



# **FpML Financial product Markup Language**

**Working Draft 17 April 2002**

## **Interest Rate Derivative Component Definitions**

***Version: 3.0***

**This Version:**

<http://www.fpml.org/spec/2002/wd-fpml-3-0-2002-04-17>

**Latest Version:**

<http://www.fpml.org/spec/fpml-3-0>

**Previous Version:**

<http://www.fpml.org/spec/2002/wd-fpml-3-0-2002-01-30>

Copyright 1999 - 2002. All rights reserved.

Financial Products Markup Language is subject to the FpML Public License.

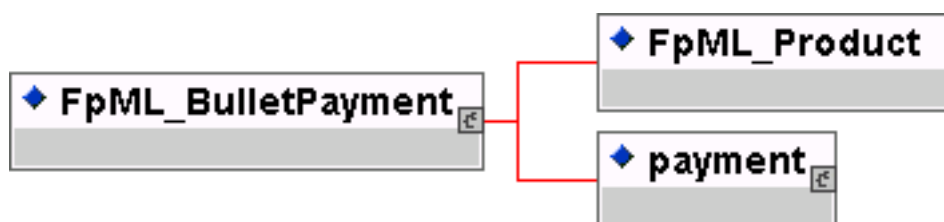
A copy of this license is available at <http://www.fpml.org/documents/license>

## FpML\_BulletPayment

### Description:

An entity for defining a single known payment between two parties.

### Figure:



### Contents:

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_Product)

- The base entity which all FpML products extend.

**payment** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Payment)

- A known payment between two parties.

### Used by:

- bulletPayment

### DTD Fragment:

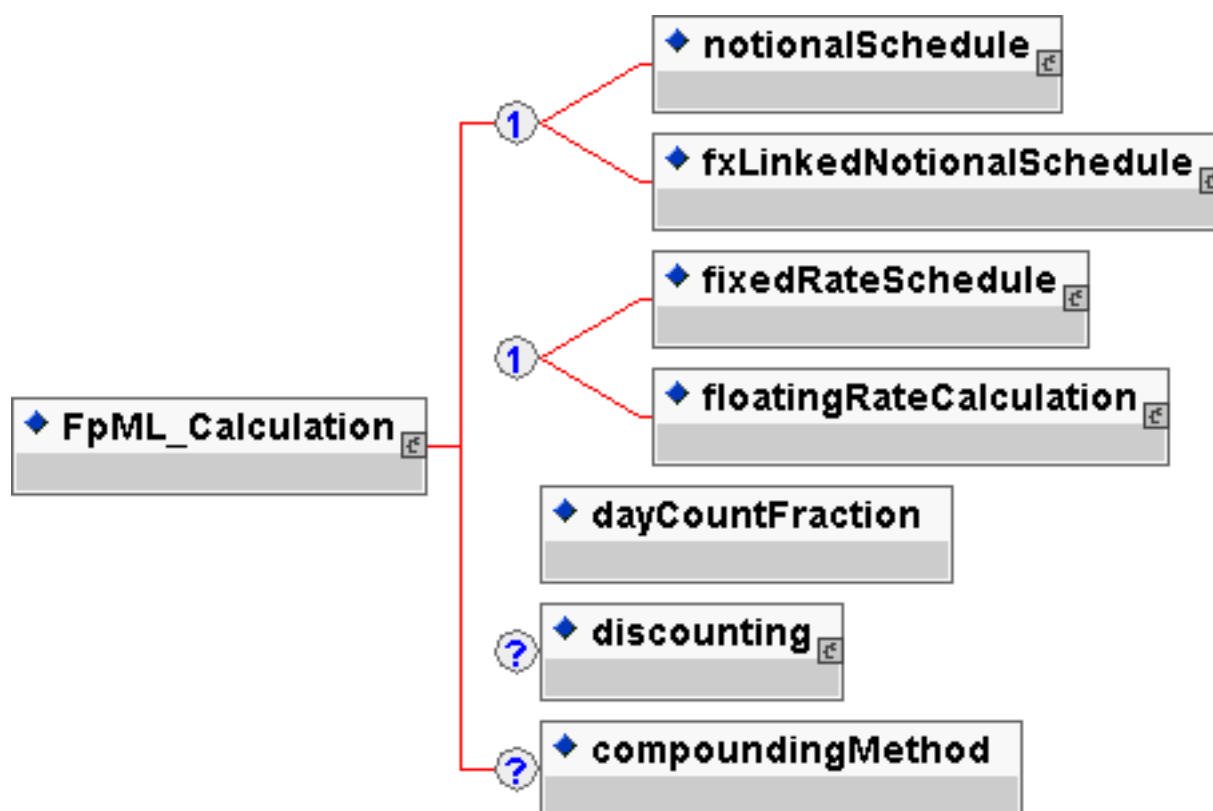
```
<!ENTITY % FpML_BulletPayment "%FpML_Product;, payment">
```

## FpML\_Calculation

### Description:

An entity for defining the parameters used in the calculation of fixed or floating calculation period amounts.

### Figure:



### Contents:

#### Either

**notionalSchedule** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Notional)

- The notional amount or notional amount schedule.

#### Or

**fxLinkedNotionalSchedule** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_FxLinkedNotionalSchedule)

- A notional amount 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.

#### Either

**fixedRateSchedule** (exactly one occurrence; contains the sub-element(s) defined by exactly one

occurrence of the entity FpML Schedule)

- The fixed rate or fixed rate schedule expressed as explicit fixed rates and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments.

Or

**floatingRateCalculation** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML FloatingRateCalculation)

- The floating rate calculation definitions.

**dayCountFraction** (exactly one occurrence; of type *string*, an enumerated domain value defined by dayCountFractionScheme)

- The day count fraction.

**discounting** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML Discounting)

- The parameters specifying any discounting conventions that may apply. This element must only be included if discounting applies.

**compoundingMethod** (zero or one occurrence; of type *string*, an enumerated domain value defined by compoundingMethodScheme)

- If more than one calculation period contributes to a single payment amount this element specifies whether compounding is applicable, and if so, what compounding method is to be used. This element must only be included when more than one calculation period contributes to a single payment amount.

**Used by:**

- calculation

**DTD Fragment:**

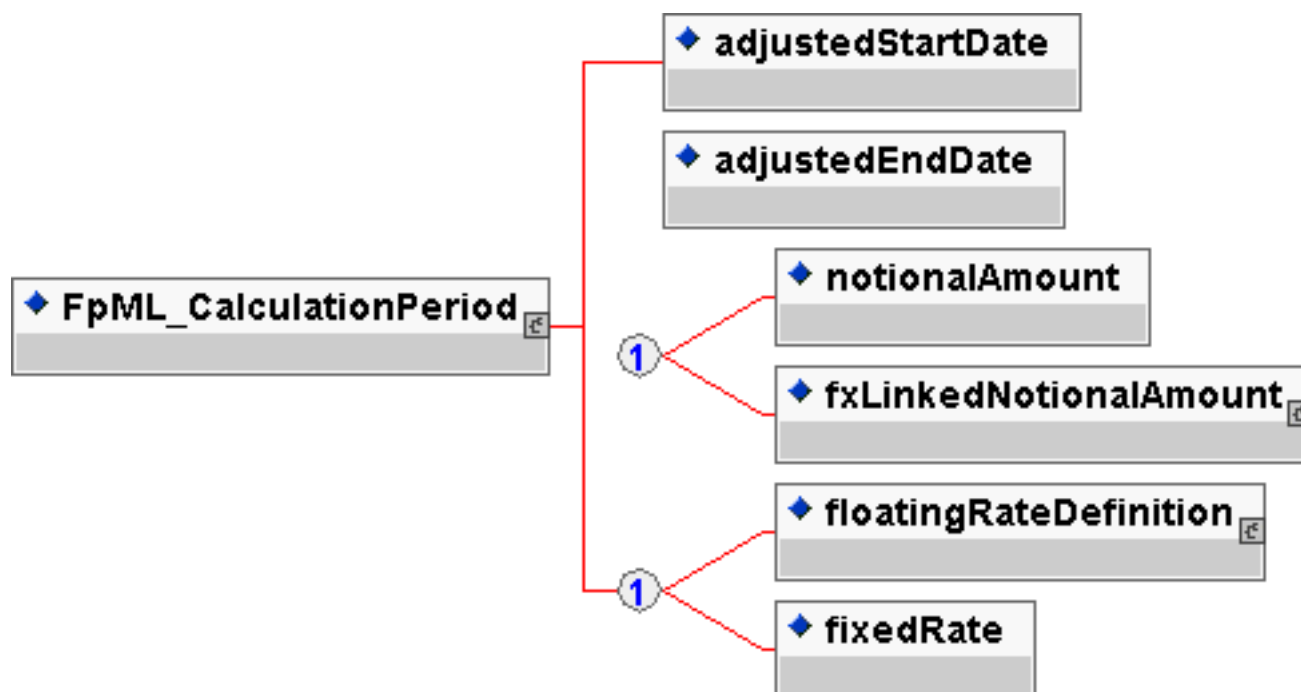
```
<!ENTITY % FpML_Calculation "((notionalSchedule | fxLinkedNotionalSchedule) , (fixedRateSchedule | floatingRateCalculation) , dayCountFraction , discounting? , compoundingMethod?)">
```

## FpML\_CalculationPeriod

### Description:

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

### Figure:



### Contents:

**adjustedStartDate** (exactly one occurrence; of type *date*)

- The calculation period start date, adjusted according to any relevant business day convention.

