   any applicable business day convention.'

   <adjustedEarlyTerminationDate> xsd:date </adjustedEarlyTerminationDate> [1]
   '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> xsd:date </adjustedCashSettlementValuationDate> [1]
   'The date by which the cash settlement amount must be agreed. This date should already
   be adjusted for any applicable business day convention.'

   <adjustedCashSettlementPaymentDate> xsd:date </adjustedCashSettlementPaymentDate> [1]
   'The date on which the cash settlement amount is paid. This date should already be adjusted
   for any applicable business dat convention.'

   <adjustedExerciseFeePaymentDate> xsd:date </adjustedExerciseFeePaymentDate> [0..1]
```

```
    'The date on which the exercise fee amount is paid. This date should already be adjusted
    for any applicable business day convention.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="EarlyTerminationEvent">
   <xsd:sequence>
      <xsd:element name="adjustedExerciseDate" type=" xsd:date "/>
      <xsd:element name="adjustedEarlyTerminationDate" type=" xsd:date "/>
      <xsd:element name="adjustedCashSettlementValuationDate" type=" xsd:date "/>
      <xsd:element name="adjustedCashSettlementPaymentDate" type=" xsd:date "/>
      <xsd:element name="adjustedExerciseFeePaymentDate" type=" xsd:date " minOccurs="0"/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: EarlyTerminationProvision

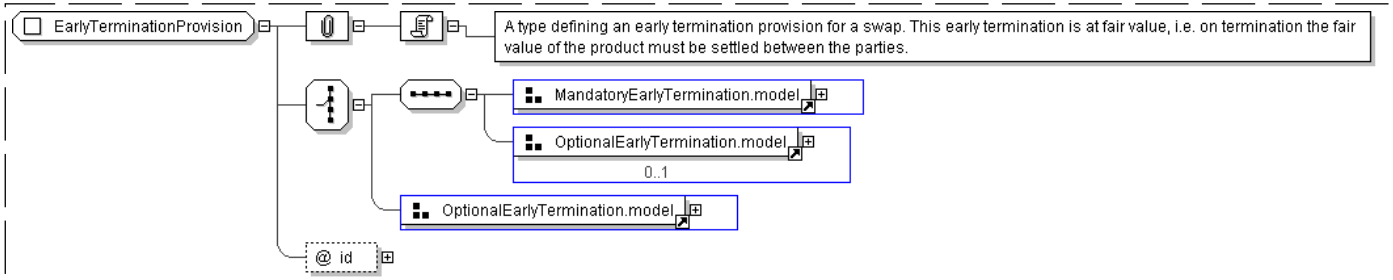
Super-types:	None
Sub-types:	None

Name	EarlyTerminationProvision
Used by (from the same schema document)	Complex Type **CapFloor** , Complex Type **Swap**
Abstract	no
Documentation	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.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
Start Choice [1]
Start Choice [1]
        <mandatoryEarlyTermination> MandatoryEarlyTermination </mandatoryEarlyTermination> [1]
        'A mandatory early termination provision to terminate the swap at fair value.'

        <mandatoryEarlyTerminationDateTenor> Interval </mandatoryEarlyTerminationDateTenor> [1]
        'Period after trade date of the mandatory early termination date.'

        <mandatoryEarlyTermination> MandatoryEarlyTermination </mandatoryEarlyTermination> [0..1]
        'A mandatory early termination provision to terminate the swap at fair value.'

End Choice
Start Group: OptionalEarlyTermination.model [0..1]
Start Choice [1]
            <optionalEarlyTermination> OptionalEarlyTermination </optionalEarlyTermination> [1]
            'An option for either or both parties to terminate the swap at fair value.'

            <optionalEarlyTerminationParameters> ExercisePeriod </optionalEarlyTerminationParameters> [1]
            '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.'

            <optionalEarlyTermination> OptionalEarlyTermination </optionalEarlyTermination> [0..1]
            'An option for either or both parties to terminate the swap at fair value.'

End Choice
End Group: OptionalEarlyTermination.model
Start Choice [1]
        <optionalEarlyTermination> OptionalEarlyTermination </optionalEarlyTermination> [1]
        'An option for either or both parties to terminate the swap at fair value.'

        <optionalEarlyTerminationParameters> ExercisePeriod </optionalEarlyTerminationParameters> [1]
        '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.'

        <optionalEarlyTermination> OptionalEarlyTermination </optionalEarlyTermination> [0..1]
        'An option for either or both parties to terminate the swap at fair value.'

End Choice
End Choice
</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="EarlyTerminationProvision">
   <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>
```

top

Complex Type: ExerciseEvent

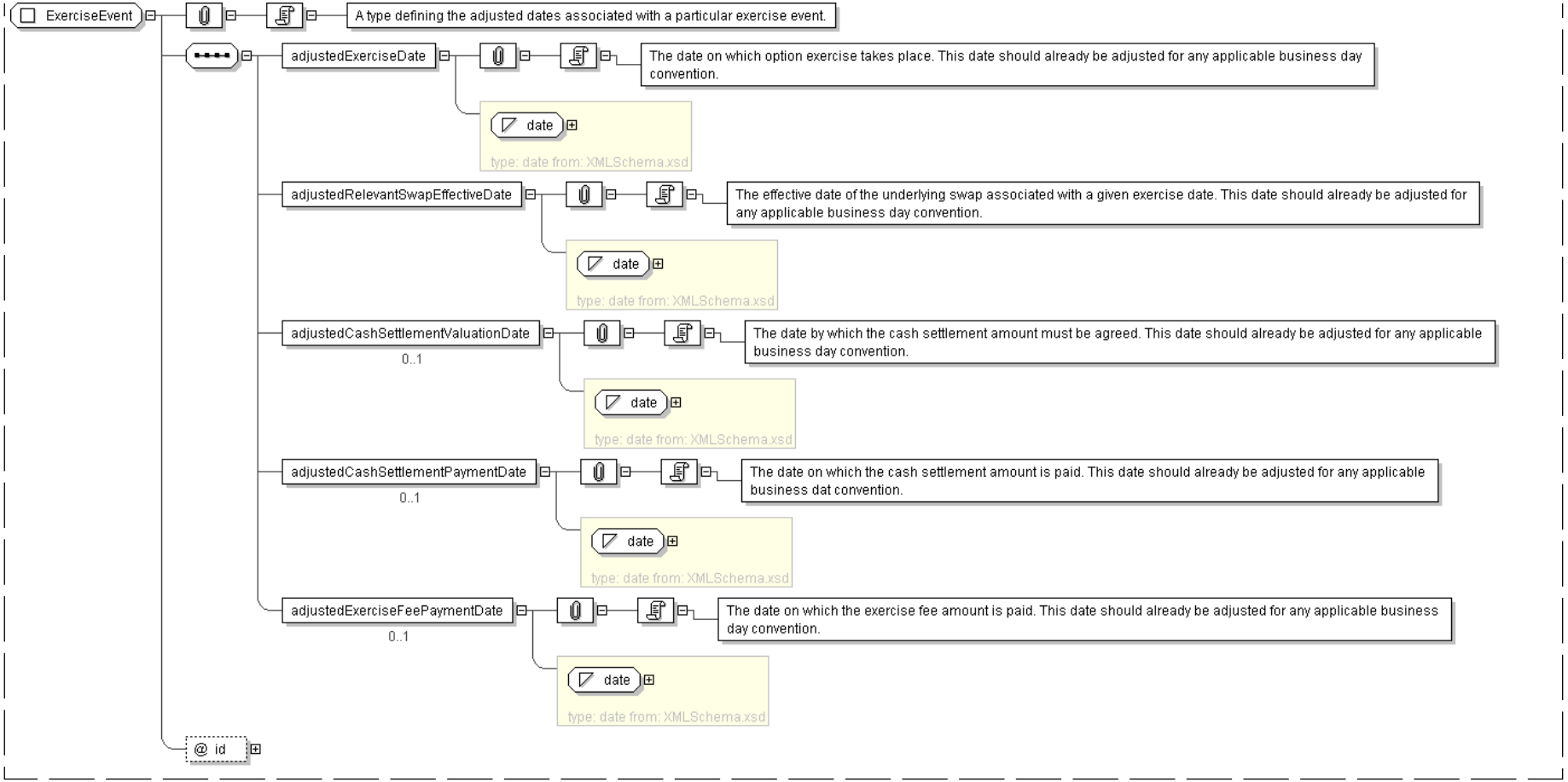
Super-types:	None
Sub-types:	None

Name	ExerciseEvent
Used by (from the same schema document)	Complex Type **SwaptionAdjustedDates**
Abstract	no
Documentation	A type defining the adjusted dates associated with a particular exercise event.

XML Instance Representation

```
<...
 id=" xsd:ID [0..1]">
   <adjustedExerciseDate> xsd:date </adjustedExerciseDate> [1]
   'The date on which option exercise takes place. This date should already be adjusted for
   any applicable business day convention.'

   <adjustedRelevantSwapEffectiveDate> xsd:date </adjustedRelevantSwapEffectiveDate> [1]
   '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> xsd:date </adjustedCashSettlementValuationDate> [0..1]
   'The date by which the cash settlement amount must be agreed. This date should already
   be adjusted for any applicable business day convention.'

   <adjustedCashSettlementPaymentDate> xsd:date </adjustedCashSettlementPaymentDate> [0..1]
   'The date on which the cash settlement amount is paid. This date should already be adjusted
   for any applicable business dat convention.'

   <adjustedExerciseFeePaymentDate> xsd:date </adjustedExerciseFeePaymentDate> [0..1]
   'The date on which the exercise fee amount is paid. This date should already be adjusted
   for any applicable business day convention.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="ExerciseEvent">
   <xsd:sequence>
      <xsd:element name="adjustedExerciseDate" type=" xsd:date "/>
      <xsd:element name="adjustedRelevantSwapEffectiveDate" type=" xsd:date "/>
      <xsd:element name="adjustedCashSettlementValuationDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="adjustedCashSettlementPaymentDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="adjustedExerciseFeePaymentDate" type=" xsd:date " minOccurs="0"/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: ExercisePeriod

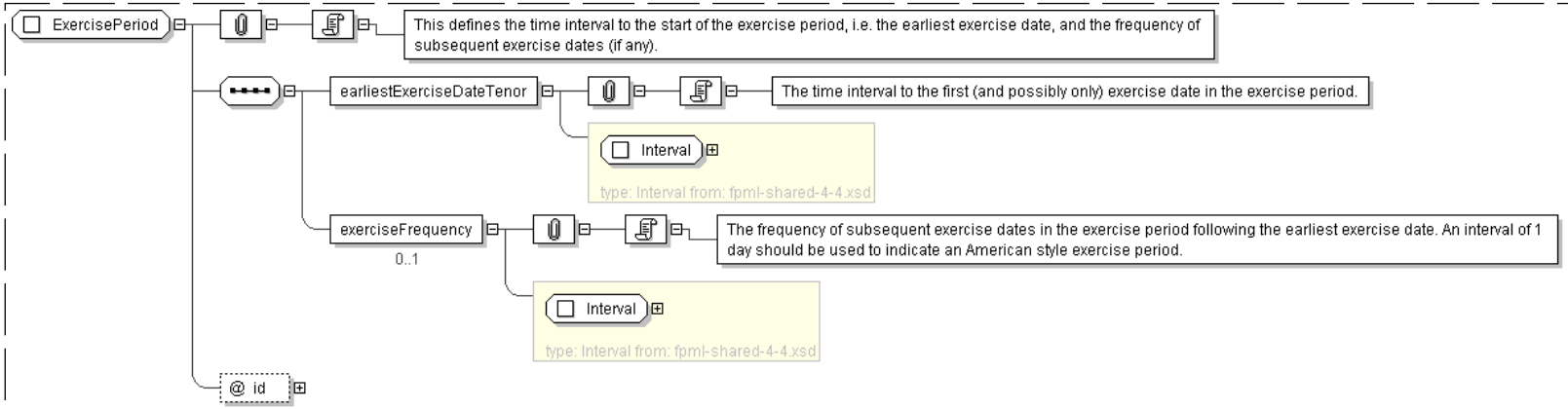
Super-types:	None
Sub-types:	None

Name	ExercisePeriod
Used by (from the same schema document)	Model Group **OptionalEarlyTermination.model**
Abstract	no
Documentation	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).

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <earliestExerciseDateTenor> Interval </earliestExerciseDateTenor> [1]
   'The time interval to the first (and possibly only) exercise date in the exercise period.'

   <exerciseFrequency> Interval </exerciseFrequency> [0..1]
   '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.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="ExercisePeriod">
   <xsd:sequence>
      <xsd:element name="earliestExerciseDateTenor" type=" Interval "/>
      <xsd:element name="exerciseFrequency" type=" Interval " minOccurs="0"/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: ExtendibleProvision

Super-types:	None
Sub-types:	None

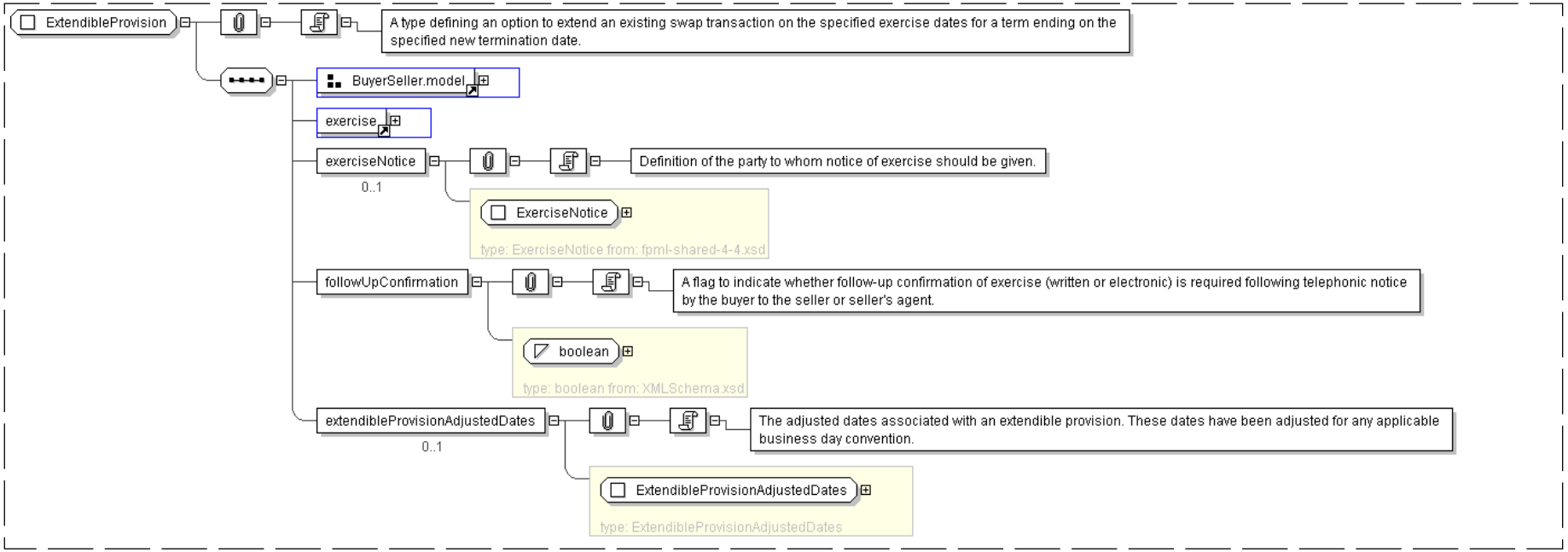
Name	ExtendibleProvision
Used by (from the same schema document)	Complex Type **Swap**
Abstract	no
Documentation	A type defining an option to extend an existing swap transaction on the specified exercise dates for a term ending on the specified new termination date.

XML Instance Representation

```
<...>
   <buyerPartyReference> PartyOrTradeSideReference </buyerPartyReference> [1]
   '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> PartyOrTradeSideReference </sellerPartyReference> [1]
   '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> ... </exercise> [1]
   <exerciseNotice> ExerciseNotice </exerciseNotice> [0..1]
   'Definition of the party to whom notice of exercise should be given.'

   <followUpConfirmation> xsd:boolean </followUpConfirmation> [1]
   '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> ExtendibleProvisionAdjustedDates
   </extendibleProvisionAdjustedDates> [0..1]
   'The adjusted dates associated with an extendible provision. These dates have been adjusted
   for any applicable business day convention.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="ExtendibleProvision">
   <xsd:sequence>
      <xsd:group ref=" BuyerSeller.model "/>
      <xsd:element ref=" exercise "/>
      <xsd:element name="exerciseNotice" type=" ExerciseNotice " minOccurs="0"/>
      <xsd:element name="followUpConfirmation" type=" xsd:boolean "/>
      <xsd:element name="extendibleProvisionAdjustedDates" type=" ExtendibleProvisionAdjustedDates
      " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: ExtendibleProvisionAdjustedDates

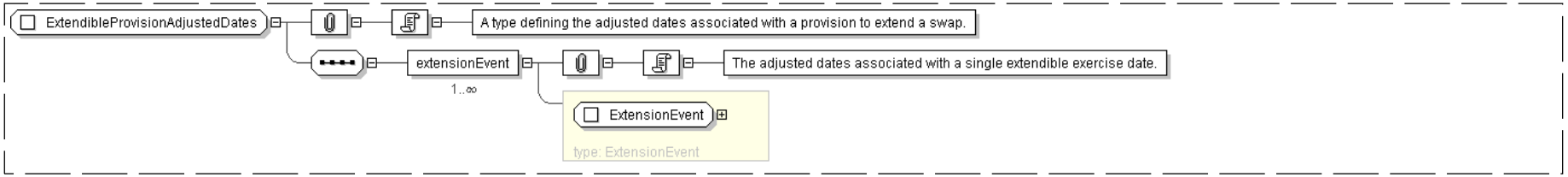
Super-types:	None
Sub-types:	None

Name	ExtendibleProvisionAdjustedDates
Used by (from the same schema document)	Complex Type **ExtendibleProvision**
Abstract	no
Documentation	A type defining the adjusted dates associated with a provision to extend a swap.

XML Instance Representation

```
<...>
   <extensionEvent> ExtensionEvent </extensionEvent> [1..*]
   'The adjusted dates associated with a single extendible exercise date.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="ExtendibleProvisionAdjustedDates">
   <xsd:sequence>
      <xsd:element name="extensionEvent" type=" ExtensionEvent " maxOccurs="unbounded"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: ExtensionEvent

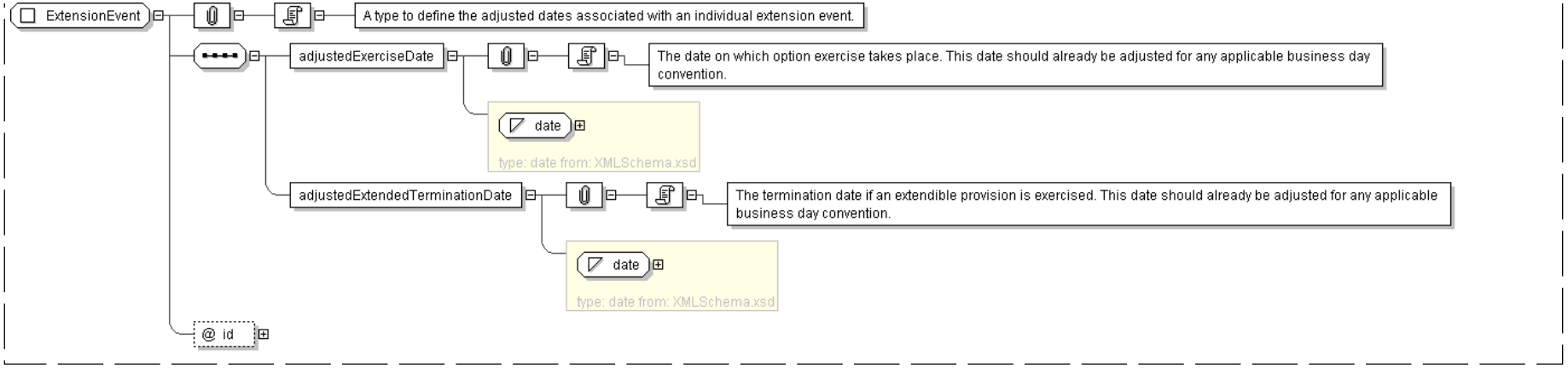
Super-types:	None
Sub-types:	None

Name	ExtensionEvent
Used by (from the same schema document)	Complex Type **ExtendibleProvisionAdjustedDates**
Abstract	no
Documentation	A type to define the adjusted dates associated with an individual extension event.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <adjustedExerciseDate> xsd:date </adjustedExerciseDate> [1]
   'The date on which option exercise takes place. This date should already be adjusted for
   any applicable business day convention.'