**adjustedEndDate** (exactly one occurrence; of type *date*)

- The calculation period end date, adjusted according to any relevant business day convention.

Either

**notionalAmount** (exactly one occurrence; of type *decimal*)

- The calculation period notional amount.

Or

**fxLinkedNotionalAmount** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity *FpML\_FxLinkedNotionalAmount*)

- The amount that a cashflow will accrue interest on. This is the calculated amount of the fx linked notional - ie the other currency notional amount multiplied by the appropriate fx spot rate.

Either

**floatingRateDefinition** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_FloatingRateDefinition)

- The floating rate reset information for the calculation period.

Or

**fixedRate** (exactly one occurrence; of type *decimal*)

- The calculation period fixed rate. A per annum rate, expressed as a decimal. A fixed rate of 5% would be represented as 0.05.

***Used by:***

- calculationPeriod

***DTD Fragment:***

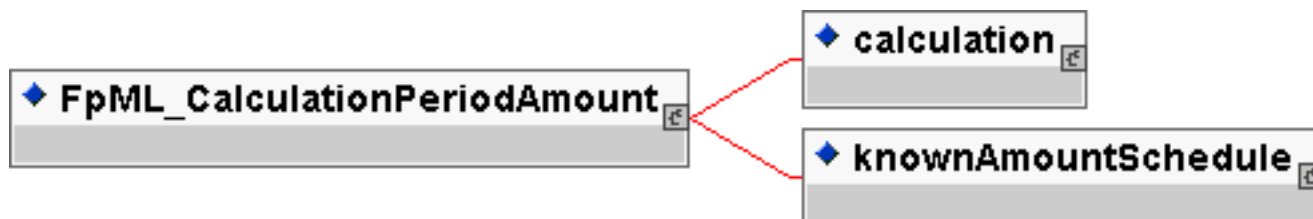
```
<!ENTITY % FpML_CalculationPeriod "adjustedStartDate , adjustedEndDate , (notionalAmount |  
fxLinkedNotionalAmount) , (floatingRateDefinition | fixedRate)">
```

## FpML\_CalculationPeriodAmount

### Description:

An entity for 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.

### Figure:



### Contents:

Either

**calculation** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Calculation)

- The parameters used in the calculation of fixed or floating rate calculation period amounts.

Or

**knownAmountSchedule** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_AmountSchedule)

- The known calculation period amount or a known amount schedule expressed as explicit known amounts and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments.

### Used by:

- calculationPeriodAmount

### DTD Fragment:

```
<!ENTITY % FpML_CalculationPeriodAmount "calculation | knownAmountSchedule">
```

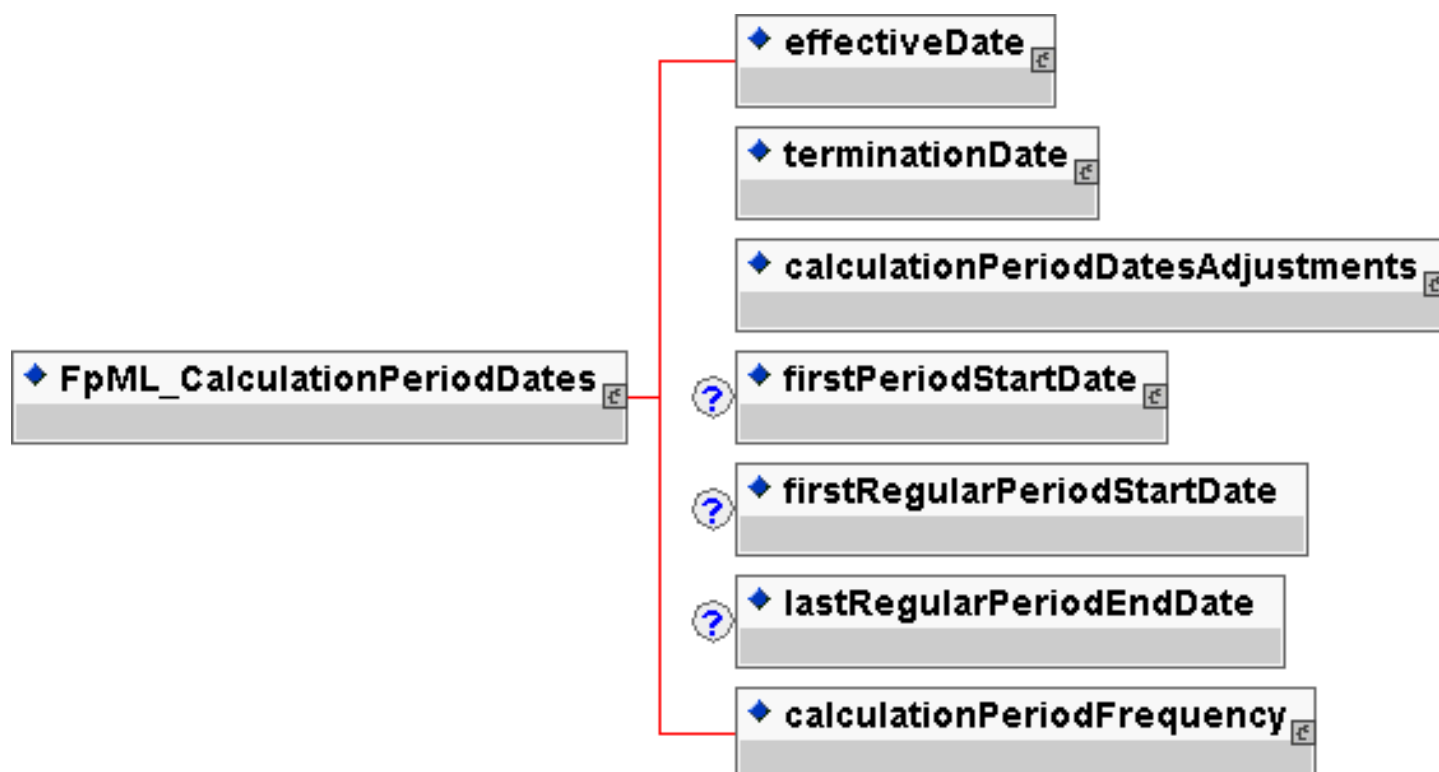


## FpML\_CalculationPeriodDates

### Description:

An entity for defining the parameters used to generate the calculation periods dates schedule, including the specification of any initial or final stub calculation periods. A calculation period 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 firstPeriodStartDate, firstRegularPeriodStartDate, lastRegularPeriodEndDate, firstRegularPeriodStartDate and lastRegularPeriodEndDate.

### Figure:



### Contents:

**effectiveDate** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_AdjustableDate)

- The first day of the term of the trade. This day may be subject to adjustment in accordance with a business day convention.

**terminationDate** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_AdjustableDate)

- The last day of the term of the trade. This day may be subject to adjustment in accordance with a business day convention.

**calculationPeriodDatesAdjustments** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_BusinessDayAdjustments)

- The business day convention to apply to each calculation period end date if it would

otherwise fall on a day that is not a business day in the specified financial business centers.

**firstPeriodStartDate** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_AdjustableDate)

- The start date of the first 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 day may be subject to adjustment in accordance with a business day convention.

**firstRegularPeriodStartDate** (zero or one occurrence; of type *date*)

- The start date of the regular part of the calculation period schedule. It must only be specified if there is an initial stub calculation period. This day may be subject to adjustment in accordance with any adjustments specified in *calculationPeriodDatesAdjustments*.

**lastRegularPeriodEndDate** (zero or one occurrence; of type *date*)

- The end date of the regular part of the calculation period schedule. It must only be specified if there is a final stub calculation period. This day may be subject to adjustment in accordance with any adjustments specified in *calculationPeriodDatesAdjustments*.

**calculationPeriodFrequency** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CalculationPeriodFrequency)

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

### ***Used by:***

- *calculationPeriodDates*

### ***DTD Fragment:***

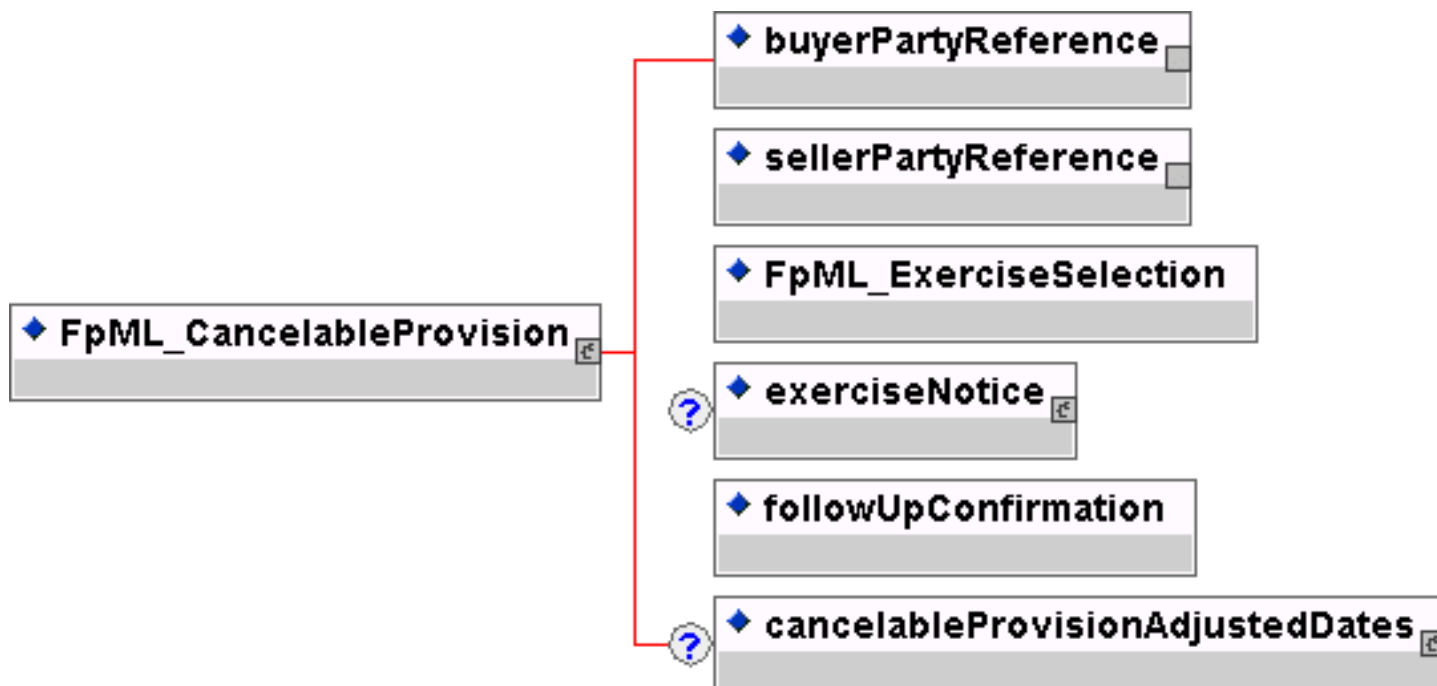
```
<!ENTITY % FpML_CalculationPeriodDates "effectiveDate , terminationDate ,
calculationPeriodDatesAdjustments , firstPeriodStartDate? , firstRegularPeriodStartDate? ,
lastRegularPeriodEndDate? , calculationPeriodFrequency">
```

## FpML\_CancelableProvision

### Description:

An entity to define the the right for a party to cancel a swap transaction on the specified exercise dates. This provision is for 'walkaway' cancellation (ie the fair value of the swap is not paid). A fee on to be paid on exercise can be specified.

### Figure:



### Contents:

**buyerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the buyer of the instrument.

**sellerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the seller of the instrument.

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_ExerciseSelection)

- Entity to defined the types of exercise. The choice is european, bermudan or american exercise.

**exerciseNotice** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_ExerciseNotice)

- Definition of the party to whom notice of exercise should be given.

**followUpConfirmation** (exactly one occurrence; of type *boolean*)

- A flag to indicate whether follow-up confirmation of exercise (written or electronic) is required following telephonic notice by the buyer to the seller or seller's agent.

**cancelableProvisionAdjustedDates** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CancelableProvisionAdjustedDates)

- The adjusted dates associated with a cancelable provision. These dates have been adjusted for any applicable business day convention.

***Used by:***

- cancelableProvision

***DTD Fragment:***

```
<!ENTITY % FpML_CancelableProvision "buyerPartyReference , sellerPartyReference ,  
(%FpML_ExerciseSelection;) , exerciseNotice? , followUpConfirmation , cancelableProvisionAdjustedDates?">
```

## FpML\_CancelableProvisionAdjustedDates

### Description:

An entity to define the adjusted dates for a cancellable provision on a swap transaction.

### Figure:



### Contents:

**cancellationEvent** (one or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CancellationEvent)

- The adjusted dates for an individual cancellation date.

### Used by:

- cancelableProvisionAdjustedDates

### DTD Fragment:

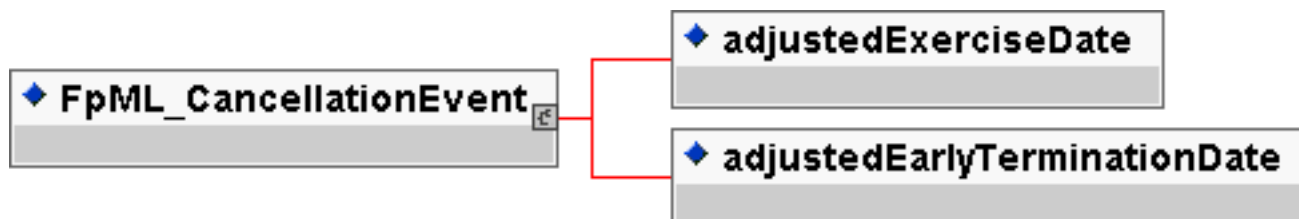
```
<!ENTITY % FpML_CancelableProvisionAdjustedDates "cancellationEvent+">
```

## FpML\_CancellationEvent

### Description:

The adjusted dates for a specific cancellation date - this includes the adjusted exercise date and adjusted termination date

### Figure:



### Contents:

**adjustedExerciseDate** (exactly one occurrence; of type *date*)

- The date on which option exercise takes place. This date should already be adjusted for any applicable business day convention.

**adjustedEarlyTerminationDate** (exactly one occurrence; of type *date*)

- The early termination date that is applicable if an early termination provision is exercised. This date should already be adjusted for any applicable business day convention.

### Used by:

- cancellationEvent

### DTD Fragment:

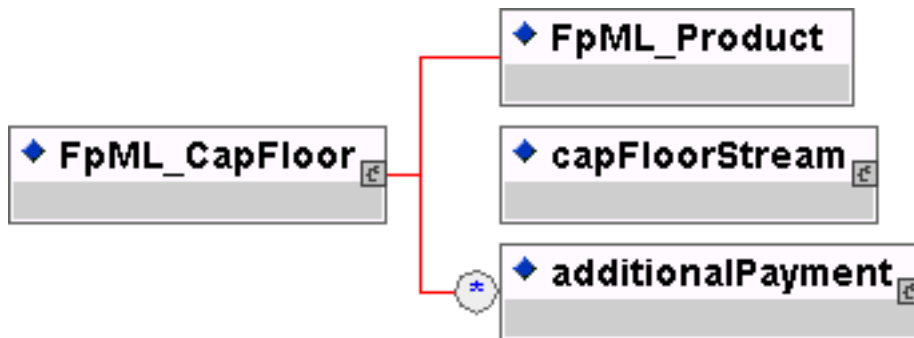
```
<!ENTITY % FpML_CancellationEvent "adjustedExerciseDate , adjustedEarlyTerminationDate">
```

## FpML\_CapFloor

### Description:

An entity for defining an interest rate cap, floor or cap/floor strategy (eg collar) product. This entity inherits from the base entity, FpML\_Product.

### Figure:



### Contents:

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_Product)

- The base entity which all FpML products extend.

**capFloorStream** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_InterestRateStream)

- A cap, floor or cap floor structure stream.