   <adjustedExtendedTerminationDate> xsd:date </adjustedExtendedTerminationDate> [1]
   'The termination date if an extendible provision is exercised. This date should already
   be adjusted for any applicable business day convention.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="ExtensionEvent">
   <xsd:sequence>
      <xsd:element name="adjustedExerciseDate" type=" xsd:date "/>
      <xsd:element name="adjustedExtendedTerminationDate" type=" xsd:date "/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: FallbackReferencePrice

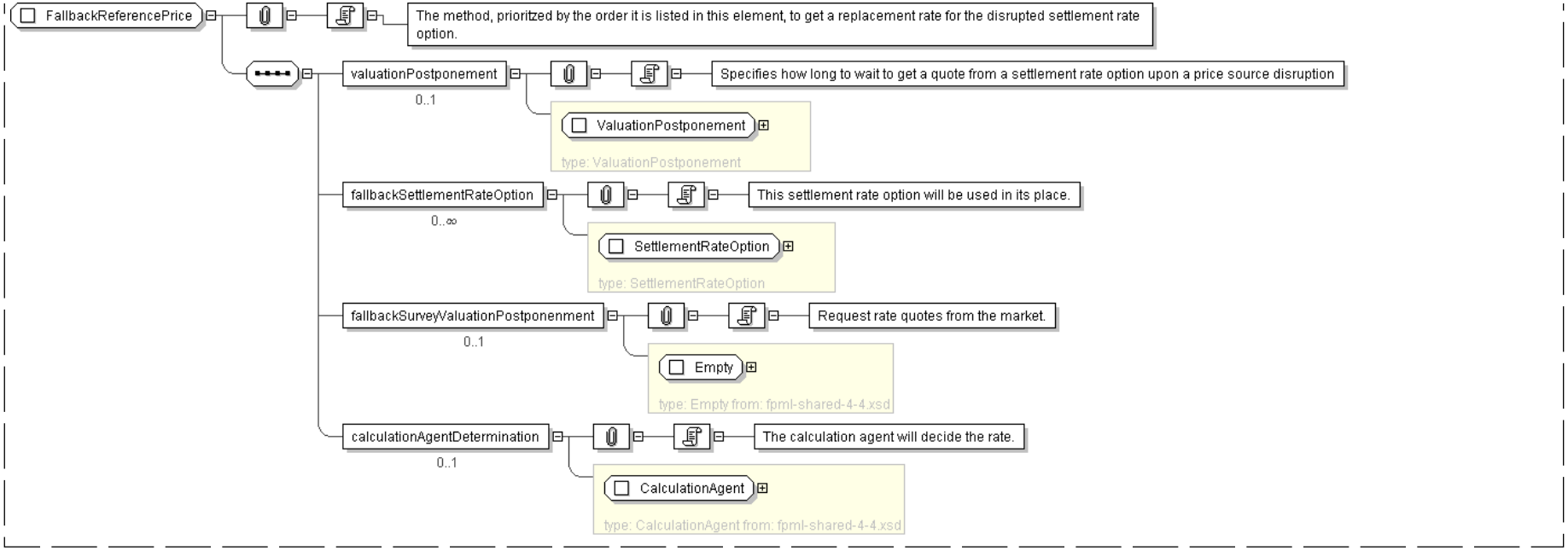
Super-types:	None
Sub-types:	None

Name	FallbackReferencePrice
Used by (from the same schema document)	Complex Type **PriceSourceDisruption**
Abstract	no
Documentation	The method, prioritzed by the order it is listed in this element, to get a replacement rate for the disrupted settlement rate option.

XML Instance Representation

```
<...>
   <valuationPostponement> ValuationPostponement </valuationPostponement> [0..1]
   'Specifies how long to wait to get a quote from a settlement rate option upon a price
   source disruption'

   <fallbackSettlementRateOption> SettlementRateOption </fallbackSettlementRateOption> [0..*]
   'This settlement rate option will be used in its place.'

   <fallbackSurveyValuationPostponenment> Empty </fallbackSurveyValuationPostponenment> [0..1]
   'Request rate quotes from the market.'

   <calculationAgentDetermination> CalculationAgent </calculationAgentDetermination> [0..1]
   'The calculation agent will decide the rate.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="FallbackReferencePrice">
   <xsd:sequence>
      <xsd:element name="valuationPostponement" type=" ValuationPostponement " minOccurs="0"/>
      <xsd:element name="fallbackSettlementRateOption" type=" SettlementRateOption "
      minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element name="fallbackSurveyValuationPostponenment" type=" Empty " minOccurs="0"/>
      <xsd:element name="calculationAgentDetermination" type=" CalculationAgent " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: FinalCalculationPeriodDateAdjustment

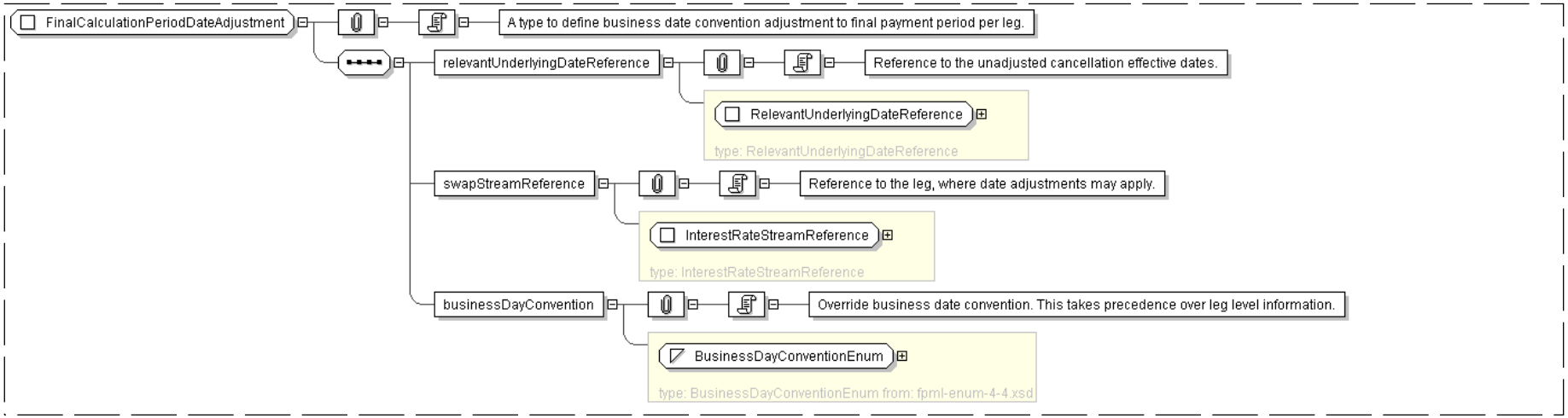
Super-types:	None
Sub-types:	None

Name	FinalCalculationPeriodDateAdjustment
Used by (from the same schema document)	Complex Type **CancelableProvision**
Abstract	no
Documentation	A type to define business date convention adjustment to final payment period per leg.

XML Instance Representation

```
<...>
   <relevantUnderlyingDateReference> RelevantUnderlyingDateReference
   </relevantUnderlyingDateReference> [1]
   'Reference to the unadjusted cancellation effective dates.'

   <swapStreamReference> InterestRateStreamReference </swapStreamReference> [1]
   'Reference to the leg, where date adjustments may apply.'

   <businessDayConvention> BusinessDayConventionEnum </businessDayConvention> [1]
   'Override business date convention. This takes precedence over leg level information.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="FinalCalculationPeriodDateAdjustment">
   <xsd:sequence>
      <xsd:element name="relevantUnderlyingDateReference" type=" RelevantUnderlyingDateReference "/>
      <xsd:element name="swapStreamReference" type=" InterestRateStreamReference "/>
      <xsd:element name="businessDayConvention" type=" BusinessDayConventionEnum "/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: FloatingRateDefinition

Super-types:	None
Sub-types:	None

Name	FloatingRateDefinition
Used by (from the same schema document)	Complex Type **CalculationPeriod**
Abstract	no
Documentation	A type defining parameters associated with a floating rate reset. This type forms part of the cashflows representation of a stream.

XML Instance Representation

```
<...>
   <calculatedRate> xsd:decimal </calculatedRate> [0..1]
   '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> RateObservation </rateObservation> [0..*]
   '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> xsd:decimal </floatingRateMultiplier> [0..1]
   '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> xsd:decimal </spread> [0..1]
   '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> Strike </capRate> [0..*]

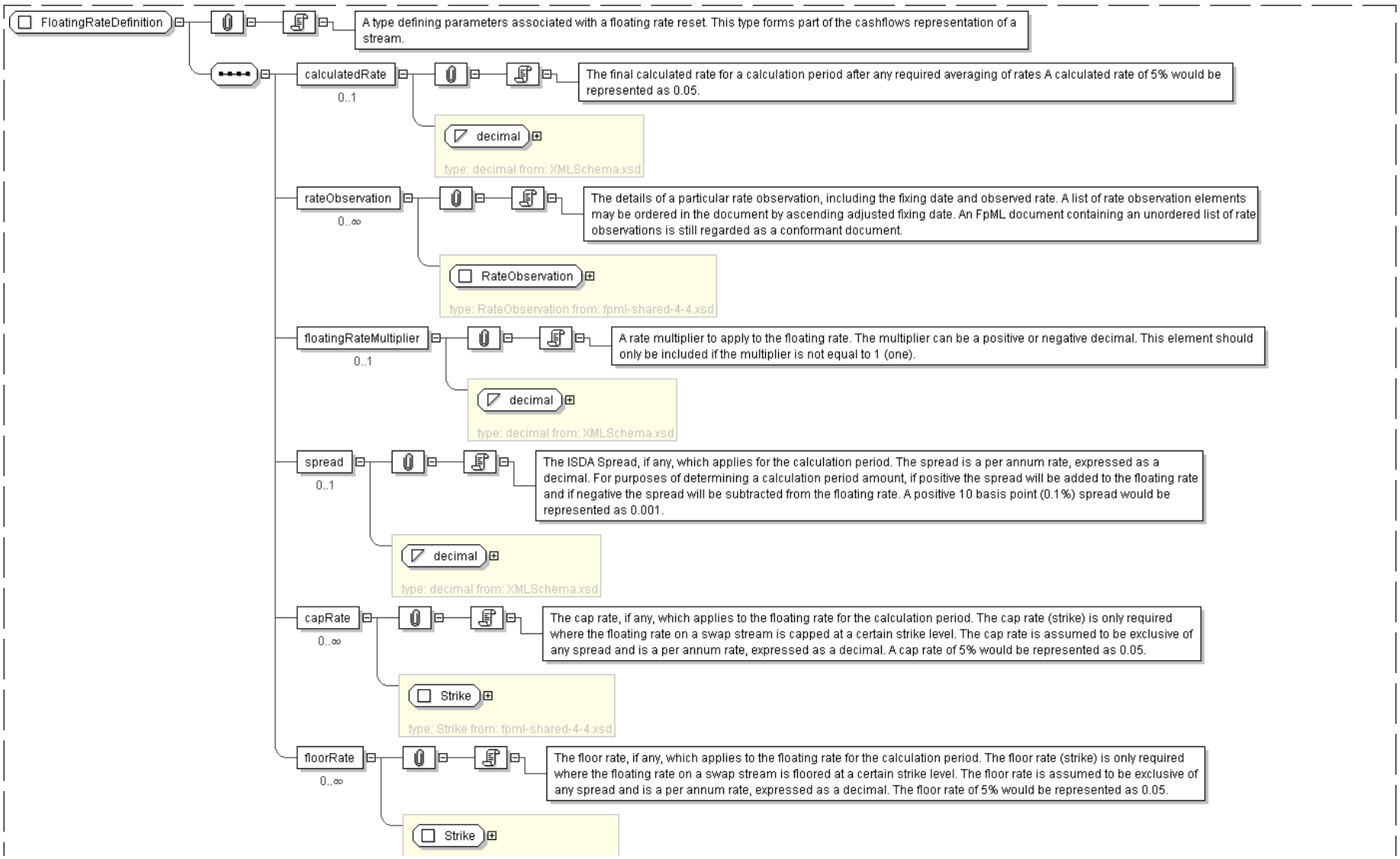
'The cap rate, if any, which applies to the floating rate for the calculation period. The cap rate (strike) is only required where the floating rate on a swap stream is capped at a certain strike level. The cap rate is assumed to be exclusive of any spread and is a per annum rate, expressed as a decimal.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

<floorRate> Strike </floorRate> [0..*]

'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.'

</...>

Diagram



type: Strike from: fpml-shared-4-4.xsd

Schema Component Representation

```
<xsd:complexType name="FloatingRateDefinition">
   <xsd:sequence>
      <xsd:element name="calculatedRate" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="rateObservation" type=" RateObservation "
      minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element name="floatingRateMultiplier" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="spread" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="capRate" type=" Strike " minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element name="floorRate" type=" Strike " minOccurs="0" maxOccurs="unbounded"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: Fra

Super-types:	Product < **Fra** (by extension)
Sub-types:	None

Name	Fra
Used by (from the same schema document)	Element **fra**
Abstract	no
Documentation	A type defining a Forward Rate Agreement (FRA) product.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
   'A classification of the type of product. FpML defines a simple product categorization using
   a coding scheme.'

   <productId> ProductId </productId> [0..*]
   'A product reference identifier allocated by a party. FpML does not define the domain
   values associated with this element. Note that the domain values for this element are
   not strictly an enumerated list.'

   <buyerPartyReference> PartyOrTradeSideReference </buyerPartyReference> [1]
   '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> PartyOrTradeSideReference </sellerPartyReference> [1]
   '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> RequiredIdentifierDate </adjustedEffectiveDate> [1]
   '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> xsd:date </adjustedTerminationDate> [1]
   'The end date of the calculation period. This date should already be adjusted for
   any applicable business day convention.'

   <paymentDate> AdjustableDate </paymentDate> [1]
   'The payment date. This date is subject to adjustment in accordance with any
   applicable business day convention.'

   <fixingDateOffset> RelativeDateOffset </fixingDateOffset> [1]
   '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> DayCountFraction **</dayCountFraction>** [1]

'The day count fraction.'

<calculationPeriodNumberOfDays> xsd:positiveInteger **</calculationPeriodNumberOfDays>** [1]

'The number of days from the adjusted effective date to the adjusted termination date calculated in accordance with the applicable day count fraction.'

<notional> Money **</notional>** [1]

'The notional amount.'

<fixedRate> xsd:decimal **</fixedRate>** [1]

'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> FloatingRateIndex **</floatingRateIndex>** [1]
<indexTenor> Interval **</indexTenor>** [1..*]

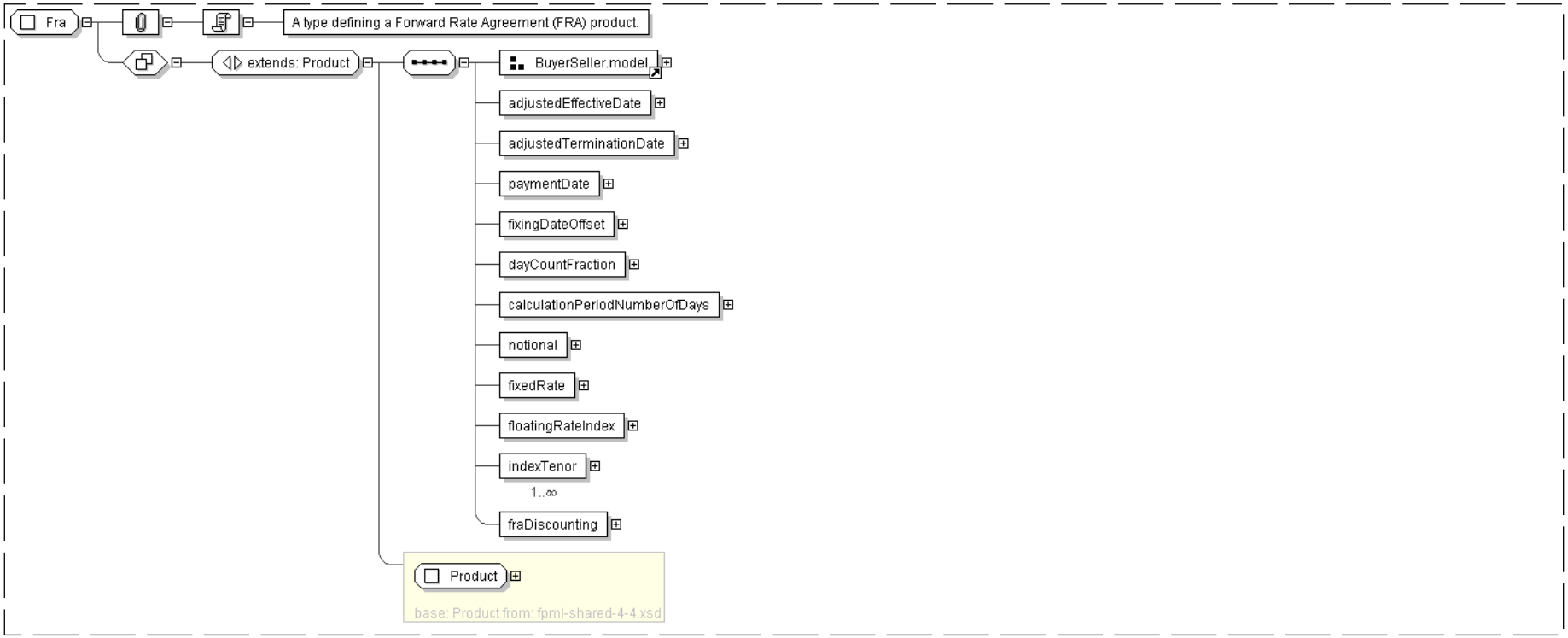
'The ISDA Designated Maturity, i.e. the tenor of the floating rate.'

<fraDiscounting> FraDiscountingEnum **</fraDiscounting>** [1]

'Specifies whether discounting applies and, if so, what type.'