**additionalPayment** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Fee)

- Additional payments between the principal parties.

### Used by:

- capFloor

### DTD Fragment:

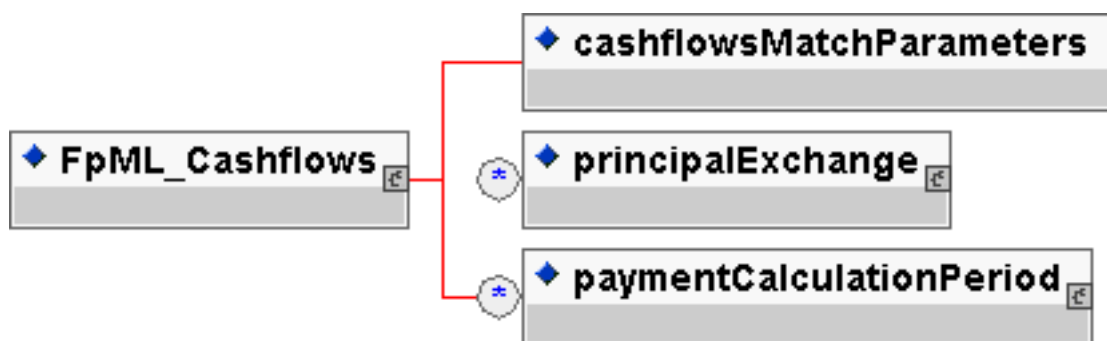
```
<!ENTITY % FpML_CapFloor "%FpML_Product;, capFloorStream , additionalPayment*">
```

## FpML\_Cashflows

### Description:

An entity for defining the cashflow representation of a swap trade.

### Figure:



### Contents:

**cashflowsMatchParameters** (exactly one occurrence; of type *boolean*)

- A true/false flag to indicate whether the cashflows match the parametric definition of the stream, i.e. whether the cashflows could be regenerated from the parameters without loss of information.

**principalExchange** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_PrincipalExchange)

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

**paymentCalculationPeriod** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_PaymentCalculationPeriod)

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

### Used by:

- cashflows

### DTD Fragment:

```
<ENTITY % FpML_Cashflows "cashflowsMatchParameters , principalExchange* ,
paymentCalculationPeriod">
```

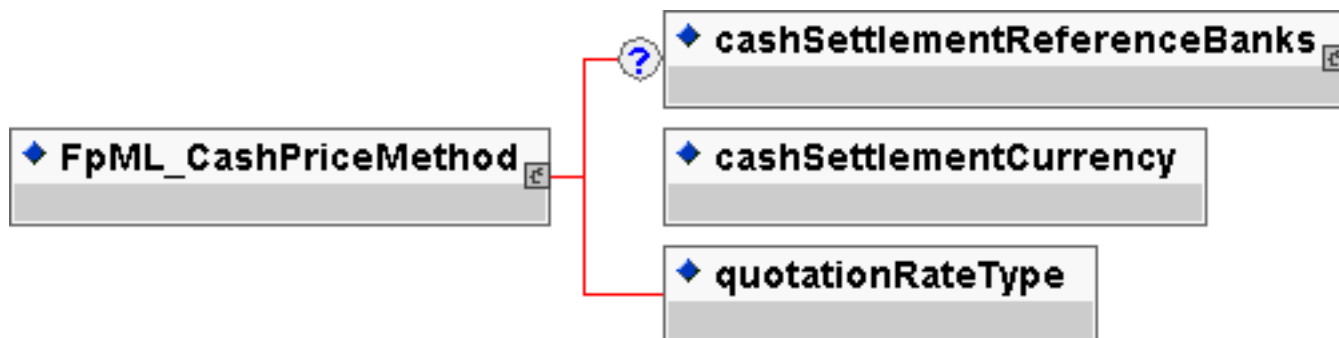


## FpML\_CashPriceMethod

### Description:

An entity to define the parameters necessary for each of the ISDA defined cash price methods for cash settlement.

### Figure:



### Contents:

**cashSettlementReferenceBanks** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CashSettlementReferenceBanks)

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

**cashSettlementCurrency** (exactly one occurrence; of type *string*, an enumerated domain value defined by *currencyScheme*)

- The currency in which the cash settlement amount will be specified.

**quotationRateType** (exactly one occurrence; of type *string*, an enumerated domain value defined by *quotationRateTypeScheme*)

- 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)

### Used by:

- cashPriceAlternateMethod
- cashPriceMethod

### DTD Fragment:

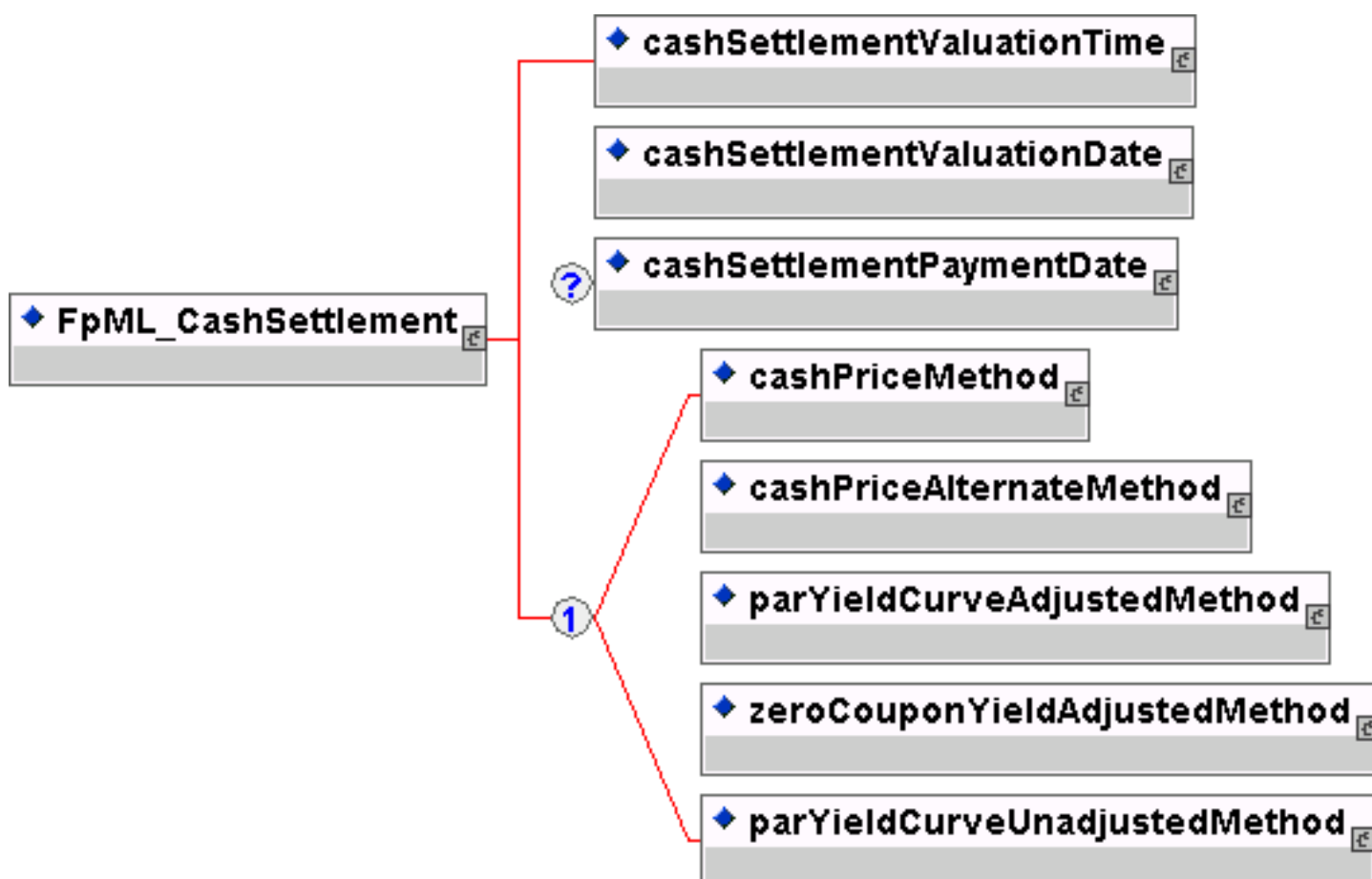
```
<ENTITY % FpML_CashPriceMethod "cashSettlementReferenceBanks? , cashSettlementCurrency , quotationRateType">
```

## FpML\_CashSettlement

### Description:

An entity to define the cash settlement terms for a product where cash settlement is applicable.