</...>

Diagram



Schema Component Representation

```
<xsd:complexType name="Fra">
   <xsd:complexContent>
```

```
      <xsd:extension base=" Product ">
         <xsd:sequence>
            <xsd:group ref=" BuyerSeller.model "/>
            <xsd:element name="adjustedEffectiveDate" type=" RequiredIdentifierDate "/>
            <xsd:element name="adjustedTerminationDate" type=" xsd:date "/>
            <xsd:element name="paymentDate" type=" AdjustableDate "/>
            <xsd:element name="fixingDateOffset" type=" RelativeDateOffset "/>
            <xsd:element name="dayCountFraction" type=" DayCountFraction "/>
            <xsd:element name="calculationPeriodNumberOfDays" type=" xsd:positiveInteger "/>
            <xsd:element name="notional" type=" Money "/>
            <xsd:element name="fixedRate" type=" xsd:decimal "/>
            <xsd:element name="floatingRateIndex" type=" FloatingRateIndex "/>
            <xsd:element name="indexTenor" type=" Interval " maxOccurs="unbounded"/>
            <xsd:element name="fraDiscounting" type=" FraDiscountingEnum "/>
         </xsd:sequence>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: FxFixingDate

Super-types:	Offset < **FxFixingDate** (by extension)
Sub-types:	None

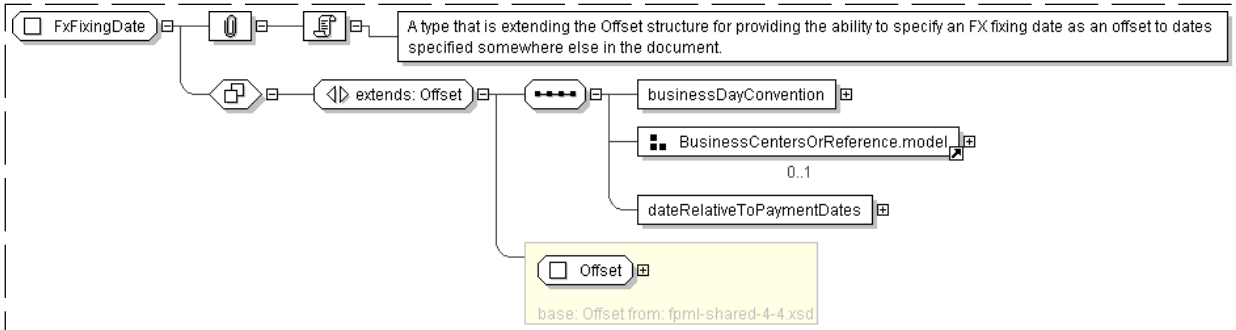
Name	FxFixingDate
Used by (from the same schema document)	Complex Type **NonDeliverableSettlement**
Abstract	no
Documentation	A type that is extending the Offset structure for providing the ability to specify an FX fixing date as an offset to dates specified somewhere else in the document.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <periodMultiplier> xsd:integer </periodMultiplier> [1]
   'A time period multiplier, e.g. 1, 2 or 3 etc. A negative value can be used when specifying
   an offset relative to another date, e.g. -2 days. If the period value is T (Term)
   then periodMultiplier must contain the value 1.'

   <period> PeriodEnum </period> [1]
   'A time period, e.g. a day, week, month, year or term of the stream. If the
   periodMultiplier value is 0 (zero) then period must contain the value D (day).'

   <dayType> DayTypeEnum </dayType> [0..1]
   'In the case of an offset specified as a number of days, this element defines
   whether consideration is given as to whether a day is a good business day or not. If a day
   type of business days is specified then non-business days are ignored when calculating
   the offset. The financial business centers to use for determination of business days
   are implied by the context in which this element is used. This element must only be
   included when the offset is specified as a number of days. If the offset is zero days then
   the dayType element should not be included.'

   <businessDayConvention> BusinessDayConventionEnum </businessDayConvention> [1]
   'The convention for adjusting a date if it would otherwise fall on a day that is not a
   business day.'

Start Group: BusinessCentersOrReference.model [0..1]
Start Choice [1]
         <businessCentersReference> BusinessCentersReference </businessCentersReference> [1]
         '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.'

         <businessCenters> BusinessCenters </businessCenters> [1]
End Choice
End Group: BusinessCentersOrReference.model
```

```
<dateRelativeToPaymentDates> DateRelativeToPaymentDates </dateRelativeToPaymentDates> [1]
'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.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="FxFixingDate">
   <xsd:complexContent>
      <xsd:extension base=" Offset ">
         <xsd:sequence>
            <xsd:element name="businessDayConvention" type=" BusinessDayConventionEnum "/>
            <xsd:group ref=" BusinessCentersOrReference.model " minOccurs="0"/>
            <xsd:element name="dateRelativeToPaymentDates" type=" DateRelativeToPaymentDates "/>
         </xsd:sequence>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: FxLinkedNotionalAmount

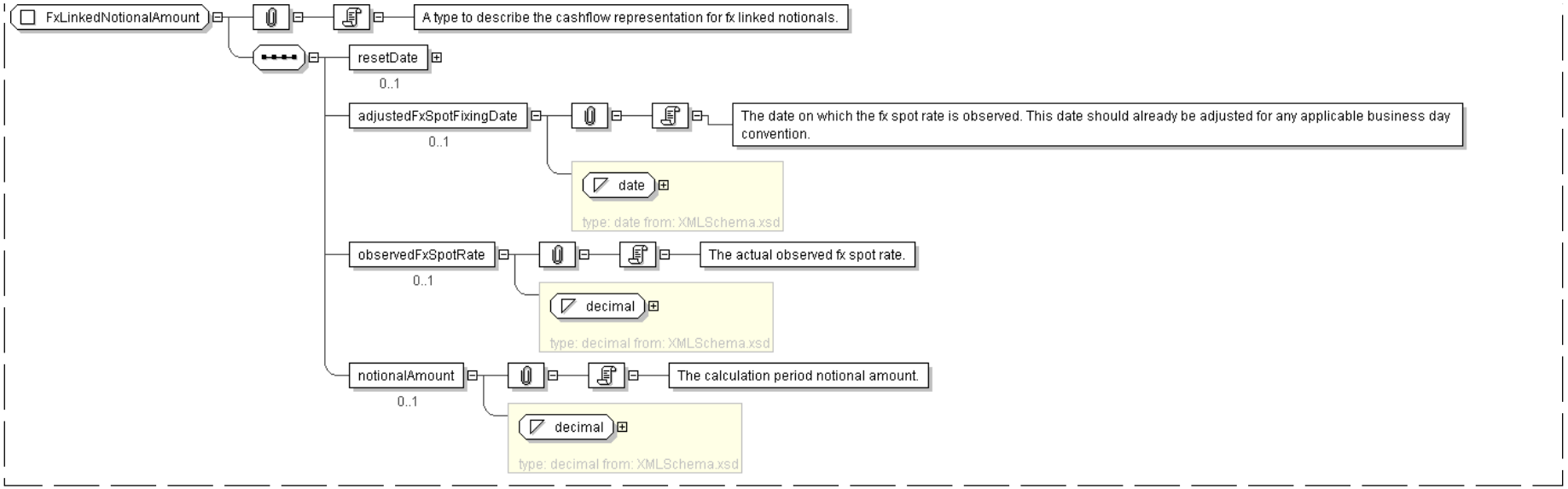
Super-types:	None
Sub-types:	None

Name	FxLinkedNotionalAmount
Used by (from the same schema document)	Complex Type **CalculationPeriod**
Abstract	no
Documentation	A type to describe the cashflow representation for fx linked notionals.

XML Instance Representation

```
<...>
   <resetDate> xsd:date </resetDate> [0..1]
   <adjustedFxSpotFixingDate> xsd:date </adjustedFxSpotFixingDate> [0..1]
   'The date on which the fx spot rate is observed. This date should already be adjusted for
   any applicable business day convention.'

   <observedFxSpotRate> xsd:decimal </observedFxSpotRate> [0..1]
   'The actual observed fx spot rate.'

   <notionalAmount> xsd:decimal </notionalAmount> [0..1]
   'The calculation period notional amount.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="FxLinkedNotionalAmount">
   <xsd:sequence>
      <xsd:element name="resetDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="adjustedFxSpotFixingDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="observedFxSpotRate" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="notionalAmount" type=" xsd:decimal " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: FxLinkedNotionalSchedule

Super-types:	None
Sub-types:	None

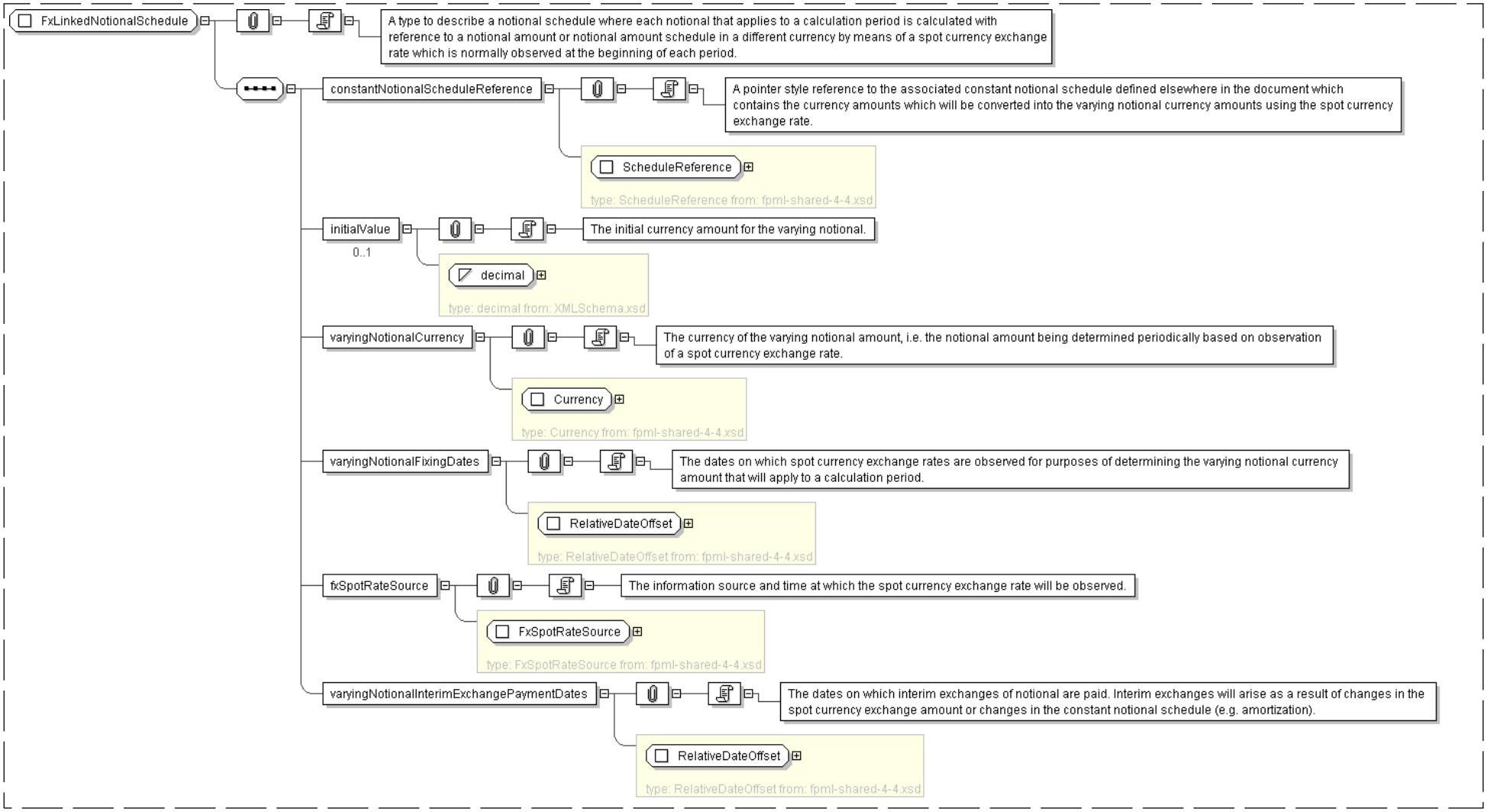
Name	FxLinkedNotionalSchedule
Used by (from the same schema document)	Complex Type **Calculation**
Abstract	no
Documentation	A type to describe a notional schedule where each notional that applies to a calculation period is calculated with reference to a notional amount or notional amount schedule in a different currency by means of a spot currency exchange rate which is normally observed at the beginning of each period.

XML Instance Representation

```
<...>
   <constantNotionalScheduleReference> ScheduleReference </constantNotionalScheduleReference> [1]
   '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> xsd:decimal </initialValue> [0..1]
   'The initial currency amount for the varying notional.'

   <varyingNotionalCurrency> Currency </varyingNotionalCurrency> [1]
   '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> RelativeDateOffset </varyingNotionalFixingDates> [1]
   '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> FxSpotRateSource </fxSpotRateSource> [1]
    'The information source and time at which the spot currency exchange rate will be observed.'

    <varyingNotionalInterimExchangePaymentDates> RelativeDateOffset
    </varyingNotionalInterimExchangePaymentDates> [1]
    '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).'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="FxLinkedNotionalSchedule">
   <xsd:sequence>
      <xsd:element name="constantNotionalScheduleReference" type=" ScheduleReference "/>
      <xsd:element name="initialValue" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="varyingNotionalCurrency" type=" Currency "/>
```

```
      <xsd:element name="varyingNotionalFixingDates" type=" RelativeDateOffset "/>
      <xsd:element name="fxSpotRateSource" type=" FxSpotRateSource "/>
      <xsd:element name="varyingNotionalInterimExchangePaymentDates" type=" RelativeDateOffset "/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: InflationRateCalculation

Super-types:	FloatingRateCalculation < **InflationRateCalculation** (by extension)
Sub-types:	None

Name	InflationRateCalculation
Used by (from the same schema document)	Element **inflationRateCalculation**
Abstract	no
Documentation	A type defining the components specifiying an Inflation Rate Calculation

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <floatingRateIndex> FloatingRateIndex </floatingRateIndex> [1]
   <indexTenor> Interval </indexTenor> [0..1]
```

'The ISDA Designated Maturity, i.e. the tenor of the floating rate.'

```
   <floatingRateMultiplierSchedule> Schedule </floatingRateMultiplierSchedule> [0..1]
```

'A rate multiplier or multiplier schedule to apply to the floating rate. A multiplier schedule is expressed as explicit multipliers and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in the calculationPeriodDatesAdjustments. The multiplier can be a positive or negative decimal. This element should only be included if the multiplier is not equal to 1 (one) for the term of the stream.'

```
   <spreadSchedule> SpreadSchedule </spreadSchedule> [0..*]
```

'The ISDA Spread or a Spread schedule expressed as explicit spreads and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments. 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.'

```
   <rateTreatment> RateTreatmentEnum </rateTreatment> [0..1]
```

'The specification of any rate conversion which needs to be applied to the observed rate before being used in any calculations. The two common conversions are for securities quoted on a bank discount basis which will need to be converted to either a Money Market Yield or Bond Equivalent Yield. See the Annex to the 2000 ISDA Definitions, Section 7.3. Certain General Definitions Relating to Floating Rate Options, paragraphs (g) and (h) for definitions of these terms.'

```
   <capRateSchedule> StrikeSchedule </capRateSchedule> [0..*]
```

'The cap rate or cap rate schedule, if any, which applies to the floating rate. The cap rate (strike) is only required where the floating rate on a swap stream is capped at a certain level. A cap rate schedule is expressed as explicit cap rates and dates and the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments. 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.'

```
   <floorRateSchedule> StrikeSchedule </floorRateSchedule> [0..*]
```

'The floor rate or floor rate schedule, if any, which applies to the floating rate. The floor rate (strike) is only required where the floating rate on a swap stream is floored at a certain strike level. A floor rate schedule is expressed as explicit floor rates and dates and the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments. The floor rate is assumed to be exclusive of any spread and is a per annum rate, expressed as a decimal. A floor rate of 5% would be represented as 0.05.'

```
   <initialRate> xsd:decimal </initialRate> [0..1]
```

'The initial floating rate reset agreed between the principal parties involved in the trade. This is assumed to be the first required reset rate for the first regular calculation period. It should only be included when the rate is not equal to the rate published on the source implied by the floating rate index. An initial rate of 5% would be represented as 0.05.'

<finalRateRounding> Rounding </finalRateRounding> [0..1]

'The rounding convention to apply to the final rate used in determination of a calculation period amount.'

<averagingMethod> AveragingMethodEnum </averagingMethod> [0..1]

'If averaging is applicable, this component specifies whether a weighted or unweighted average method of calculation is to be used. The component must only be included when averaging applies.'

<negativeInterestRateTreatment> NegativeInterestRateTreatmentEnum
</negativeInterestRateTreatment> [0..1]

'The specification of any provisions for calculating payment obligations when a floating rate is negative (either due to a quoted negative floating rate or by operation of a spread that is subtracted from the floating rate).'

<inflationLag> Offset </inflationLag> [1]

'an offsetting period from the payment date which determines the reference period for which the inflation index is onserved.'

<indexSource> RateSourcePage </indexSource> [1]

'The reference source such as Reuters or Bloomberg.'

<mainPublication> MainPublication </mainPublication> [0..1]

'The current main publication source such as relevant web site or a government body.'

<interpolationMethod> InterpolationMethod </interpolationMethod> [1]

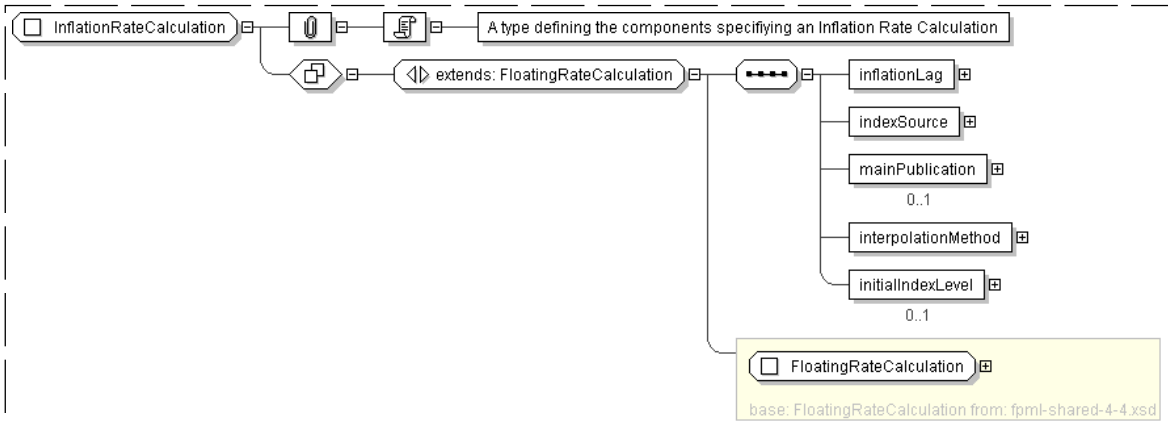
'The method used when calculating the Inflation Index Level from multiple points - the most common is Linear.'

<initialIndexLevel> xsd:decimal </initialIndexLevel> [0..1]

'initial known index level for the first calculation period.'

</...>

Diagram



Schema Component Representation

```
<xsd:complexType name="InflationRateCalculation">
   <xsd:complexContent>
      <xsd:extension base=" FloatingRateCalculation ">
         <xsd:sequence>
            <xsd:element name="inflationLag" type=" Offset "/>
```

```
            <xsd:element name="indexSource" type=" RateSourcePage "/>
            <xsd:element name="mainPublication" type=" MainPublication " minOccurs="0"/>
            <xsd:element name="interpolationMethod" type=" InterpolationMethod "/>
            <xsd:element name="initialIndexLevel" type=" xsd:decimal " minOccurs="0"/>
          </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: InterestRateStream

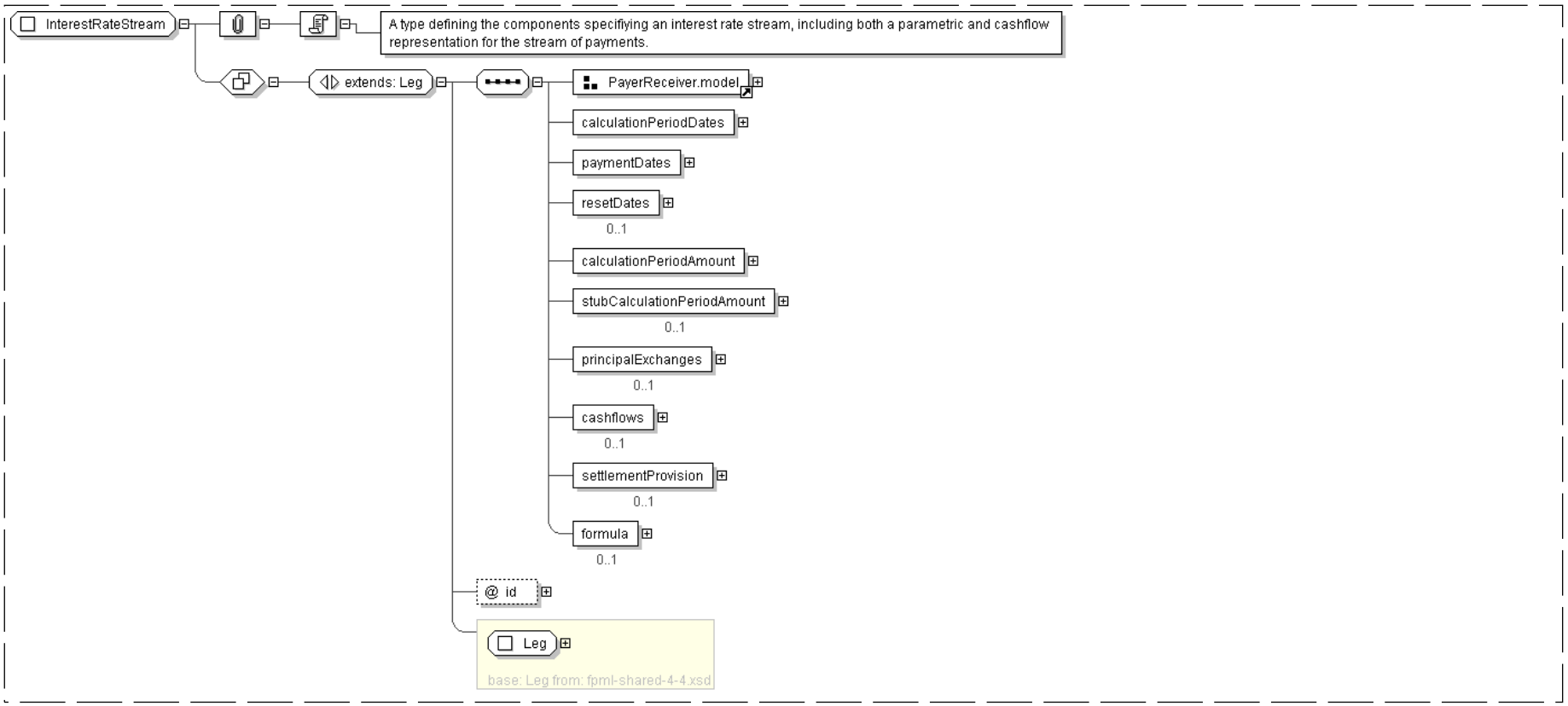
Super-types:	Leg < **InterestRateStream** (by extension)
Sub-types:	None

Name	InterestRateStream
Used by (from the same schema document)	Complex Type **CapFloor** , Complex Type **Swap**
Abstract	no
Documentation	A type defining the components specifiying an interest rate stream, including both a parametric and cashflow representation for the stream of payments.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <payerPartyReference> PartyOrAccountReference </payerPartyReference> [1]
   'A reference to the party responsible for making the payments defined by this structure.'

   <receiverPartyReference> PartyOrAccountReference </receiverPartyReference> [1]
   'A reference to the party that receives the payments corresponding to this structure.'

   <calculationPeriodDates> CalculationPeriodDates </calculationPeriodDates> [1]
   'The calculation periods dates schedule.'

   <paymentDates> PaymentDates </paymentDates> [1]
   'The payment dates schedule.'

   <resetDates> ResetDates </resetDates> [0..1]
   'The reset dates schedule. The reset dates schedule only applies for a floating rate stream.'

   <calculationPeriodAmount> CalculationPeriodAmount </calculationPeriodAmount> [1]
   'The calculation period amount parameters.'

   <stubCalculationPeriodAmount> StubCalculationPeriodAmount </stubCalculationPeriodAmount> [0..1]
   '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> PrincipalExchanges </principalExchanges> [0..1]
   'The true/false flags indicating whether initial, intermediate or final exchanges of
   principal should occur.'

   <cashflows> Cashflows </cashflows> [0..1]
   'The cashflows representation of the swap stream.'

   <settlementProvision> SettlementProvision </settlementProvision> [0..1]
   'A provision that allows the specification of settlement terms, occuring when the
   settlement currency is different to the notional currency of the trade.'

   <formula> Formula </formula> [0..1]
   'An interest rate derivative formula.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="InterestRateStream">
   <xsd:complexContent>
      <xsd:extension base=" Leg ">
         <xsd:sequence>
            <xsd:group ref=" PayerReceiver.model "/>
            <xsd:element name="calculationPeriodDates" type=" CalculationPeriodDates "/>
            <xsd:element name="paymentDates" type=" PaymentDates "/>
            <xsd:element name="resetDates" type=" ResetDates " minOccurs="0"/>
            <xsd:element name="calculationPeriodAmount" type=" CalculationPeriodAmount "/>
            <xsd:element name="stubCalculationPeriodAmount" type=" StubCalculationPeriodAmount
            " minOccurs="0"/>
            <xsd:element name="principalExchanges" type=" PrincipalExchanges " minOccurs="0"/>
            <xsd:element name="cashflows" type=" Cashflows " minOccurs="0"/>
            <xsd:element name="settlementProvision" type=" SettlementProvision " minOccurs="0"/>
            <xsd:element name="formula" type=" Formula " minOccurs="0"/>
         </xsd:sequence>
         <xsd:attribute name="id" type=" xsd:ID "/>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: InterestRateStreamReference

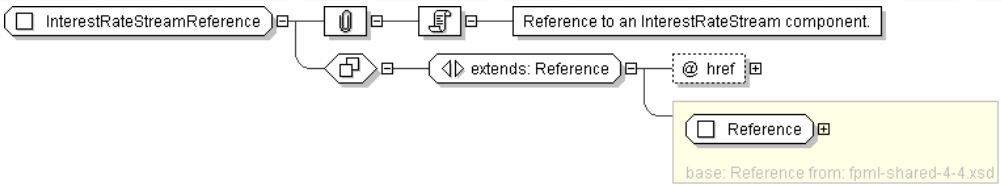
Super-types:	Reference < **InterestRateStreamReference** (by extension)
Sub-types:	None

Name	InterestRateStreamReference
Used by (from the same schema document)	Complex Type **FinalCalculationPeriodDateAdjustment**
Abstract	no
Documentation	Reference to an InterestRateStream component.

XML Instance Representation

```
<...
href=" xsd:IDREF [1]"/>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="InterestRateStreamReference">
   <xsd:complexContent>
      <xsd:extension base=" Reference ">
         <xsd:attribute name="href" type=" xsd:IDREF " use="required" reference="InterestRateStream"/>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: MandatoryEarlyTermination

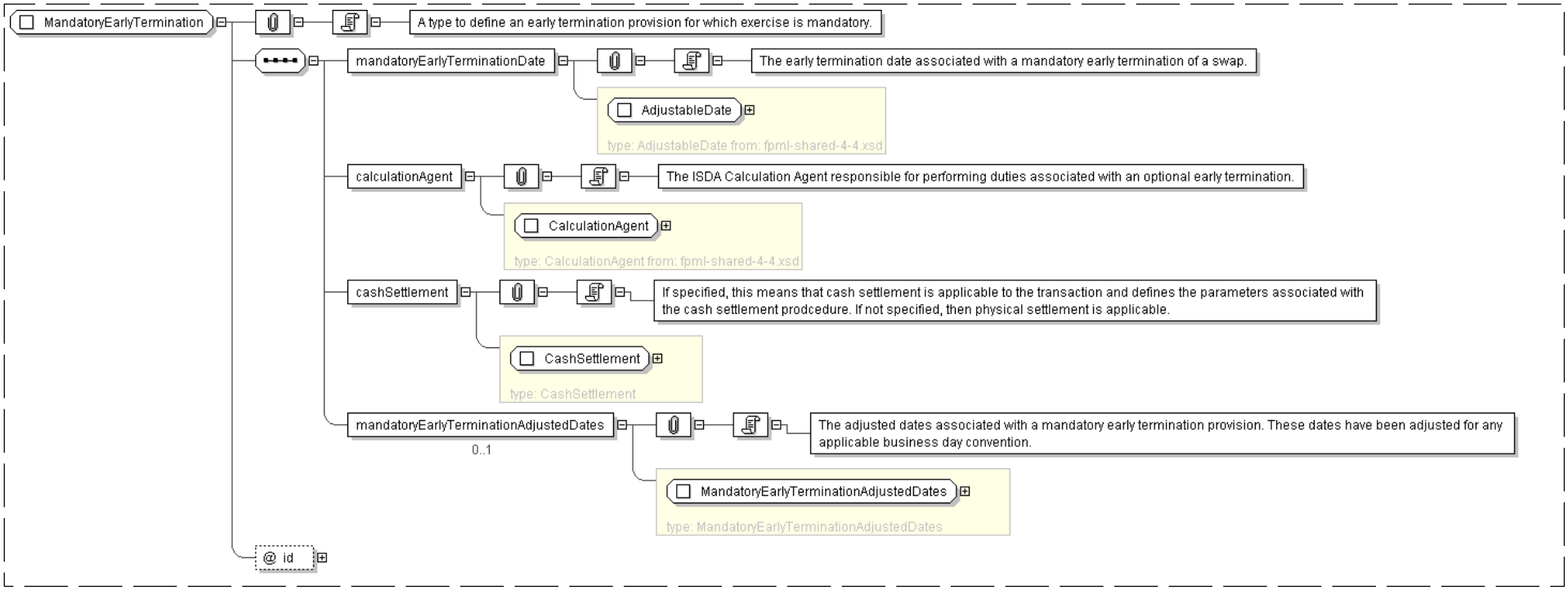
Super-types:	None
Sub-types:	None

Name	MandatoryEarlyTermination
Used by (from the same schema document)	Model Group **MandatoryEarlyTermination.model** , Model Group **MandatoryEarlyTermination.model**
Abstract	no
Documentation	A type to define an early termination provision for which exercise is mandatory.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <mandatoryEarlyTerminationDate> AdjustableDate </mandatoryEarlyTerminationDate> [1]
   'The early termination date associated with a mandatory early termination of a swap.'

   <calculationAgent> CalculationAgent </calculationAgent> [1]
   'The ISDA Calculation Agent responsible for performing duties associated with an optional
   early termination.'

   <cashSettlement> CashSettlement </cashSettlement> [1]
   '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> MandatoryEarlyTerminationAdjustedDates
   </mandatoryEarlyTerminationAdjustedDates> [0..1]
   'The adjusted dates associated with a mandatory early termination provision. These dates
   have been adjusted for any applicable business day convention.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="MandatoryEarlyTermination">
   <xsd:sequence>
      <xsd:element name="mandatoryEarlyTerminationDate" type=" AdjustableDate "/>
      <xsd:element name="calculationAgent" type=" CalculationAgent "/>
      <xsd:element name="cashSettlement" type=" CashSettlement "/>
      <xsd:element name="mandatoryEarlyTerminationAdjustedDates"
      type=" MandatoryEarlyTerminationAdjustedDates " minOccurs="0"/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: MandatoryEarlyTerminationAdjustedDates

Super-types:	None
Sub-types:	None

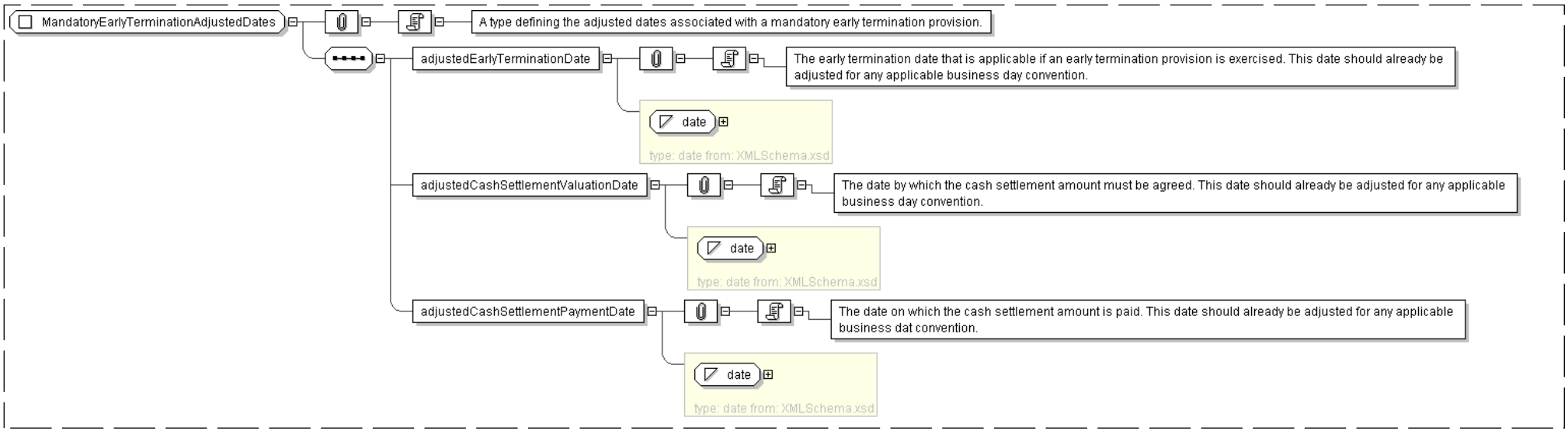
Name	MandatoryEarlyTerminationAdjustedDates
Used by (from the same schema document)	Complex Type **MandatoryEarlyTermination**
Abstract	no
Documentation	A type defining the adjusted dates associated with a mandatory early termination provision.

XML Instance Representation

```
<...>
   <adjustedEarlyTerminationDate> xsd:date </adjustedEarlyTerminationDate> [1]
   '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> xsd:date </adjustedCashSettlementValuationDate> [1]
   'The date by which the cash settlement amount must be agreed. This date should already
```

```
    be adjusted for any applicable business day convention.'

    <adjustedCashSettlementPaymentDate> xsd:date </adjustedCashSettlementPaymentDate> [1]
    'The date on which the cash settlement amount is paid. This date should already be adjusted
    for any applicable business dat convention.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="MandatoryEarlyTerminationAdjustedDates">
   <xsd:sequence>
      <xsd:element name="adjustedEarlyTerminationDate" type=" xsd:date "/>
      <xsd:element name="adjustedCashSettlementValuationDate" type=" xsd:date "/>
      <xsd:element name="adjustedCashSettlementPaymentDate" type=" xsd:date "/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: NonDeliverableSettlement

Super-types:	None
Sub-types:	None

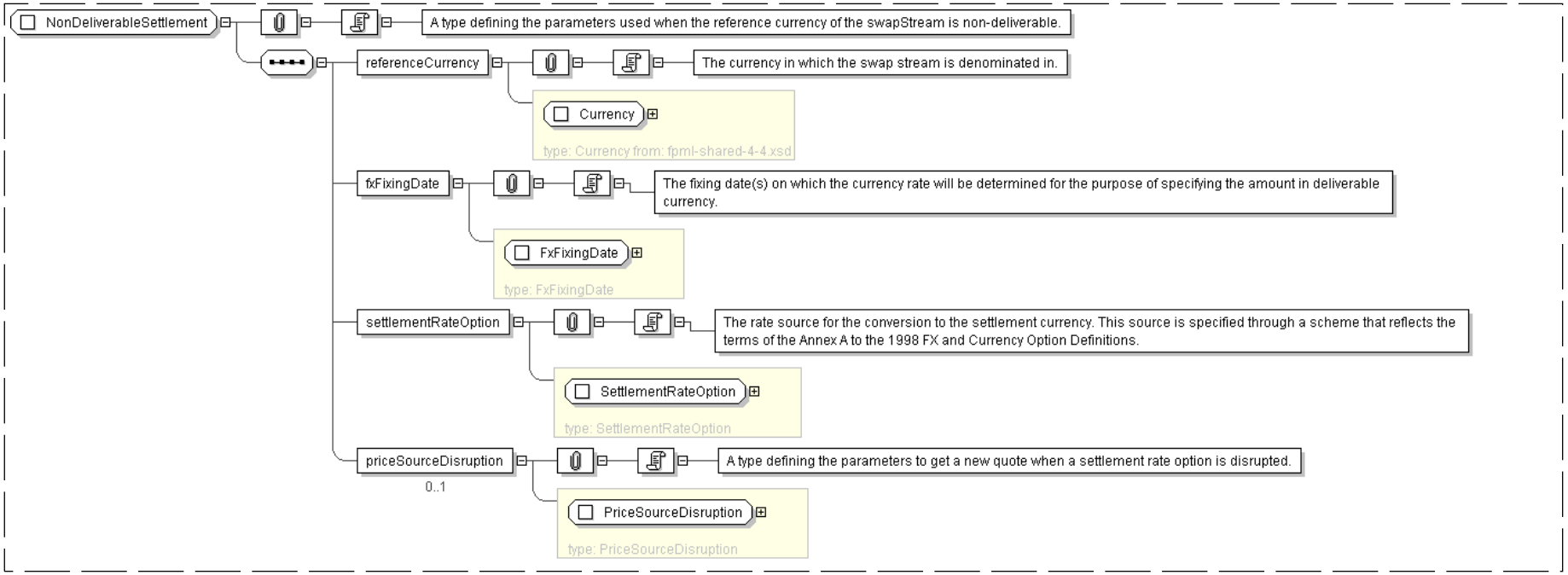
Name	NonDeliverableSettlement
Used by (from the same schema document)	Complex Type **SettlementProvision**
Abstract	no
Documentation	A type defining the parameters used when the reference currency of the swapStream is non-deliverable.

XML Instance Representation

```
<...>
   <referenceCurrency> Currency </referenceCurrency> [1]
   'The currency in which the swap stream is denominated in.'