### Figure:



### Contents:

**cashSettlementValuationTime** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_BusinessCenterTime)

- The time on 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** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_RelativeDateOffset)

- The date on which the cash settlement amount will be determined according to the cash settlement method if the parties have not otherwise been able to agree the cash settlement amount.

**cashSettlementPaymentDate** (zero or one occurrence; contains the sub-element(s) defined by

exactly one occurrence of the entity FpML\_CashSettlementPaymentDate)

- The date on which the cash settlement amount will be paid, subject to adjustment in accordance with any applicable business day convention. This element would not be present for a mandatory early termination provision where the cash settlement date is the mandatory early termination date.

**Either**

**cashPriceMethod** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CashPriceMethod)

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

**Or**

**cashPriceAlternateMethod** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CashPriceMethod)

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

**Or**

**parYieldCurveAdjustedMethod** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_YieldCurveMethod)

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

**Or**

**zeroCouponYieldAdjustedMethod** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_YieldCurveMethod)

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

**Or**

**parYieldCurveUnadjustedMethod** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_YieldCurveMethod)

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

***Used by:***

- cashSettlement

***DTD Fragment:***

```
<!ENTITY % FpML_CashSettlement "cashSettlementValuationTime , cashSettlementValuationDate ,
cashSettlementPaymentDate? , (cashPriceMethod | cashPriceAlternateMethod |
parYieldCurveAdjustedMethod | zeroCouponYieldAdjustedMethod | parYieldCurveUnadjustedMethod)">
```

## FpML\_CashSettlementPaymentDate

### Description:

An entity for 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.

### Figure:



### Contents:

#### Either

**adjustableDates** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_AdjustableDates)

- A series of dates that shall be subject to adjustment if they would otherwise fall on a day that is not a business day in the specified business centers, together with the convention for adjusting the date.

#### Or

**relativeDate** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_RelativeDateOffset)

- A date specified as some offset to another date (the anchor date).

#### Or

**businessDateRange** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_BusinessDateRange)

- A range of contiguous business days.

### Used by:

- cashSettlementPaymentDate

### DTD Fragment:

```
<ENTITY % FpML_CashSettlementPaymentDate "adjustableDates | relativeDate | businessDateRange">
```

## FpML\_CashSettlementReferenceBanks

### Description:

An entity for defining the list of reference institutions polled for relevant rates or prices when determining the cash settlement amount for a product where cash settlement is applicable.

### Figure:



### Contents:

**referenceBank** (one or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_ReferenceBank)

- An institution (party) identified by means of a coding scheme and an optional name.

### Used by:

- cashSettlementReferenceBanks

### DTD Fragment:

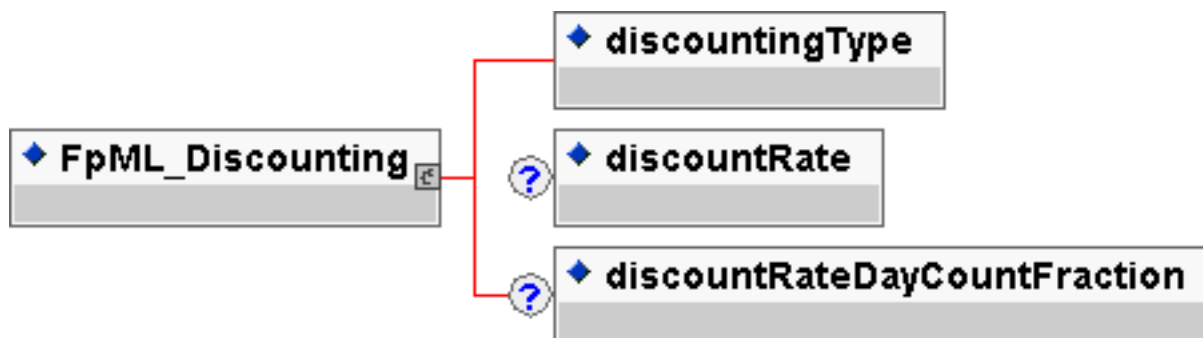
```
<!ENTITY % FpML_CashSettlementReferenceBanks "referenceBank+">
```

## FpML\_Discounting

### Description:

An entity for 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 entity must only be included if discounting applies.

### Figure:



### Contents:

**discountingType** (exactly one occurrence; of type *string*, an enumerated domain value defined by *discountingTypeScheme*)

- The discounting method that is applicable.

**discountRate** (zero or one occurrence; of type *decimal*)

- A discount rate, expressed as a decimal, to be used in the calculation of a discounted amount. A discount rate of 5% would be represented as 0.05.

**discountRateDayCountFraction** (zero or one occurrence; of type *string*, an enumerated domain value defined by *dayCountFractionScheme*)

- A discount day count fraction to be used in the calculation of a discounted amount.

### Used by:

- discounting

### DTD Fragment:

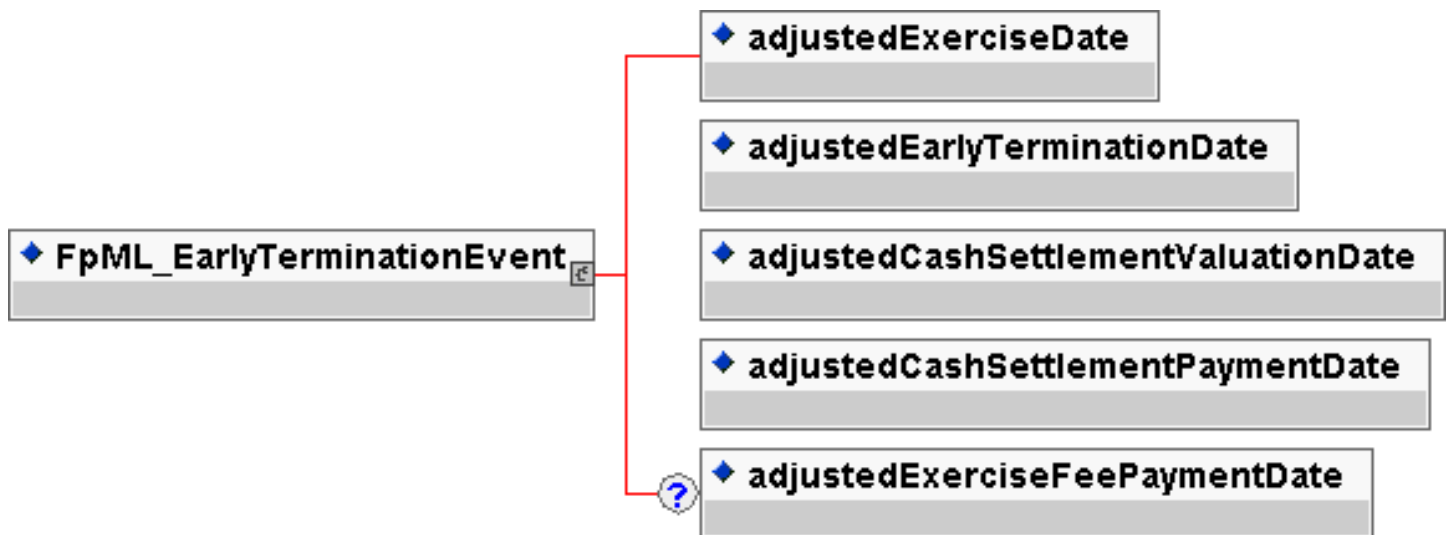
```
<!ENTITY % FpML_Discounting "discountingType , discountRate? , discountRateDayCountFraction?">
```

## FpML\_EarlyTerminationEvent

### Description:

An entity to define the adjusted dates associated with an early termination provision.

### Figure:



### Contents:

**adjustedExerciseDate** (exactly one occurrence; of type *date*)

- The date on which option exercise takes place. This date should already be adjusted for any applicable business day convention.

**adjustedEarlyTerminationDate** (exactly one occurrence; of type *date*)

- The early termination date that is applicable if an early termination provision is exercised. This date should already be adjusted for any applicable business day convention.

**adjustedCashSettlementValuationDate** (exactly one occurrence; of type *date*)

- The date by which the cash settlement amount must be agreed. This date should already be adjusted for any applicable business day convention.

**adjustedCashSettlementPaymentDate** (exactly one occurrence; of type *date*)

- The date on which the cash settlement amount is paid. This date should already be adjusted for any applicable business day convention.

**adjustedExerciseFeePaymentDate** (zero or one occurrence; of type *date*)

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

### Used by:

- earlyTerminationEvent

### DTD Fragment:

```
<!ENTITY % FpML_EarlyTerminationEvent "adjustedExerciseDate , adjustedEarlyTerminationDate ,
```

adjustedCashSettlementValuationDate , adjustedCashSettlementPaymentDate ,  
adjustedExerciseFeePaymentDate?">

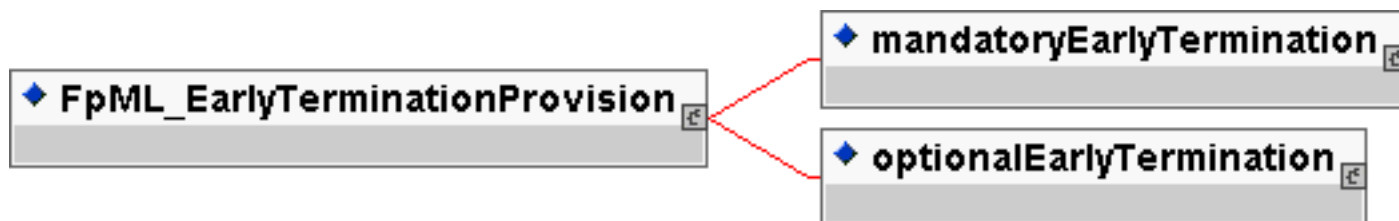


## FpML\_EarlyTerminationProvision

### Description:

An entity to define an early termination provision for a swap. This early termination is at fair value, ie on termination the fair value of the product must be settled between the parties.

### Figure:



### Contents:

Either

**mandatoryEarlyTermination** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity [FpML\\_MandatoryEarlyTermination](#))

- A mandatory early termination provision to terminate the swap at fair value.

Or

**optionalEarlyTermination** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity [FpML\\_OptionalEarlyTermination](#))

- An option for either or both parties to terminate the swap at fair value.

### Used by:

- earlyTerminationProvision

### DTD Fragment:

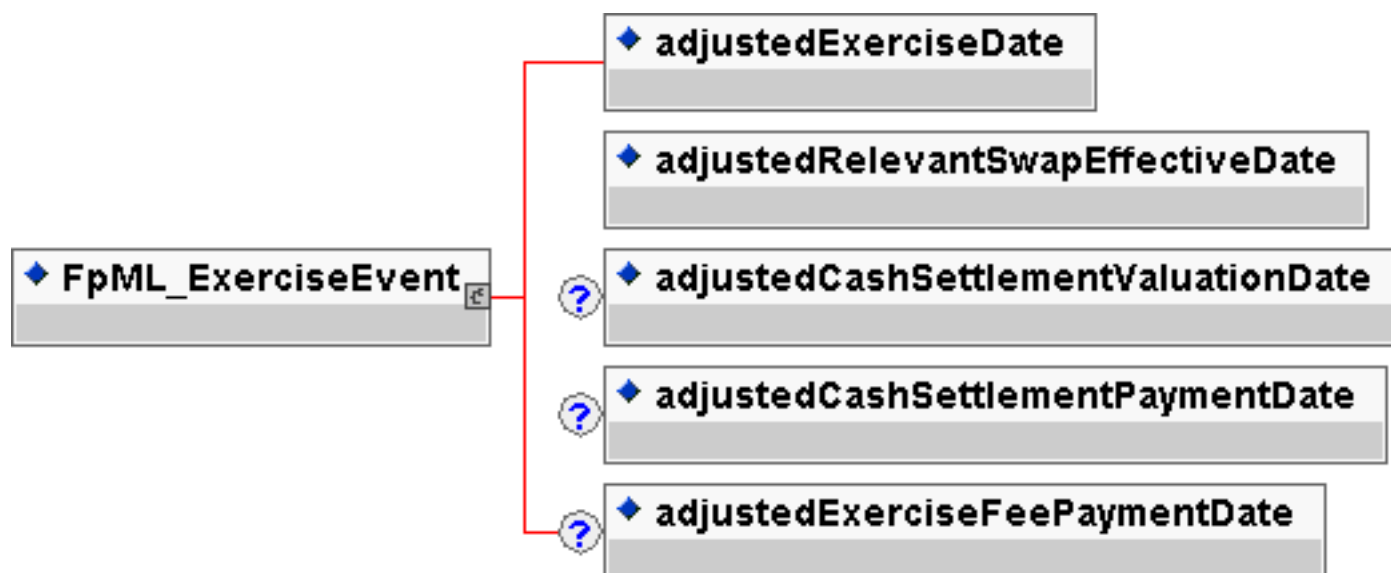
```
<!ENTITY % FpML_EarlyTerminationProvision "mandatoryEarlyTermination | optionalEarlyTermination">
```

## FpML\_ExerciseEvent

### Description:

An entity to define the adjusted dates associated with a particular exercise event. This entity was defined by the Interest Rate Derivatives Working Group.

### Figure:



### Contents:

**adjustedExerciseDate** (exactly one occurrence; of type *date*)

- The date on which option exercise takes place. This date should already be adjusted for any applicable business day convention.

**adjustedRelevantSwapEffectiveDate** (exactly one occurrence; of type *date*)

- The effective date of the underlying swap associated with a given exercise date. This date should already be adjusted for any applicable business day convention.

**adjustedCashSettlementValuationDate** (zero or one occurrence; of type *date*)

- The date by which the cash settlement amount must be agreed. This date should already be adjusted for any applicable business day convention.

**adjustedCashSettlementPaymentDate** (zero or one occurrence; of type *date*)

- The date on which the cash settlement amount is paid. This date should already be adjusted for any applicable business day convention.

**adjustedExerciseFeePaymentDate** (zero or one occurrence; of type *date*)

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

### Used by:

- exerciseEvent

### DTD Fragment:

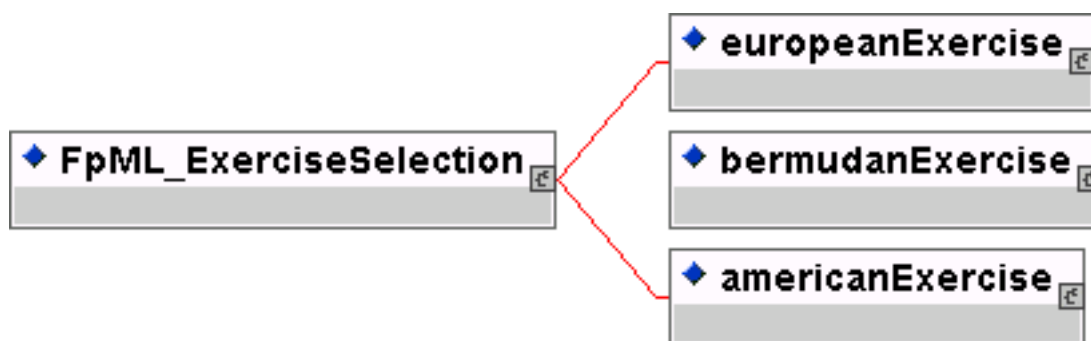
```
<!ENTITY % FpML_ExerciseEvent "adjustedExerciseDate , adjustedRelevantSwapEffectiveDate ,  
adjustedCashSettlementValuationDate? , adjustedCashSettlementPaymentDate? ,  
adjustedExerciseFeePaymentDate?">
```

## FpML\_ExerciseSelection

### Description:

Entity to defined the types of exercise. The choice is european, bermudan or american exercise.

### Figure:



### Contents:

#### Either

**europeanExercise** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_EuropeanExercise)

- The parameters for defining the exercise period for a European style option together with any rules governing the notional amount of the underlying which can be exercised on any given exercise date and any associated exercise fees.

#### Or

**bermudanExercise** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_BermudanExercise)

- The parameters for defining the exercise period for a Bermudan style option together with any rules governing the notional amount of the underlying which can be exercised on any given exercise date and any associated exercise fees.

#### Or

**americanExercise** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_AmericanExercise)

- The parameters for defining the exercise period for an American style option together with any rules governing the notional amount of the underlying which can be exercised on any given exercise date and any associated exercise fees.