   <fxFixingDate> FxFixingDate </fxFixingDate> [1]
   'The fixing date(s) on which the currency rate will be determined for the purpose of
   specifying the amount in deliverable currency.'
```

```
<settlementRateOption> SettlementRateOption </settlementRateOption> [1]
'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> PriceSourceDisruption </priceSourceDisruption> [0..1]
'A type defining the parameters to get a new quote when a settlement rate option is disrupted.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="NonDeliverableSettlement">
   <xsd:sequence>
      <xsd:element name="referenceCurrency" type=" Currency "/>
      <xsd:element name="fxFixingDate" type=" FxFixingDate "/>
      <xsd:element name="settlementRateOption" type=" SettlementRateOption "/>
      <xsd:element name="priceSourceDisruption" type=" PriceSourceDisruption " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: Notional

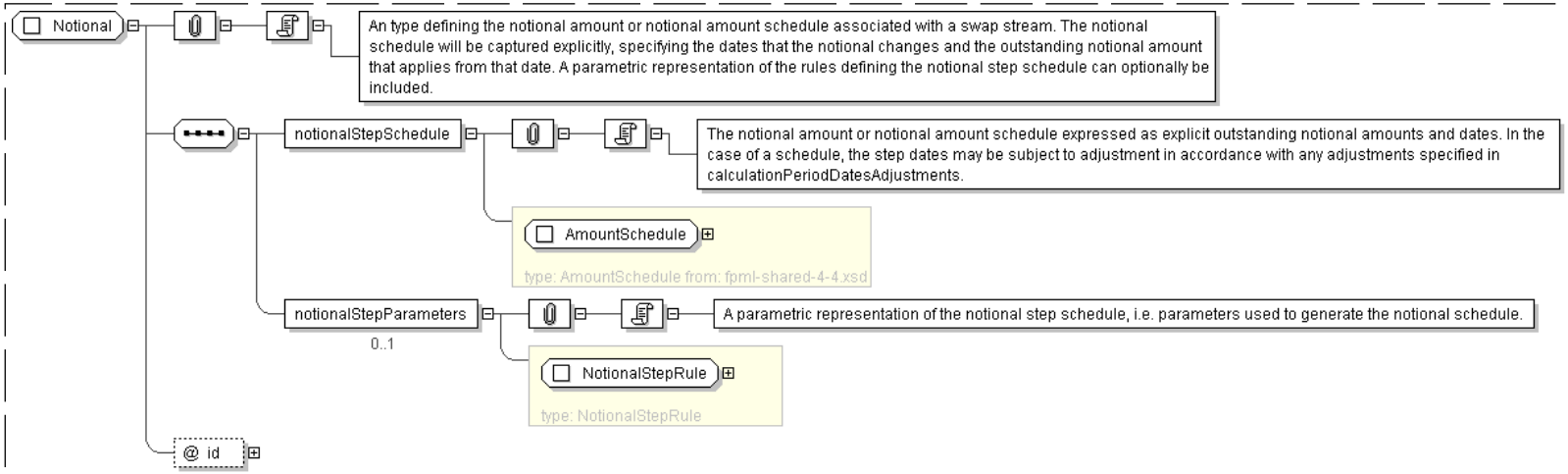
Super-types:	None
Sub-types:	None

Name	Notional
Used by (from the same schema document)	Complex Type **Calculation**
Abstract	no
Documentation	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.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <notionalStepSchedule> AmountSchedule </notionalStepSchedule> [1]
   '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> NotionalStepRule </notionalStepParameters> [0..1]
   'A parametric representation of the notional step schedule, i.e. parameters used to
   generate the notional schedule.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="Notional">
   <xsd:sequence>
      <xsd:element name="notionalStepSchedule" type=" AmountSchedule "/>
      <xsd:element name="notionalStepParameters" type=" NotionalStepRule " minOccurs="0"/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: NotionalStepRule

Super-types:	None
Sub-types:	None

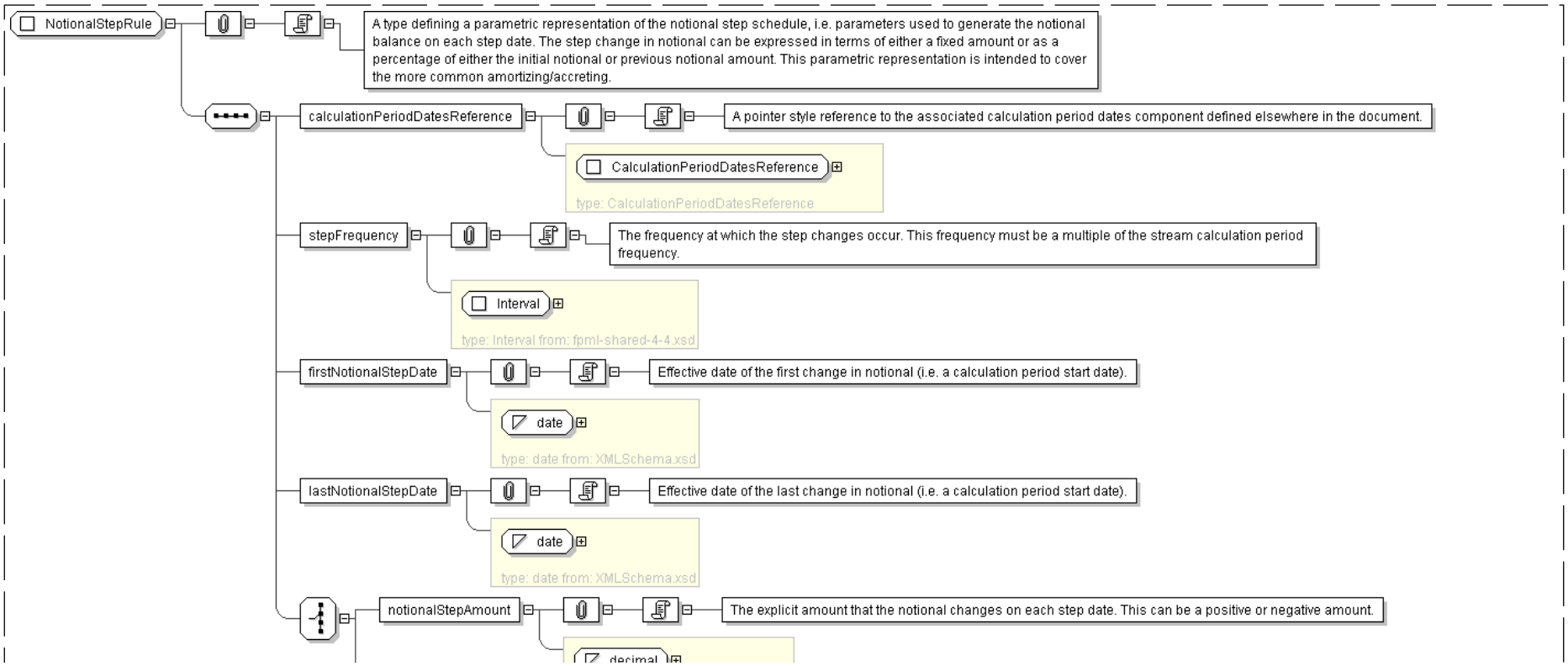
Name	NotionalStepRule
Used by (from the same schema document)	Complex Type **Notional**
Abstract	no
Documentation	A type defining a parametric representation of the notional step schedule, i.e. parameters used to generate the notional balance on each step date. The step change in notional can be expressed 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.

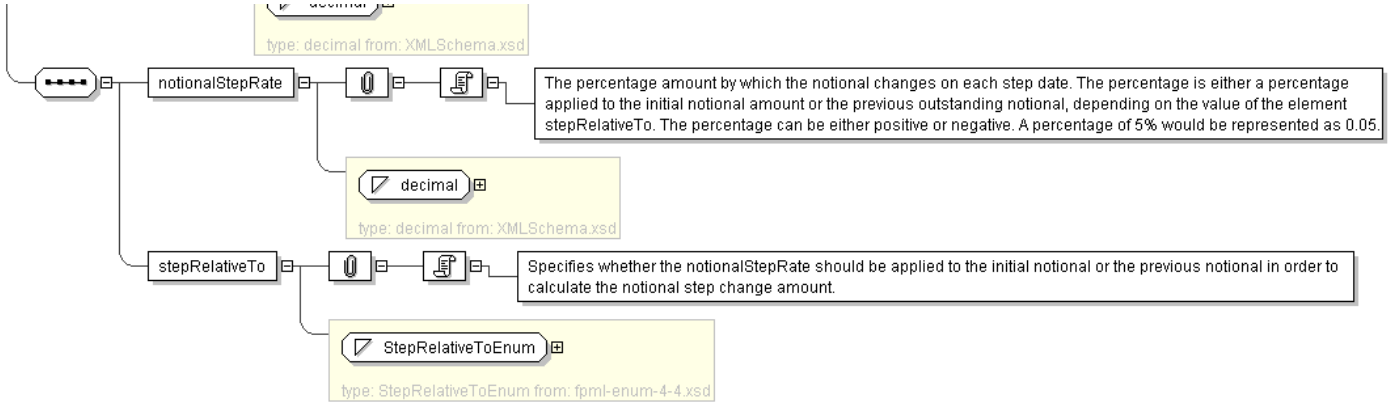
XML Instance Representation

```
<...>
   <calculationPeriodDatesReference> CalculationPeriodDatesReference
```

```
    </calculationPeriodDatesReference> [1]
    'A pointer style reference to the associated calculation period dates component
    defined elsewhere in the document.'

    <stepFrequency> Interval </stepFrequency> [1]
    'The frequency at which the step changes occur. This frequency must be a multiple of the
    stream calculation period frequency.'

    <firstNotionalStepDate> xsd:date </firstNotionalStepDate> [1]
    'Effective date of the first change in notional (i.e. a calculation period start date).'

    <lastNotionalStepDate> xsd:date </lastNotionalStepDate> [1]
    'Effective date of the last change in notional (i.e. a calculation period start date).'

Start Choice [1]
      <notionalStepAmount> xsd:decimal </notionalStepAmount> [1]
      'The explicit amount that the notional changes on each step date. This can be a positive
      or negative amount.'

      <notionalStepRate> xsd:decimal </notionalStepRate> [1]
      '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.'

      <stepRelativeTo> StepRelativeToEnum </stepRelativeTo> [1]
      'Specifies whether the notionalStepRate should be applied to the initial notional or
      the previous notional in order to calculate the notional step change amount.'

End Choice
</...>
```

Diagram





Schema Component Representation

```
<xsd:complexType name="NotionalStepRule">
   <xsd:sequence>
      <xsd:element name="calculationPeriodDatesReference" type=" CalculationPeriodDatesReference "/>
      <xsd:element name="stepFrequency" type=" Interval "/>
      <xsd:element name="firstNotionalStepDate" type=" xsd:date "/>
      <xsd:element name="lastNotionalStepDate" type=" xsd:date "/>
      <xsd:choice>
         <xsd:element name="notionalStepAmount" type=" xsd:decimal "/>
         <xsd:sequence>
            <xsd:element name="notionalStepRate" type=" xsd:decimal "/>
            <xsd:element name="stepRelativeTo" type=" StepRelativeToEnum "/>
         </xsd:sequence>
      </xsd:choice>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: OptionalEarlyTermination

Super-types:	None
Sub-types:	None

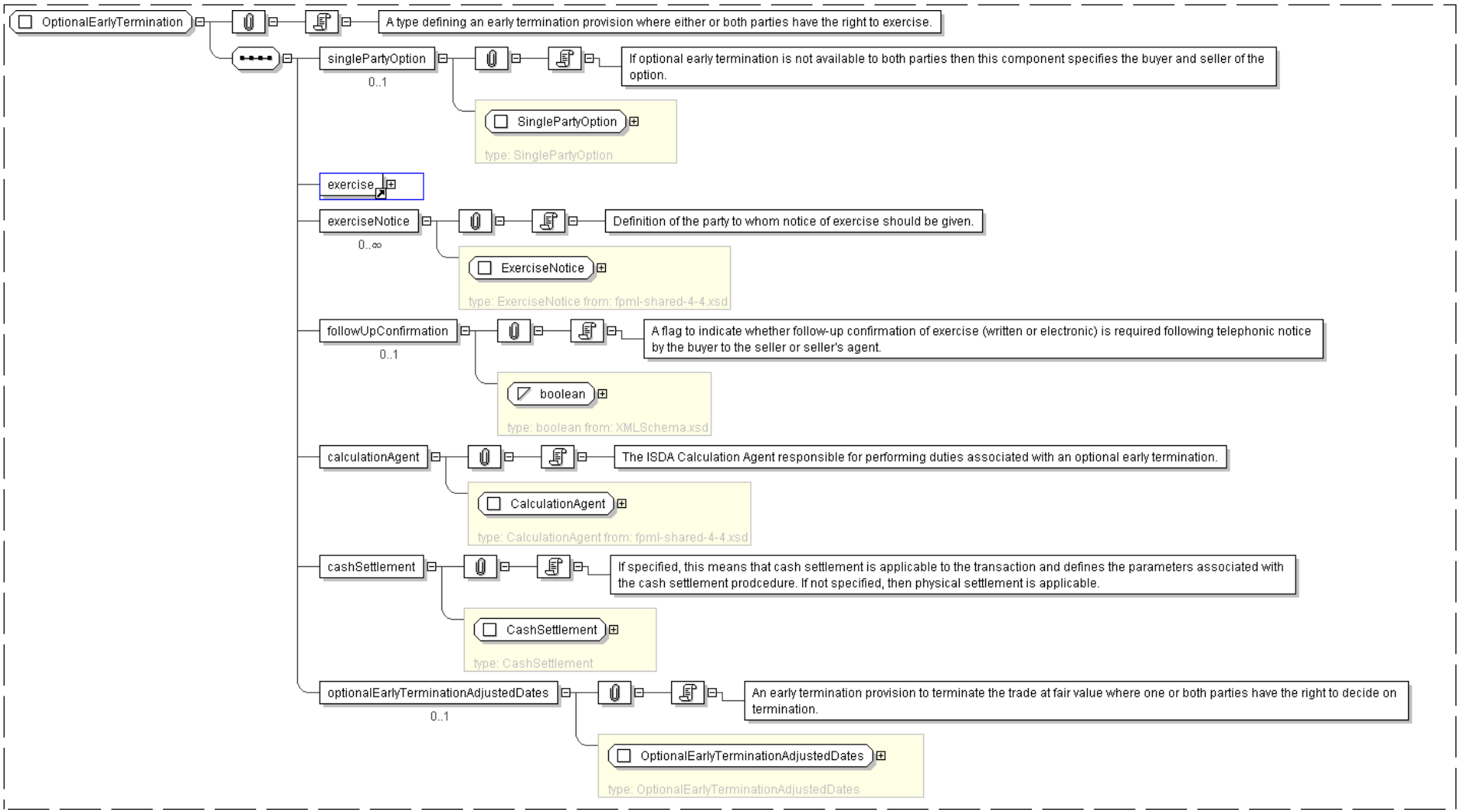
Name	OptionalEarlyTermination
Used by (from the same schema document)	Model Group **OptionalEarlyTermination.model** , Model Group **OptionalEarlyTermination.model**
Abstract	no
Documentation	A type defining an early termination provision where either or both parties have the right to exercise.

XML Instance Representation

```
<...>
   <singlePartyOption> SinglePartyOption </singlePartyOption> [0..1]
   'If optional early termination is not available to both parties then this component
   specifies the buyer and seller of the option.'

   <exercise> ... </exercise> [1]
   <exerciseNotice> ExerciseNotice </exerciseNotice> [0..*]
   'Definition of the party to whom notice of exercise should be given.'

   <followUpConfirmation> xsd:boolean </followUpConfirmation> [0..1]
   '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> CalculationAgent </calculationAgent> [1]
   'The ISDA Calculation Agent responsible for performing duties associated with an optional
   early termination.'
```

```
<cashSettlement> CashSettlement </cashSettlement> [1]
'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> OptionalEarlyTerminationAdjustedDates
</optionalEarlyTerminationAdjustedDates> [0..1]
'An early termination provision to terminate the trade at fair value where one or both
parties have the right to decide on termination.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="OptionalEarlyTermination">
   <xsd:sequence>
      <xsd:element name="singlePartyOption" type=" SinglePartyOption " minOccurs="0"/>
      <xsd:element ref=" exercise "/>
      <xsd:element name="exerciseNotice" type=" ExerciseNotice " minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element name="followUpConfirmation" type=" xsd:boolean " minOccurs="0"/>
```

```
      <xsd:element name="calculationAgent" type=" CalculationAgent "/>
      <xsd:element name="cashSettlement" type=" CashSettlement "/>
      <xsd:element name="optionalEarlyTerminationAdjustedDates"
      type=" OptionalEarlyTerminationAdjustedDates " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: OptionalEarlyTerminationAdjustedDates

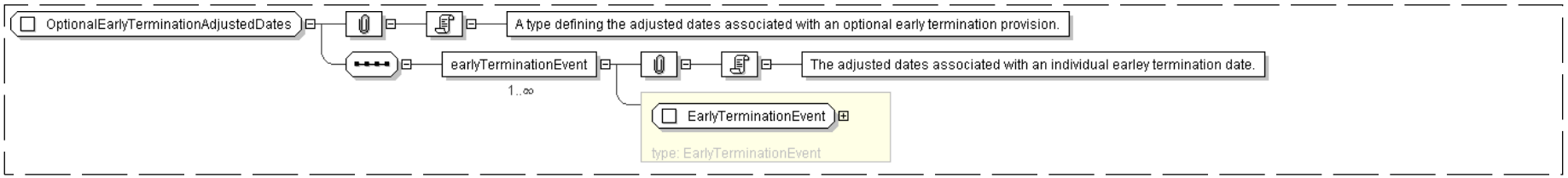
Super-types:	None
Sub-types:	None

Name	OptionalEarlyTerminationAdjustedDates
Used by (from the same schema document)	Complex Type **OptionalEarlyTermination**
Abstract	no
Documentation	A type defining the adjusted dates associated with an optional early termination provision.

XML Instance Representation

```
<...>
   <earlyTerminationEvent> EarlyTerminationEvent </earlyTerminationEvent> [1..*]
    'The adjusted dates associated with an individual earley termination date.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="OptionalEarlyTerminationAdjustedDates">
   <xsd:sequence>
      <xsd:element name="earlyTerminationEvent" type=" EarlyTerminationEvent " maxOccurs="unbounded"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: PaymentCalculationPeriod

Super-types:	None
Sub-types:	None

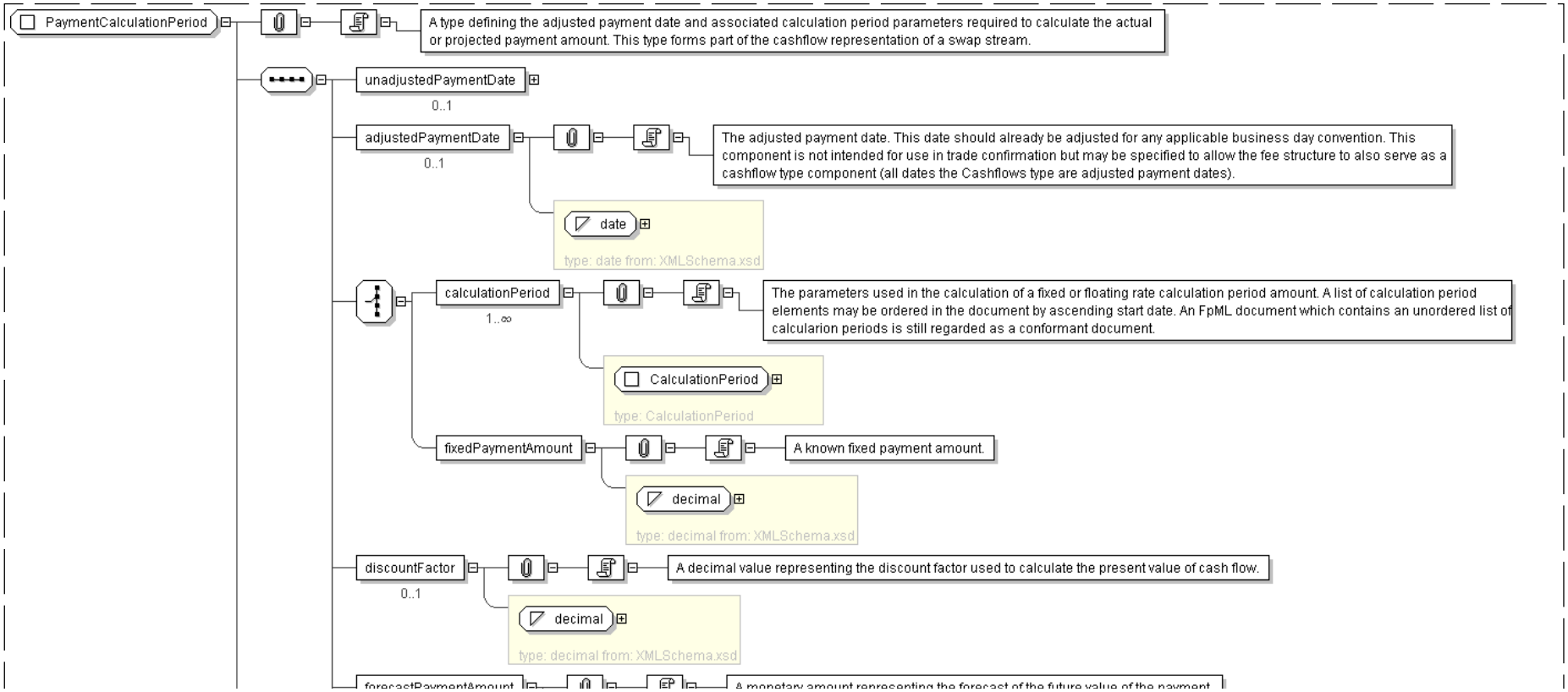
Name	PaymentCalculationPeriod
Used by (from the same schema document)	Complex Type **Cashflows**
Abstract	no
Documentation	A type defining the adjusted payment date and associated calculation period parameters required to calculate the actual or projected payment amount. This type forms part of the cashflow representation of a swap stream.

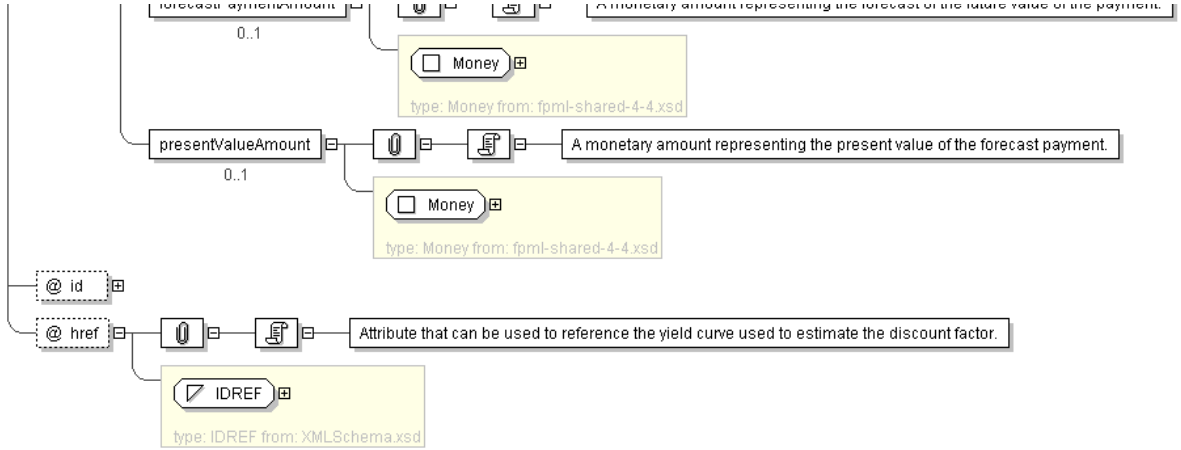
XML Instance Representation

```
<...
id=" xsd:ID [0..1]"
href=" xsd:IDREF [0..1]
 'Attribute that can be used to reference the yield curve used to estimate the discount factor.'
```

```
">
   <unadjustedPaymentDate> xsd:date </unadjustedPaymentDate> [0..1]
   <adjustedPaymentDate> xsd:date </adjustedPaymentDate> [0..1]
   '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).'