### Used by:

- FpML\_CancelableProvision
- FpML\_ExtendibleProvision
- FpML\_OptionalEarlyTermination
- FpML\_Swaption

### DTD Fragment:

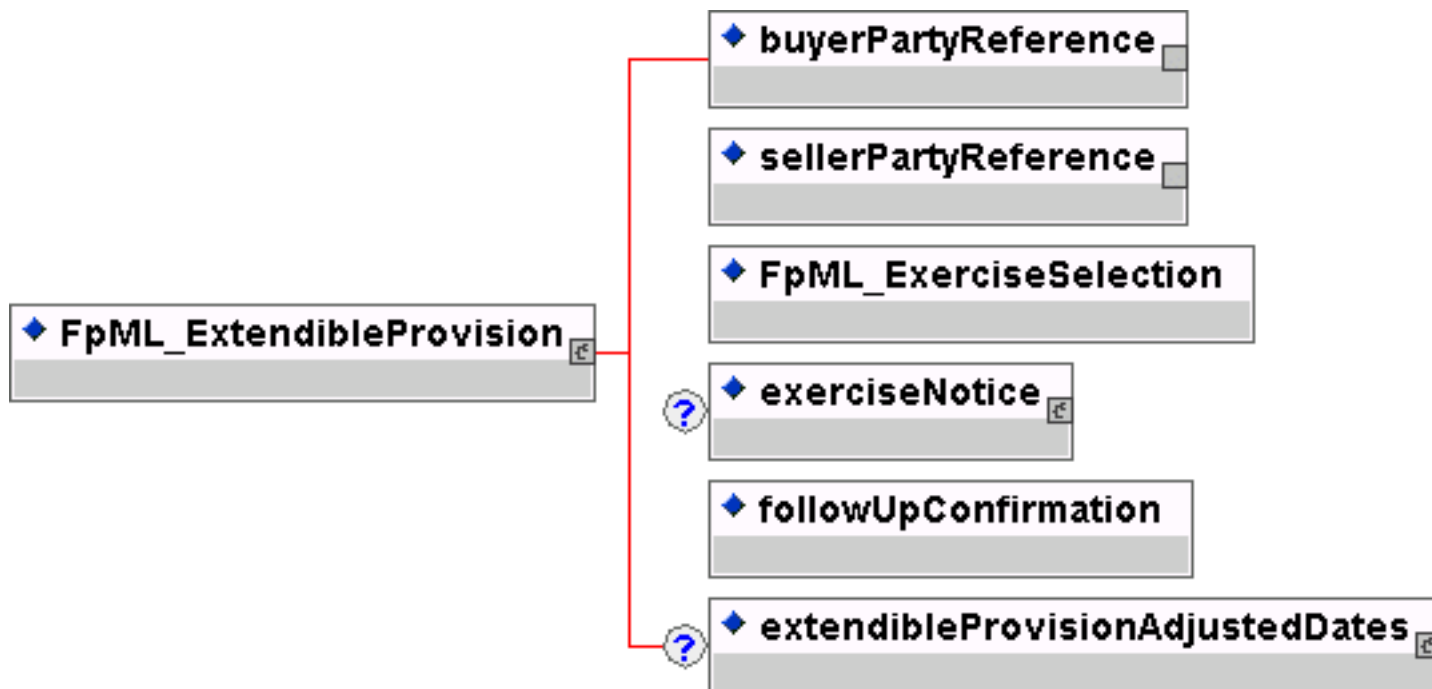
<!ENTITY % FpML\_ExerciseSelection "europeanExercise | bermudanExercise | americanExercise">

## FpML\_ExtendibleProvision

### Description:

An entity to define an option to extend an existing swap transaction on the specified exercise dates for a term ending on a specified new termination date.

### Figure:



### Contents:

**buyerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the buyer of the instrument.

**sellerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the seller of the instrument.

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_ExerciseSelection)

- Entity to defined the types of exercise. The choice is european, bermudan or american exercise.

**exerciseNotice** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_ExerciseNotice)

- Definition of the party to whom notice of exercise should be given.

**followUpConfirmation** (exactly one occurrence; of type *boolean*)

- A flag to indicate whether follow-up confirmation of exercise (written or electronic) is required following telephonic notice by the buyer to the seller or seller's agent.

**extendibleProvisionAdjustedDates** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML ExtendibleProvisionAdjustedDates)

- The adjusted dates associated with a extendible provision. These dates have been adjusted for any applicable business day convention.

***Used by:***

- extendibleProvision

***DTD Fragment:***

```
<!ENTITY % FpML_ExtendibleProvision "buyerPartyReference , sellerPartyReference ,  
(%FpML_ExerciseSelection;) , exerciseNotice? , followUpConfirmation , extendibleProvisionAdjustedDates?">
```

## FpML\_ExtendibleProvisionAdjustedDates

### Description:

An entity to define the adjusted dates associated with a provision to extend a swap.

### Figure:



### Contents:

**extensionEvent** (one or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_ExtensionEvent)

- The adjusted dates associated with a single extendible exercise date.

### Used by:

- extendibleProvisionAdjustedDates

### DTD Fragment:

```
<!ENTITY % FpML_ExtendibleProvisionAdjustedDates "extensionEvent+">
```



## FpML\_ExtensionEvent

### Description:

An entity to define the adjusted dates associated with an individual extension event.

### Figure:



### Contents:

**adjustedExerciseDate** (exactly one occurrence; of type *date*)

- The date on which option exercise takes place. This date should already be adjusted for any applicable business day convention.

**adjustedExtendedTerminationDate** (exactly one occurrence; of type *date*)

- The termination date if an extendible provision is exercised. This date should already be adjusted for any applicable business day convention.

### Used by:

- extensionEvent

### DTD Fragment:

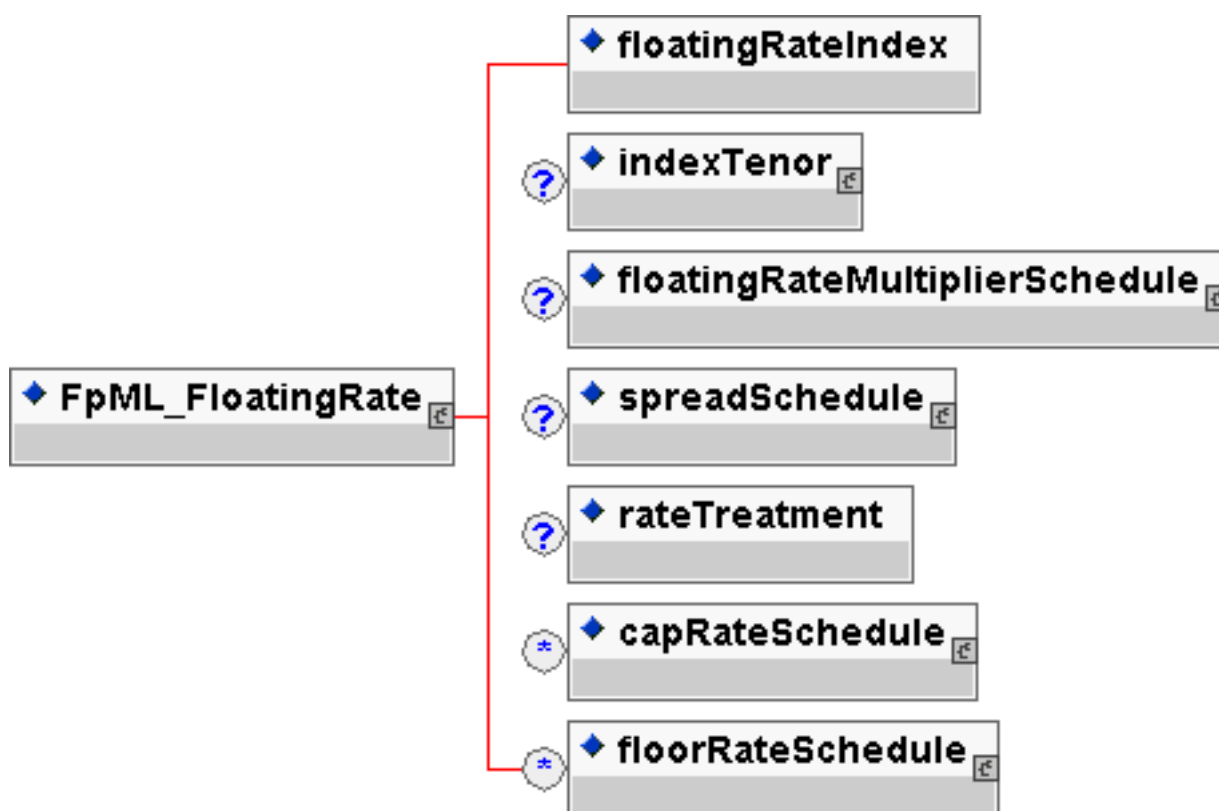
```
<!ENTITY % FpML_ExtensionEvent "adjustedExerciseDate , adjustedExtendedTerminationDate">
```

## FpML\_FloatingRate

### Description:

An entity for defining the floating rate definitions.

### Figure:



### Contents:

**floatingRateIndex** (exactly one occurrence; of type *string*, an enumerated domain value defined by *floatingRateIndexScheme*)

- The ISDA Floating Rate Option, i.e. the floating rate index.