Start Choice [1]
      <calculationPeriod> CalculationPeriod </calculationPeriod> [1..*]
      '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.'

      <fixedPaymentAmount> xsd:decimal </fixedPaymentAmount> [1]
      'A known fixed payment amount.'

End Choice
   <discountFactor> xsd:decimal </discountFactor> [0..1]
   'A decimal value representing the discount factor used to calculate the present value of
   cash flow.'

   <forecastPaymentAmount> Money </forecastPaymentAmount> [0..1]
   'A monetary amount representing the forecast of the future value of the payment.'

   <presentValueAmount> Money </presentValueAmount> [0..1]
   'A monetary amount representing the present value of the forecast payment.'

</...>
```

Diagram





Schema Component Representation

```
<xsd:complexType name="PaymentCalculationPeriod">
   <xsd:sequence>
      <xsd:element name="unadjustedPaymentDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="adjustedPaymentDate" type=" xsd:date " minOccurs="0"/>
      <xsd:choice>
         <xsd:element name="calculationPeriod" type=" CalculationPeriod " maxOccurs="unbounded"/>
         <xsd:element name="fixedPaymentAmount" type=" xsd:decimal "/>
      </xsd:choice>
      <xsd:element name="discountFactor" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="forecastPaymentAmount" type=" Money " minOccurs="0"/>
      <xsd:element name="presentValueAmount" type=" Money " minOccurs="0"/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
   <xsd:attribute name="href" type=" xsd:IDREF " reference="PricingStructure"/>
</xsd:complexType>
```

top

Complex Type: PaymentDates

Super-types:	None
Sub-types:	None

Name	PaymentDates
Used by (from the same schema document)	Complex Type **InterestRateStream**
Abstract	no
Documentation	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.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
Start Choice [1]
      <calculationPeriodDatesReference> CalculationPeriodDatesReference
      </calculationPeriodDatesReference> [1]
      'A pointer style reference to the associated calculation period dates component
      defined elsewhere in the document.'

      <resetDatesReference> ResetDatesReference </resetDatesReference> [1]
      'A pointer style reference to the associated reset dates component defined elsewhere in
      the document.'

End Choice
   <paymentFrequency> Interval </paymentFrequency> [1]
```

'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 e 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> xsd:date </firstPaymentDate> [0..1]

'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> xsd:date </lastRegularPaymentDate> [0..1]

'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> PayRelativeToEnum </payRelativeTo> [1]

'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> Offset </paymentDaysOffset> [0..1]

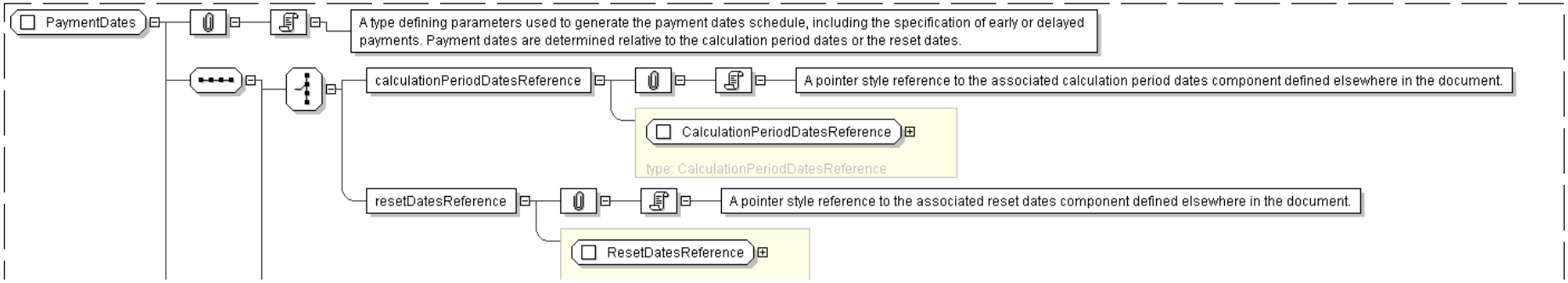
'If early payment or delayed payment is required, specifies the number of days offset that the payment occurs relative to what would otherwise be the unadjusted payment date. The offset can be specified in terms of either calendar or business days. Even in the case of a calendar days offset, the resulting 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> BusinessDayAdjustments </paymentDatesAdjustments> [1]

'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.'

</...>

Diagram



type: ResetDatesReference

paymentFrequency

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 e 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.

Interval

type: Interval from: fpml-shared-4-4.xsd

firstPaymentDate

0..1

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.

date

type: date from: XMLSchema.xsd

lastRegularPaymentDate

0..1

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.

date

type: date from: XMLSchema.xsd

payRelativeTo

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.

PayRelativeToEnum

type: PayRelativeToEnum from: fpml-enum-4-4.xsd

paymentDaysOffset

0..1

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.

Offset

type: Offset from: fpml-shared-4-4.xsd

paymentDatesAdjustments

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.

BusinessDayAdjustments

type: BusinessDayAdjustments from: fpml-shared-4-4.xsd

@ id

Schema Component Representation

```
<xsd:complexType name="PaymentDates">
   <xsd:sequence>
      <xsd:choice>
         <xsd:element name="calculationPeriodDatesReference" type=" CalculationPeriodDatesReference "/>
         <xsd:element name="resetDatesReference" type=" ResetDatesReference "/>
      </xsd:choice>
      <xsd:element name="paymentFrequency" type=" Interval "/>
      <xsd:element name="firstPaymentDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="lastRegularPaymentDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="payRelativeTo" type=" PayRelativeToEnum "/>
      <xsd:element name="paymentDaysOffset" type=" Offset " minOccurs="0"/>
      <xsd:element name="paymentDatesAdjustments" type=" BusinessDayAdjustments "/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: PaymentDatesReference

Super-types:	Reference < **PaymentDatesReference** (by extension)
Sub-types:	None

Name	PaymentDatesReference
Used by (from the same schema document)	Complex Type **DateRelativeToPaymentDates**
Abstract	no
Documentation	Reference to a payment dates structure.

XML Instance Representation

```
<...
href=" xsd:IDREF [1]"/>
```

Diagram

Schema Component Representation

```
<xsd:complexType name="PaymentDatesReference">
   <xsd:complexContent>
      <xsd:extension base=" Reference ">
         <xsd:attribute name="href" type=" xsd:IDREF " use="required" reference="PaymentDates"/>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: PriceSourceDisruption

Super-types:	None
Sub-types:	None

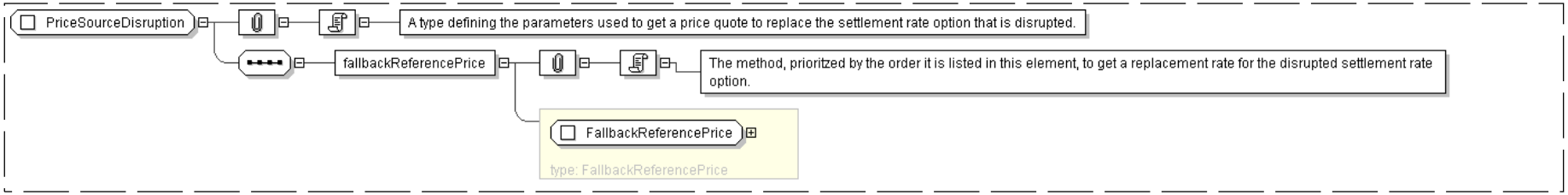
Name	PriceSourceDisruption
Used by (from the same schema document)	Complex Type **NonDeliverableSettlement**
Abstract	no

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

XML Instance Representation

```
<...>
   <fallbackReferencePrice> FallbackReferencePrice </fallbackReferencePrice> [1]
   'The method, prioritzed by the order it is listed in this element, to get a replacement
   rate for the disrupted settlement rate option.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="PriceSourceDisruption">
   <xsd:sequence>
      <xsd:element name="fallbackReferencePrice" type=" FallbackReferencePrice "/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: PrincipalExchange

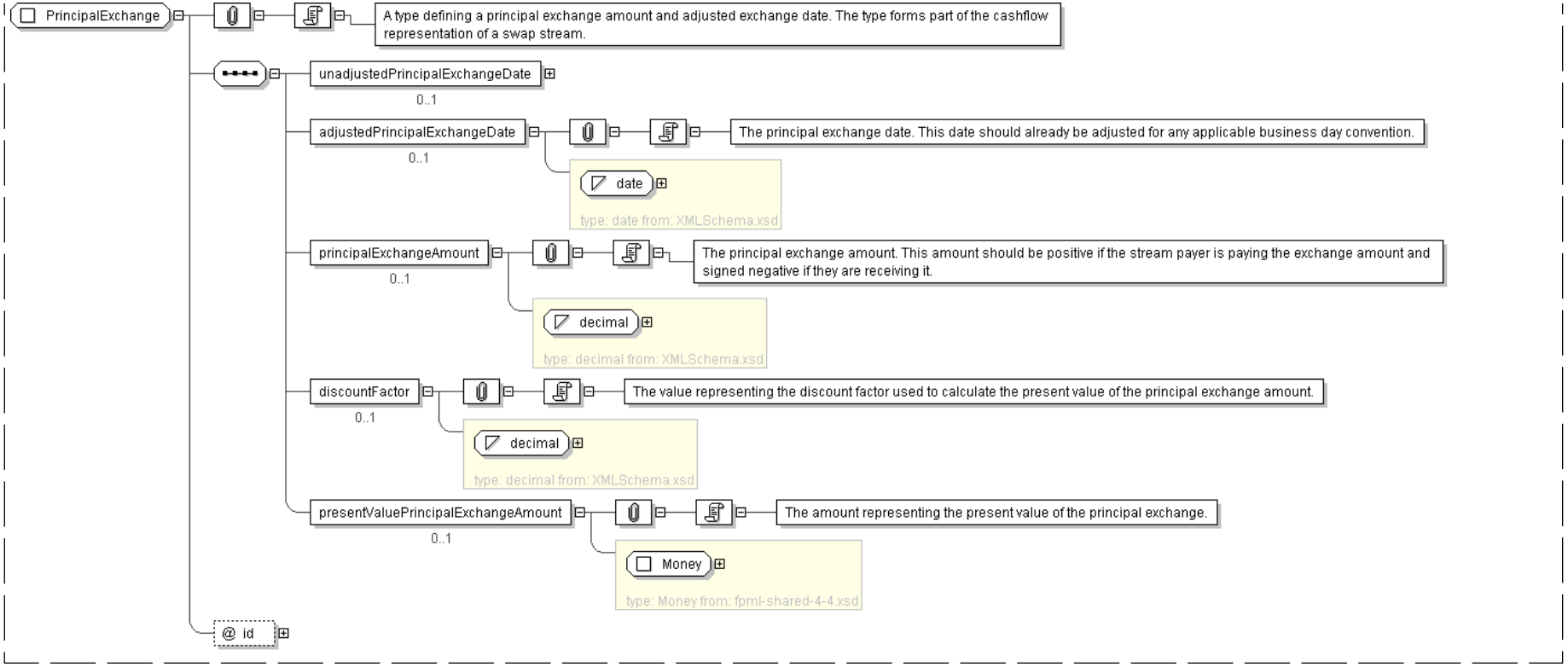
Super-types:	None
Sub-types:	None

Name	PrincipalExchange
Used by (from the same schema document)	Complex Type **Cashflows**
Abstract	no
Documentation	A type defining a principal exchange amount and adjusted exchange date. The type forms part of the cashflow representation of a swap stream.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <unadjustedPrincipalExchangeDate> xsd:date </unadjustedPrincipalExchangeDate> [0..1]
   <adjustedPrincipalExchangeDate> xsd:date </adjustedPrincipalExchangeDate> [0..1]
   'The principal exchange date. This date should already be adjusted for any applicable
   business day convention.'

   <principalExchangeAmount> xsd:decimal </principalExchangeAmount> [0..1]
   '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> xsd:decimal </discountFactor> [0..1]
   'The value representing the discount factor used to calculate the present value of
   the principal exchange amount.'

   <presentValuePrincipalExchangeAmount> Money </presentValuePrincipalExchangeAmount> [0..1]
   'The amount representing the present value of the principal exchange.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="PrincipalExchange">
   <xsd:sequence>
      <xsd:element name="unadjustedPrincipalExchangeDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="adjustedPrincipalExchangeDate" type=" xsd:date " minOccurs="0"/>
      <xsd:element name="principalExchangeAmount" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="discountFactor" type=" xsd:decimal " minOccurs="0"/>
      <xsd:element name="presentValuePrincipalExchangeAmount" type=" Money " minOccurs="0"/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID "/>
</xsd:complexType>
```

top

Complex Type: RelevantUnderlyingDateReference

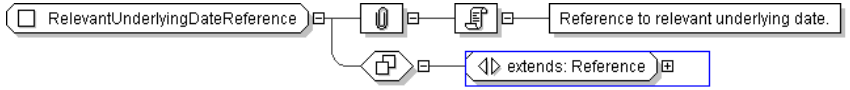
Super-types:	Reference < **RelevantUnderlyingDateReference** (by extension)
Sub-types:	None

Name	RelevantUnderlyingDateReference
Used by (from the same schema document)	Complex Type **FinalCalculationPeriodDateAdjustment**
Abstract	no
Documentation	Reference to relevant underlying date.

XML Instance Representation

```
<.../>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="RelevantUnderlyingDateReference">
   <xsd:complexContent>
      <xsd:extension base=" Reference "/>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: ResetDates

Super-types:	None
Sub-types:	None

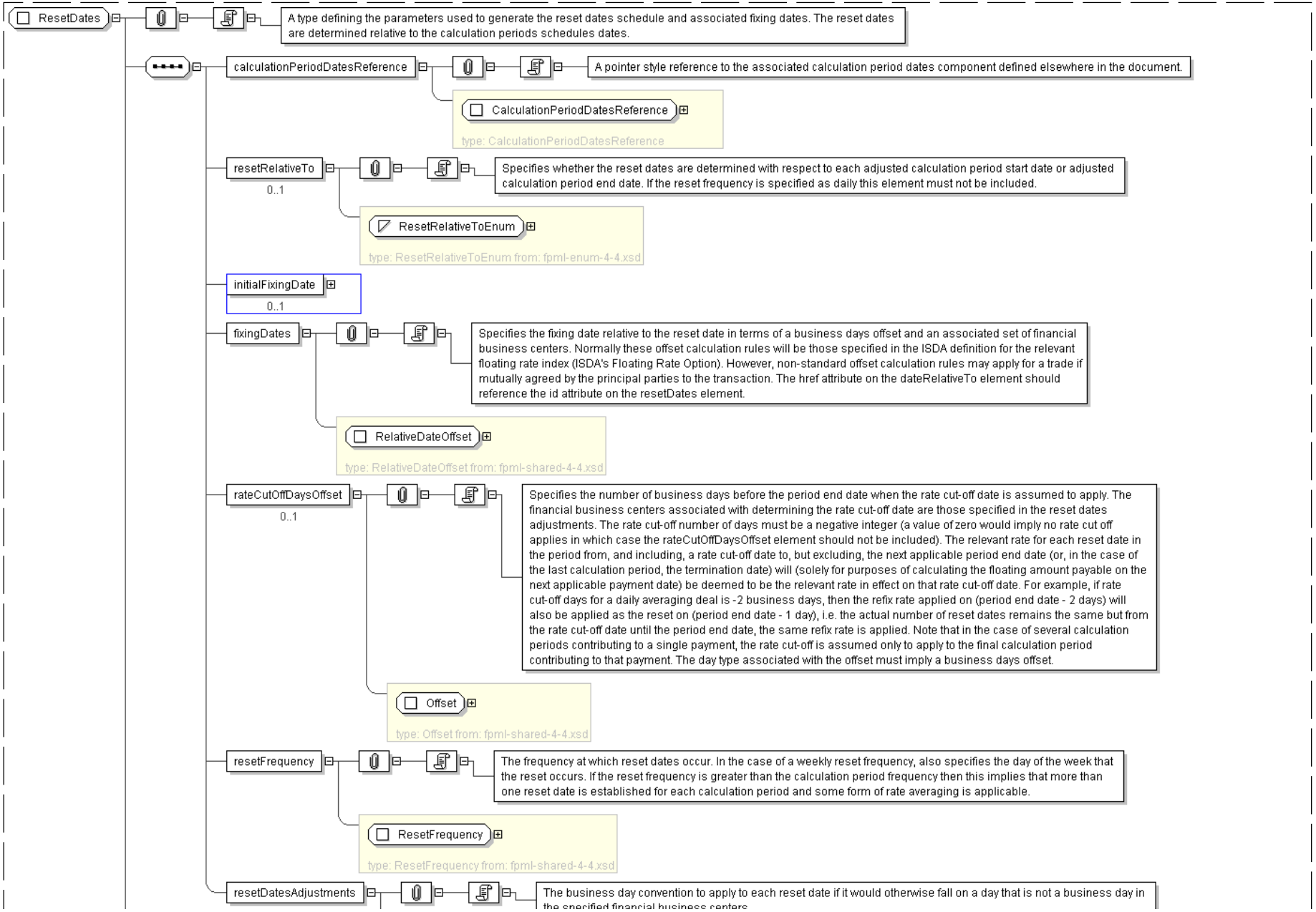
Name	ResetDates
Used by (from the same schema document)	Complex Type **InterestRateStream**
Abstract	no
Documentation	A type defining the parameters used to generate the reset dates schedule and associated fixing dates. The reset dates are determined relative to the calculation periods schedules dates.

XML Instance Representation

```
<...
id=" xsd:ID [1]">
   <calculationPeriodDatesReference> CalculationPeriodDatesReference
   </calculationPeriodDatesReference> [1]
   'A pointer style reference to the associated calculation period dates component
   defined elsewhere in the document.'

   <resetRelativeTo> ResetRelativeToEnum </resetRelativeTo> [0..1]
   '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> RelativeDateOffset </initialFixingDate> [0..1]
   <fixingDates> RelativeDateOffset </fixingDates> [1]
   '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> Offset </rateCutOffDaysOffset> [0..1]
   '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> ResetFrequency </resetFrequency> [1]
```

```
'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> BusinessDayAdjustments </resetDatesAdjustments> [1]
'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.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="ResetDates">
   <xsd:sequence>
      <xsd:element name="calculationPeriodDatesReference" type=" CalculationPeriodDatesReference "/>
      <xsd:element name="resetRelativeTo" type=" ResetRelativeToEnum " minOccurs="0"/>
      <xsd:element name="initialFixingDate" type=" RelativeDateOffset " minOccurs="0"/>
      <xsd:element name="fixingDates" type=" RelativeDateOffset "/>
      <xsd:element name="rateCutOffDaysOffset" type=" Offset " minOccurs="0"/>
      <xsd:element name="resetFrequency" type=" ResetFrequency "/>
      <xsd:element name="resetDatesAdjustments" type=" BusinessDayAdjustments "/>
   </xsd:sequence>
   <xsd:attribute name="id" type=" xsd:ID " use="required"/>
</xsd:complexType>
```

top

Complex Type: ResetDatesReference

Super-types:	Reference < **ResetDatesReference** (by extension)
Sub-types:	None

Name	ResetDatesReference
Used by (from the same schema document)	Complex Type **PaymentDates**
Abstract	no
Documentation	Reference to a reset dates component.

XML Instance Representation

```
<...
href=" xsd:IDREF [1]"/>
```

Diagram

Schema Component Representation

```
<xsd:complexType name="ResetDatesReference">
   <xsd:complexContent>
      <xsd:extension base=" Reference ">
         <xsd:attribute name="href" type=" xsd:IDREF " use="required" reference="ResetDates"/>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: SettlementProvision

Super-types:	None

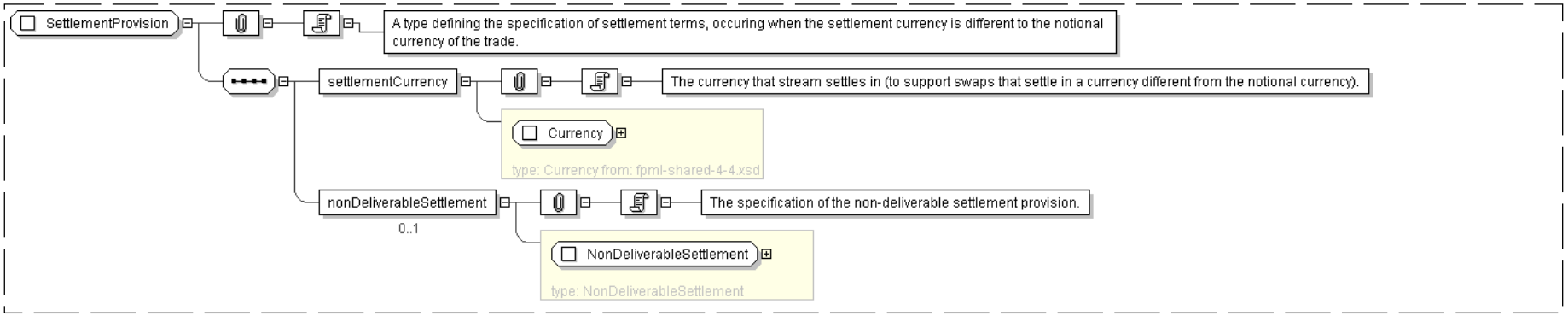
Sub-types:	None

Name	SettlementProvision
Used by (from the same schema document)	Complex Type **InterestRateStream**
Abstract	no
Documentation	A type defining the specification of settlement terms, occuring when the settlement currency is different to the notional currency of the trade.

XML Instance Representation

```
<...>
   <settlementCurrency> Currency </settlementCurrency> [1]
   'The currency that stream settles in (to support swaps that settle in a currency different
   from the notional currency).'

   <nonDeliverableSettlement> NonDeliverableSettlement </nonDeliverableSettlement> [0..1]
   'The specification of the non-deliverable settlement provision.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="SettlementProvision">
   <xsd:sequence>
      <xsd:element name="settlementCurrency" type=" Currency "/>
      <xsd:element name="nonDeliverableSettlement" type=" NonDeliverableSettlement " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: SettlementRateOption

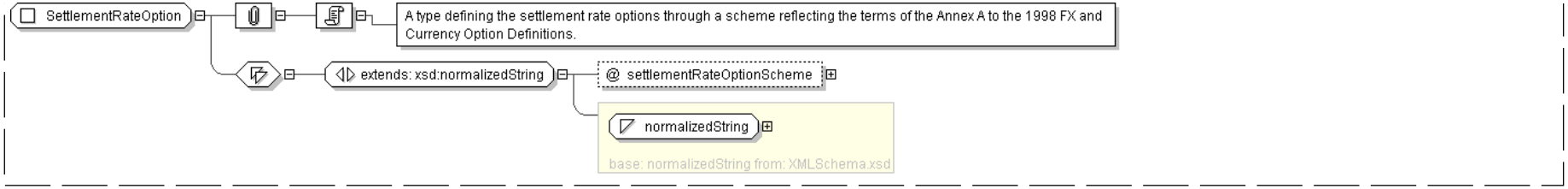
Super-types:	xsd:normalizedString < **SettlementRateOption** (by extension)
Sub-types:	None

Name	SettlementRateOption
Used by (from the same schema document)	Complex Type **FallbackReferencePrice** , Complex Type **NonDeliverableSettlement**
Abstract	no
Documentation	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.

XML Instance Representation

```
<...
settlementRateOptionScheme=" xsd:anyURI [0..1]">
xsd:normalizedString
</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="SettlementRateOption">
   <xsd:simpleContent>
      <xsd:extension base=" xsd:normalizedString ">
         <xsd:attribute name="settlementRateOptionScheme" type=" xsd:anyURI " default="http://www.
         fpml.org/coding-scheme/settlement-rate-option-2-1"/>
      </xsd:extension>
   </xsd:simpleContent>
</xsd:complexType>
```

top

Complex Type: SinglePartyOption

Super-types:	None
Sub-types:	None

Name	SinglePartyOption
Used by (from the same schema document)	Complex Type **OptionalEarlyTermination**
Abstract	no
Documentation	A type describing the buyer and seller of an option.

XML Instance Representation

```
<...>
   <buyerPartyReference> PartyOrTradeSideReference </buyerPartyReference> [1]
   '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> PartyOrTradeSideReference </sellerPartyReference> [1]
   '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.'

</...>
```

Diagram

Schema Component Representation

```
<xsd:complexType name="SinglePartyOption">
   <xsd:sequence>
      <xsd:group ref=" BuyerSeller.model "/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: StubCalculationPeriodAmount

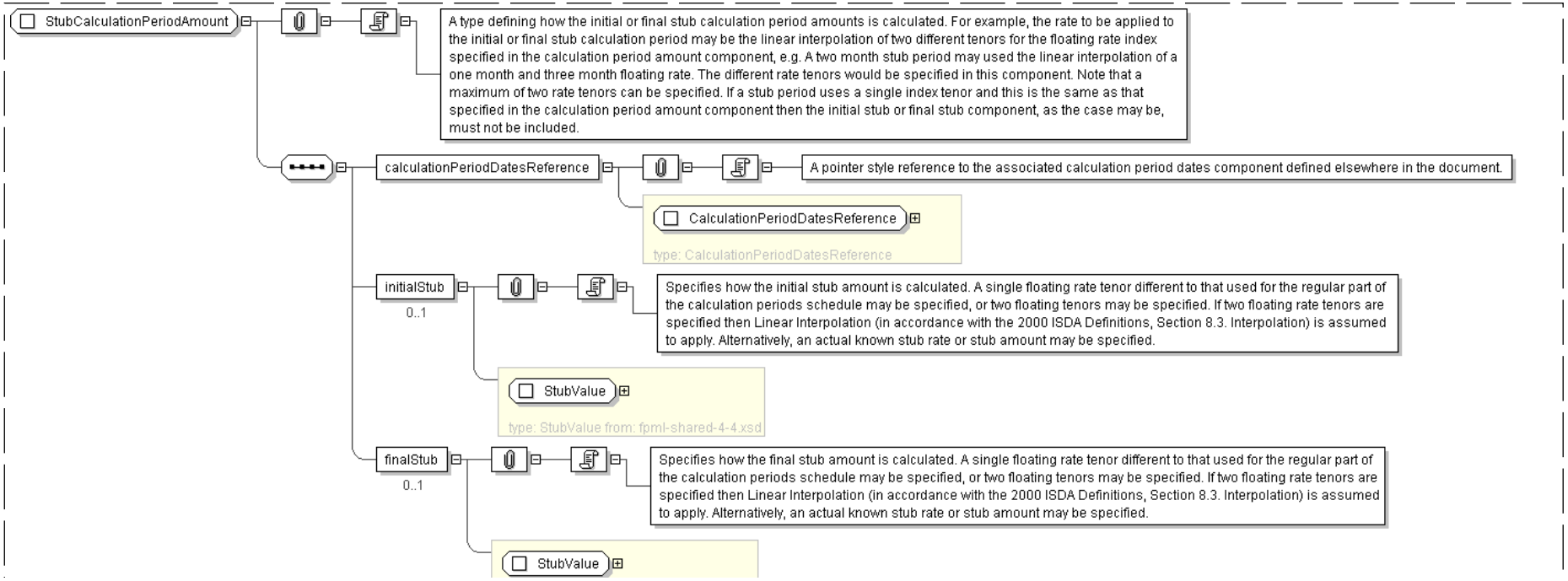
Super-types:	None
Sub-types:	None

Name	StubCalculationPeriodAmount
Used by (from the same schema document)	Complex Type **InterestRateStream**
Abstract	no
Documentation	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.

XML Instance Representation

```
<...>
   <calculationPeriodDatesReference> CalculationPeriodDatesReference
   </calculationPeriodDatesReference> [1]
   'A pointer style reference to the associated calculation period dates component
   defined elsewhere in the document.'

   <initialStub> StubValue </initialStub> [0..1]
   '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> StubValue </finalStub> [0..1]
   '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.'

</...>
```

Diagram



type: StubValue from: fpml-shared-4-4.xsd

Schema Component Representation

```
<xsd:complexType name="StubCalculationPeriodAmount">
   <xsd:sequence>
      <xsd:element name="calculationPeriodDatesReference" type=" CalculationPeriodDatesReference "/>
      <xsd:element name="initialStub" type=" StubValue " minOccurs="0"/>
      <xsd:element name="finalStub" type=" StubValue " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: Swap

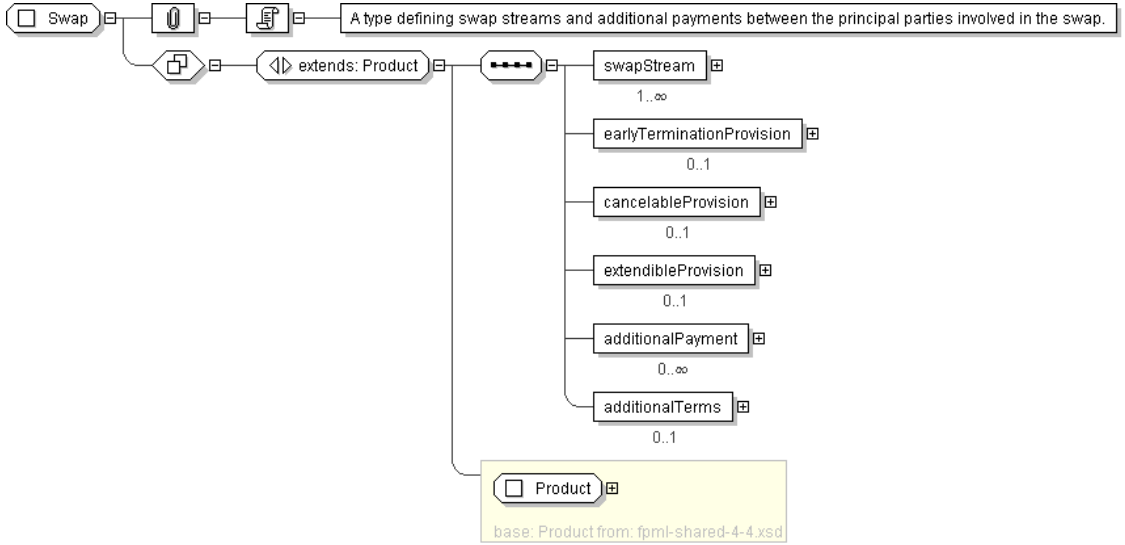
Super-types:	Product < **Swap** (by extension)
Sub-types:	None

Name	Swap
Used by (from the same schema document)	Element **swap**
Abstract	no
Documentation	A type defining swap streams and additional payments between the principal parties involved in the swap.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
   'A classification of the type of product. FpML defines a simple product categorization using
   a coding scheme.'

   <productId> ProductId </productId> [0..*]
   'A product reference identifier allocated by a party. FpML does not define the domain
   values associated with this element. Note that the domain values for this element are
   not strictly an enumerated list.'

   <swapStream> InterestRateStream </swapStream> [1..*]
   'The swap streams.'

   <earlyTerminationProvision> EarlyTerminationProvision </earlyTerminationProvision> [0..1]
   'Parameters specifying provisions relating to the optional and mandatory early terminarion of
   a swap transaction.'

   <cancelableProvision> CancelableProvision </cancelableProvision> [0..1]
   '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> ExtendibleProvision </extendibleProvision> [0..1]
   '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> Payment </additionalPayment> [0..*]
   'Additional payments between the principal parties.'

   <additionalTerms> SwapAdditionalTerms </additionalTerms> [0..1]
   'Contains any additional terms to the swap contract.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="Swap">
   <xsd:complexContent>
      <xsd:extension base=" Product ">
         <xsd:sequence>
            <xsd:element name="swapStream" type=" InterestRateStream " maxOccurs="unbounded"/>
            <xsd:element name="earlyTerminationProvision" type=" EarlyTerminationProvision " minOccurs="0"/>
            <xsd:element name="cancelableProvision" type=" CancelableProvision " minOccurs="0"/>
            <xsd:element name="extendibleProvision" type=" ExtendibleProvision " minOccurs="0"/>
            <xsd:element name="additionalPayment" type=" Payment " minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element name="additionalTerms" type=" SwapAdditionalTerms " minOccurs="0"/>
         </xsd:sequence>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: SwapAdditionalTerms

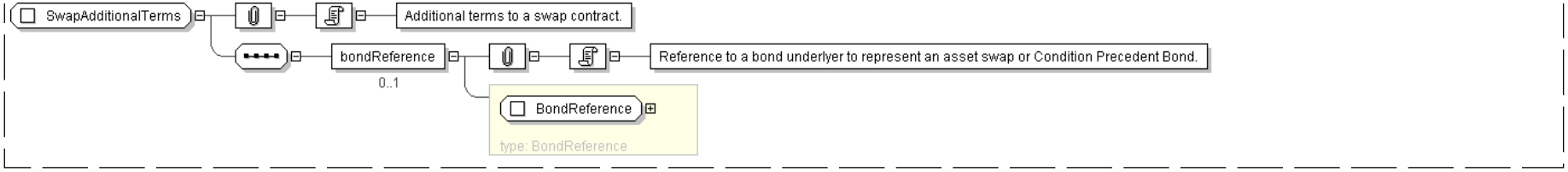
Super-types:	None
Sub-types:	None

Name	SwapAdditionalTerms
Used by (from the same schema document)	Complex Type **Swap**
Abstract	no
Documentation	Additional terms to a swap contract.

XML Instance Representation

```
<...>
   <bondReference> BondReference </bondReference> [0..1]
   'Reference to a bond underlyer to represent an asset swap or Condition Precedent Bond.'
</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="SwapAdditionalTerms">
   <xsd:sequence>
      <xsd:element name="bondReference" type=" BondReference " minOccurs="0"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: Swaption

Super-types:	Product < **Swaption** (by extension)
Sub-types:	None

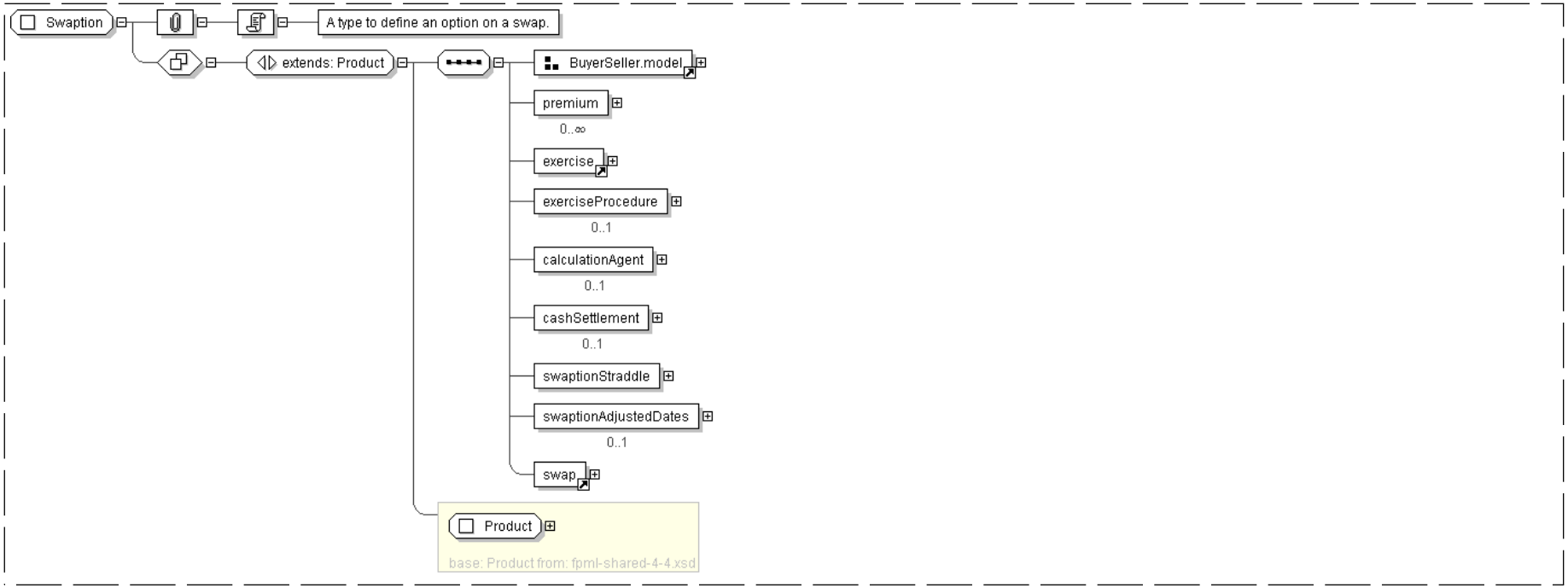
Name	Swaption
Used by (from the same schema document)	Element **swaption**
Abstract	no
Documentation	A type to define an option on a swap.

XML Instance Representation

```
<...
id=" xsd:ID [0..1]">
   <productType> ProductType </productType> [0..*]
   'A classification of the type of product. FpML defines a simple product categorization using
   a coding scheme.'

   <productId> ProductId </productId> [0..*]
   'A product reference identifier allocated by a party. FpML does not define the domain
   values associated with this element. Note that the domain values for this element are
   not strictly an enumerated list.'

   <buyerPartyReference> PartyOrTradeSideReference </buyerPartyReference> [1]
   '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> PartyOrTradeSideReference </sellerPartyReference> [1]
   '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> Payment </premium> [0..*]
   'The option premium amount payable by buyer to seller on the specified payment date.'

   <exercise> ... </exercise> [1]
   <exerciseProcedure> ExerciseProcedure </exerciseProcedure> [0..1]
   'A set of parameters defining procedures associated with the exercise.'

   <calculationAgent> CalculationAgent </calculationAgent> [0..1]
   'The ISDA Calculation Agent responsible for performing duties associated with an optional
   early termination.'

   <cashSettlement> CashSettlement </cashSettlement> [0..1]
   '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> xsd:boolean </swaptionStraddle> [1]
'Whether the option is a swaption or a swaption straddle.'

<swaptionAdjustedDates> SwaptionAdjustedDates </swaptionAdjustedDates> [0..1]
'The adjusted dates associated with swaption exercise. These dates have been adjusted for
any applicable business day convention.'

<swap> ... </swap> [1]
</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="Swaption">
   <xsd:complexContent>
      <xsd:extension base=" Product ">
         <xsd:sequence>
            <xsd:group ref=" BuyerSeller.model "/>
            <xsd:element name="premium" type=" Payment " minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref=" exercise "/>
            <xsd:element name="exerciseProcedure" type=" ExerciseProcedure " minOccurs="0"/>
            <xsd:element name="calculationAgent" type=" CalculationAgent " minOccurs="0"/>
            <xsd:element name="cashSettlement" type=" CashSettlement " minOccurs="0"/>
            <xsd:element name="swaptionStraddle" type=" xsd:boolean "/>
            <xsd:element name="swaptionAdjustedDates" type=" SwaptionAdjustedDates " minOccurs="0"/>
            <xsd:element ref=" swap "/>
         </xsd:sequence>
      </xsd:extension>
   </xsd:complexContent>
</xsd:complexType>
```

top

Complex Type: SwaptionAdjustedDates

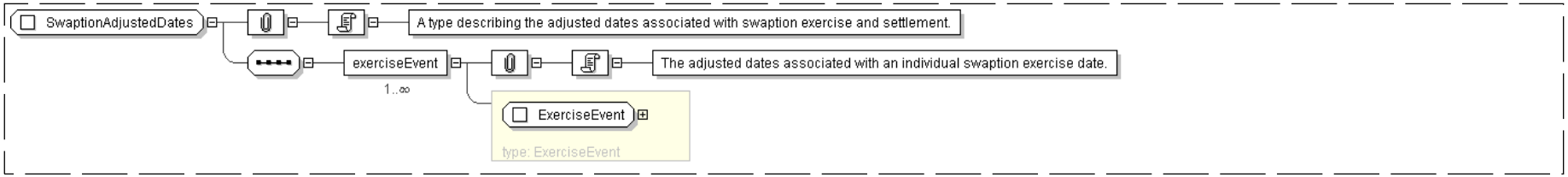
Super-types:	None
Sub-types:	None

Name	SwaptionAdjustedDates
Used by (from the same schema document)	Complex Type **Swaption**
Abstract	no
Documentation	A type describing the adjusted dates associated with swaption exercise and settlement.

XML Instance Representation

```
<...>
   <exerciseEvent> ExerciseEvent </exerciseEvent> [1..*]
   'The adjusted dates associated with an individual swaption exercise date.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="SwaptionAdjustedDates">
   <xsd:sequence>
      <xsd:element name="exerciseEvent" type=" ExerciseEvent " maxOccurs="unbounded"/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: ValuationPostponement

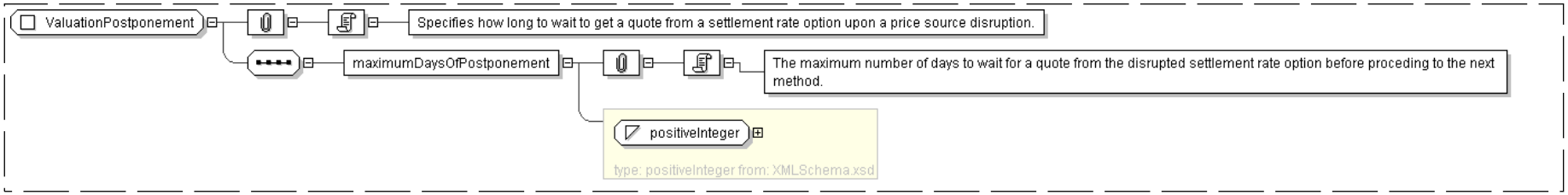
Super-types:	None
Sub-types:	None

Name	ValuationPostponement
Used by (from the same schema document)	Complex Type **FallbackReferencePrice**
Abstract	no
Documentation	Specifies how long to wait to get a quote from a settlement rate option upon a price source disruption.

XML Instance Representation

```
<...>
   <maximumDaysOfPostponement> xsd:positiveInteger </maximumDaysOfPostponement> [1]
   'The maximum number of days to wait for a quote from the disrupted settlement rate
   option before proceding to the next method.'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="ValuationPostponement">
   <xsd:sequence>
      <xsd:element name="maximumDaysOfPostponement" type=" xsd:positiveInteger "/>
   </xsd:sequence>
</xsd:complexType>
```

top

Complex Type: YieldCurveMethod

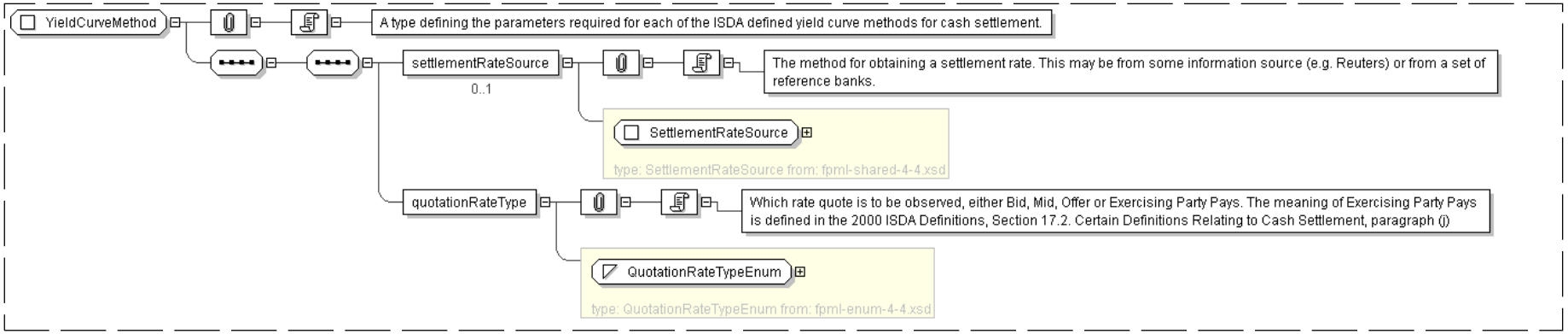
Super-types:	None
Sub-types:	None

Name	YieldCurveMethod
Used by (from the same schema document)	Complex Type **CashSettlement** , Complex Type **CashSettlement** , Complex Type **CashSettlement**
Abstract	no
Documentation	A type defining the parameters required for each of the ISDA defined yield curve methods for cash settlement.

XML Instance Representation

```
<...>
   <settlementRateSource> SettlementRateSource </settlementRateSource> [0..1]
   'The method for obtaining a settlement rate. This may be from some information source (e.
   g. Reuters) or from a set of reference banks.'

   <quotationRateType> QuotationRateTypeEnum </quotationRateType> [1]
   '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)'

</...>
```

Diagram



Schema Component Representation

```
<xsd:complexType name="YieldCurveMethod">
   <xsd:sequence>
      <xsd:sequence>
         <xsd:element name="settlementRateSource" type=" SettlementRateSource " minOccurs="0"/>
         <xsd:element name="quotationRateType" type=" QuotationRateTypeEnum "/>
      </xsd:sequence>
   </xsd:sequence>
</xsd:complexType>
```

top

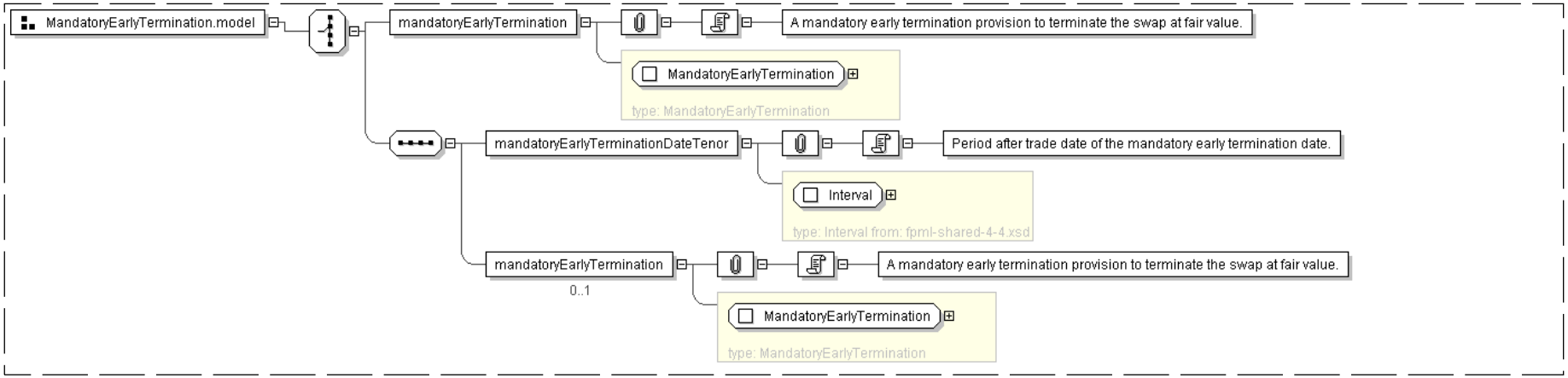
Model Group: MandatoryEarlyTermination.model

Name	MandatoryEarlyTermination.model
Used by (from the same schema document)	Complex Type **EarlyTerminationProvision**

XML Instance Representation

```
Start Choice [1]
   <mandatoryEarlyTermination> MandatoryEarlyTermination </mandatoryEarlyTermination> [1]
   'A mandatory early termination provision to terminate the swap at fair value.'

   <mandatoryEarlyTerminationDateTenor> Interval </mandatoryEarlyTerminationDateTenor> [1]
   'Period after trade date of the mandatory early termination date.'

   <mandatoryEarlyTermination> MandatoryEarlyTermination </mandatoryEarlyTermination> [0..1]
   'A mandatory early termination provision to terminate the swap at fair value.'

End Choice
```

Diagram



Schema Component Representation

```
<xsd:group name="MandatoryEarlyTermination.model">
   <xsd:choice>
      <xsd:element name="mandatoryEarlyTermination" type=" MandatoryEarlyTermination "/>
      <xsd:sequence>
         <xsd:element name="mandatoryEarlyTerminationDateTenor" type=" Interval "/>
         <xsd:element name="mandatoryEarlyTermination" type=" MandatoryEarlyTermination " minOccurs="0"/>
      </xsd:sequence>
   </xsd:choice>
</xsd:group>
```

top

Model Group: OptionalEarlyTermination.model

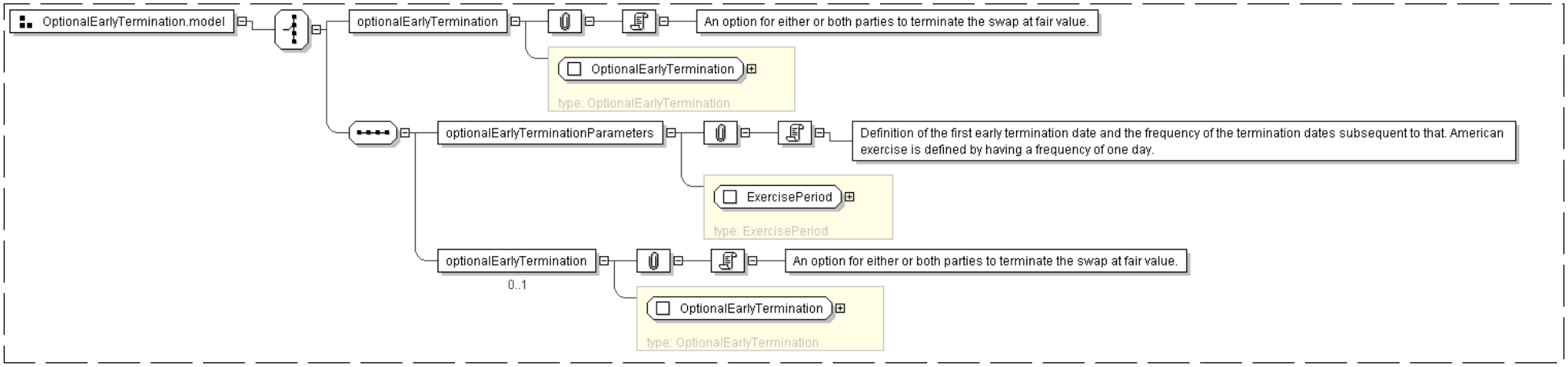
Name	OptionalEarlyTermination.model
Used by (from the same schema document)	Complex Type **EarlyTerminationProvision** , Complex Type **EarlyTerminationProvision**

XML Instance Representation

```
Start Choice [1]
   <optionalEarlyTermination> OptionalEarlyTermination </optionalEarlyTermination> [1]
   'An option for either or both parties to terminate the swap at fair value.'

   <optionalEarlyTerminationParameters> ExercisePeriod </optionalEarlyTerminationParameters> [1]
   '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.'

<optionalEarlyTermination> OptionalEarlyTermination </optionalEarlyTermination> [0..1]
'An option for either or both parties to terminate the swap at fair value.'

End Choice
```

Diagram



Schema Component Representation

```
<xsd:group name="OptionalEarlyTermination.model">
   <xsd:choice>
      <xsd:element name="optionalEarlyTermination" type=" OptionalEarlyTermination "/>
      <xsd:sequence>
         <xsd:element name="optionalEarlyTerminationParameters" type=" ExercisePeriod "/>
         <xsd:element name="optionalEarlyTermination" type=" OptionalEarlyTermination " minOccurs="0"/>
      </xsd:sequence>
   </xsd:choice>
</xsd:group>
```

top

Legend

Complex Type: Schema Component Type

AusAddress Schema Component Name

Super-types:	Address < AusAddress (by extension)
Sub-types:	• QLDAddress (by restriction)

If this schema component is a type definition, its type hierarchy is shown in a gray-bordered box.

Name	AusAddress
Abstract	no

The table above displays the properties of this schema component.

XML Instance Representation

```
<... country="Australia" >
<unitNo> string </unitNo> [0..1]
<houseNo> string </houseNo> [1]
<street> string </street> [1]
Start Choice [1]
<city> string </city> [1]
```

```
<town> string </town> [1]
End Choice
<state> AusStates </state> [1]
<postcode> string <<pattern = [1-9][0-9]{3}>> </postcode> [1]
</...>
```

The XML Instance Representation table above shows the schema component's content as an XML instance.

- The minimum and maximum occurrence of elements and attributes are provided in square brackets, e.g. [0..1].
- Model group information are shown in gray, e.g. Start Choice ... End Choice.
- For type derivations, the elements and attributes that have been added to or changed from the base type's content are shown in **bold**.
- If an element/attribute has a fixed value, the fixed value is shown in green, e.g. country="Australia".
- Otherwise, the type of the element/attribute is displayed.
  - If the element/attribute's type is in the schema, a link is provided to it.
  - For local simple type definitions, the constraints are displayed in angle brackets, e.g. <<*pattern* = [1-9][0-9]{3}>>.

Schema Component Representation

```
<complexType name="AusAddress">
<complexContent>
<extension base=" Address ">
<sequence>
<element name="state" type=" AusStates "/>
<element name="postcode">
<simpleType>
<restriction base=" string ">
<pattern value="[1-9][0-9]{3}"/>
</restriction>
</simpleType>
</element>
</sequence>
<attribute name="country" type=" string " fixed="Australia"/>
</extension>
</complexContent>
</complexType>
```

The Schema Component Representation table above displays the underlying XML representation of the schema component. (Annotations are not shown.)

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Glossary

Abstract (Applies to complex type definitions and element declarations). An abstract element or complex type cannot used to validate an element instance. If there is a reference to an abstract element, only element declarations that can substitute the abstract element can be used to validate the instance. For references to abstract type definitions, only derived types can be used.

All Model Group Child elements can be provided *in any order* in instances. See: http://www.w3.org/TR/xmlschema-1/#element-all.

Choice Model Group *Only one* from the list of child elements and model groups can be provided in instances. See: http://www.w3.org/TR/xmlschema-1/#element-choice.

Collapse Whitespace Policy Replace tab, line feed, and carriage return characters with space character (Unicode character 32). Then, collapse contiguous sequences of space characters into single space character, and remove leading and trailing space characters.

Disallowed Substitutions (Applies to element declarations). If *substitution* is specified, then substitution group members cannot be used in place of the given element declaration to validate element instances. If *derivation methods*, e.g. extension, restriction, are specified, then the given element declaration will not validate element instances that have types derived from the element declaration's type using the specified derivation methods. Normally, element instances can override their declaration's type by specifying an `xsi:type` attribute.

Key Constraint Like Uniqueness Constraint, but additionally requires that the specified value(s) must be provided. See: http://www.w3.org/TR/xmlschema-1/#cIdentity-constraint_Definitions.

Key Reference Constraint Ensures that the specified value(s) must match value(s) from a Key Constraint or Uniqueness Constraint. See: http://www.w3.org/TR/xmlschema-1/#cIdentity-constraint_Definitions.

Model Group Groups together element content, specifying the order in which the element content can occur and the number of times the group of element content may be repeated. See: http://www.w3.org/TR/xmlschema-1/#Model_Groups.

Nillable (Applies to element declarations). If an element declaration is nillable, instances can use the `xsi:nil` attribute. The `xsi:nil` attribute is

the boolean attribute, *nil*, from the *http://www.w3.org/2001/XMLSchema-instance* namespace. If an element instance has an `xsi:nil` attribute set to true, it can be left empty, even though its element declaration may have required content.

Notation A notation is used to identify the format of a piece of data. Values of elements and attributes that are of type, NOTATION, must come from the names of declared notations. See: http://www.w3.org/TR/xmlschema-1/#cNotation_Declarations.

Preserve Whitespace Policy Preserve whitespaces exactly as they appear in instances.

Prohibited Derivations (Applies to type definitions). Derivation methods that cannot be used to create sub-types from a given type definition.

Prohibited Substitutions (Applies to complex type definitions). Prevents sub-types that have been derived using the specified derivation methods from validating element instances in place of the given type definition.

Replace Whitespace Policy Replace tab, line feed, and carriage return characters with space character (Unicode character 32).

Sequence Model Group Child elements and model groups must be provided *in the specified order* in instances. See: http://www.w3.org/TR/xmlschema-1/#element-sequence.

Substitution Group Elements that are *members* of a substitution group can be used wherever the *head* element of the substitution group is referenced.

Substitution Group Exclusions (Applies to element declarations). Prohibits element declarations from nominating themselves as being able to substitute a given element declaration, if they have types that are derived from the original element's type using the specified derivation methods.

Target Namespace The target namespace identifies the namespace that components in this schema belongs to. If no target namespace is provided, then the schema components do not belong to any namespace.

Uniqueness Constraint Ensures uniqueness of an element/attribute value, or a combination of values, within a specified scope. See: http://www.w3.org/TR/xmlschema-1/#cIdentity-constraint_Definitions.

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Generated by <oXygen/> XML Editor using a modified version of xs3p that adds schema diagrams and chunking support.