**indexTenor** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity *FpML Interval*)

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

**floatingRateMultiplierSchedule** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity *FpML Schedule*)

- 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** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Schedule)

- 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** (zero or one occurrence; of type *string*, an enumerated domain value defined by *rateTreatmentScheme*)

- 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** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_StrikeSchedule)

- 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 strike 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** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_StrikeSchedule)

- 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.

### ***Used by:***

- FpML\_FloatingRateCalculation
- floatingRate

### ***DTD Fragment:***

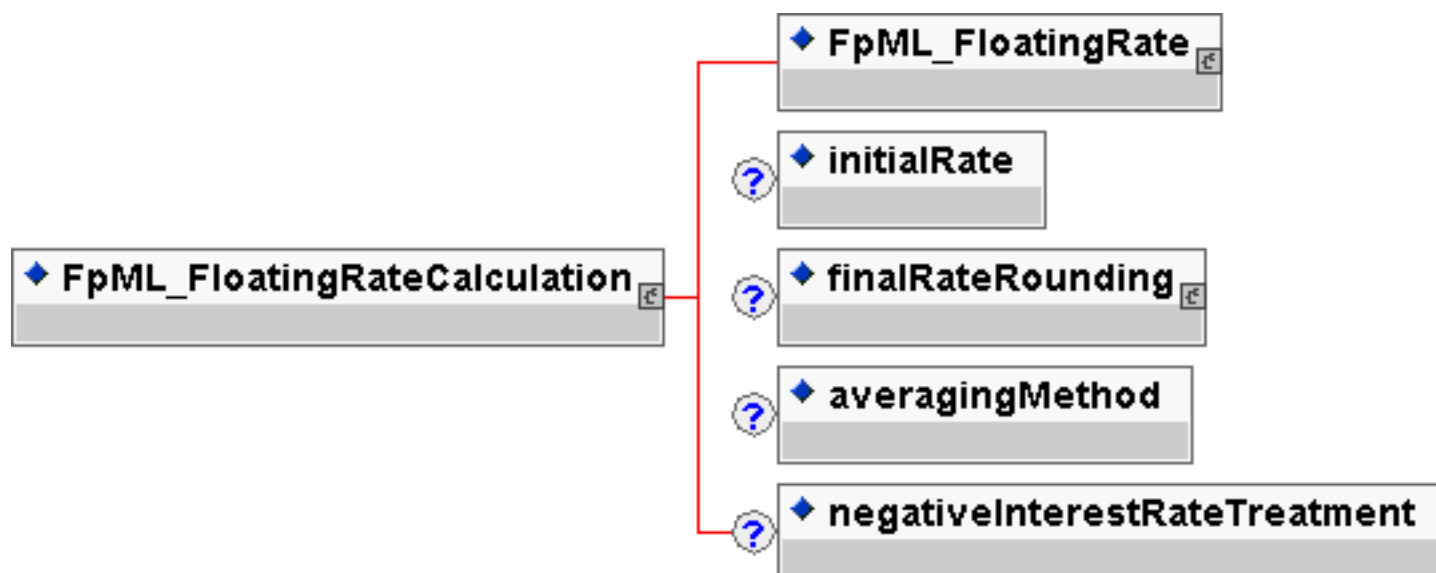
```
<!ENTITY % FpML_FloatingRate "floatingRateIndex , indexTenor? , floatingRateMultiplierSchedule? , spreadSchedule? , rateTreatment? , capRateSchedule* , floorRateSchedule*">
```

## FpML\_FloatingRateCalculation

### Description:

An entity for defining the floating rate definitions and definitions relating to the calculation of floating rate amounts. This entity inherits from a base entity, FpML\_FloatingRate.

### Figure:



### Contents:

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_FloatingRate)

- An entity for defining the floating rate definitions.

**initialRate** (zero or one occurrence; of type *decimal*)

- 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** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Rounding)

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

**averagingMethod** (zero or one occurrence; of type *string*, an enumerated domain value defined by *averagingMethodScheme*)

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

**negativeInterestRateTreatment** (zero or one occurrence; of type *string*, an enumerated domain

value defined by *negativeInterestRateTreatmentScheme*)

- 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).

***Used by:***

- floatingRateCalculation

***DTD Fragment:***

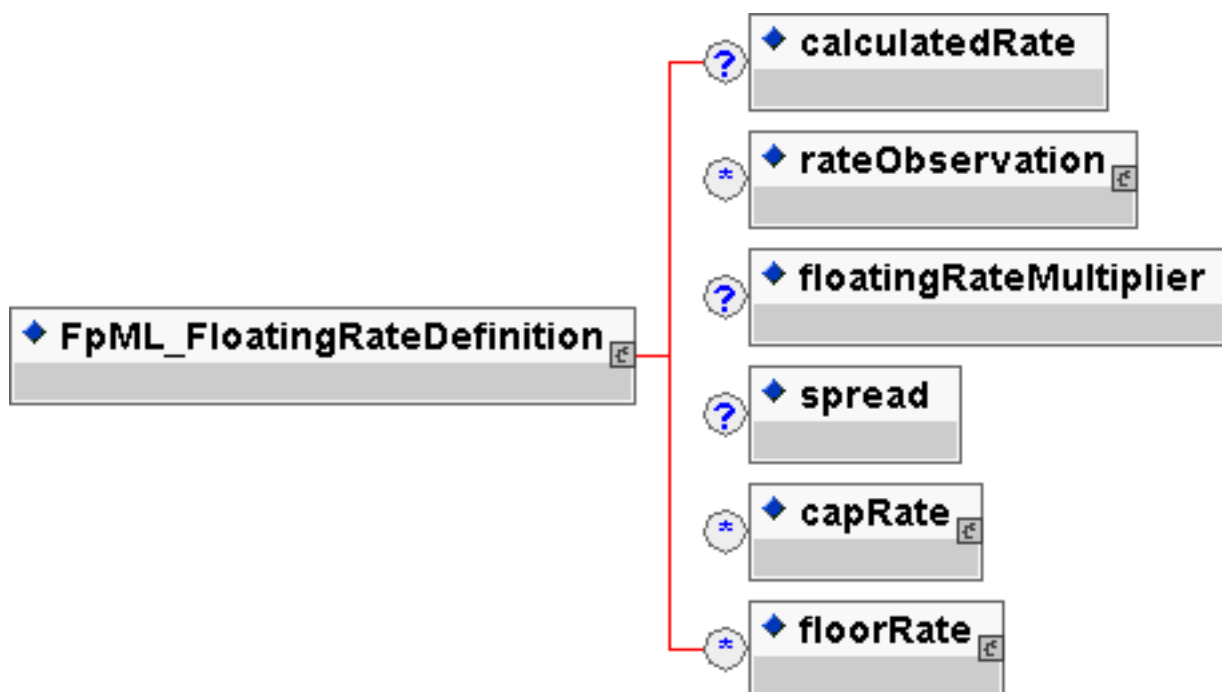
```
<!ENTITY % FpML_FloatingRateCalculation "(%FpML_FloatingRate; , initialRate? , finalRateRounding? , averagingMethod? , negativeInterestRateTreatment?)">
```

## FpML\_FloatingRateDefinition

### Description:

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

### Figure:



### Contents:

**calculatedRate** (zero or one occurrence; of type *decimal*)

- The final calculated rate for a calculation period after any required averaging of rates. A calculated rate of 5% would be represented as 0.05.

**rateObservation** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_RateObservation)

- The details of a particular rate observation, including the fixing date and observed rate. A list of rate observation elements may be ordered in the document by ascending adjusted fixing date. An FpML document containing an unordered list of rate observations is still regarded as a conformant document.

**floatingRateMultiplier** (zero or one occurrence; of type *decimal*)

- A rate multiplier to apply to the floating rate. The multiplier can be a positive or negative decimal. This element should only be included if the multiplier is not equal to 1 (one).

**spread** (zero or one occurrence; of type *decimal*)

- The ISDA Spread, if any, which applies for the calculation period. The spread is a per annum rate, expressed as a decimal. For purposes of determining a calculation period amount, if positive the spread will be added to the floating rate and if negative the spread will be subtracted from the floating rate. A positive 10 basis point (0.1%) spread would be

represented as 0.001.

**capRate** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML Strike)

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

**floorRate** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML Strike)

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

### ***Used by:***

- floatingRateDefinition

### ***DTD Fragment:***

```
<!ENTITY % FpML_FloatingRateDefinition "calculatedRate? , rateObservation* , floatingRateMultiplier? , spread? , capRate* , floorRate*">
```

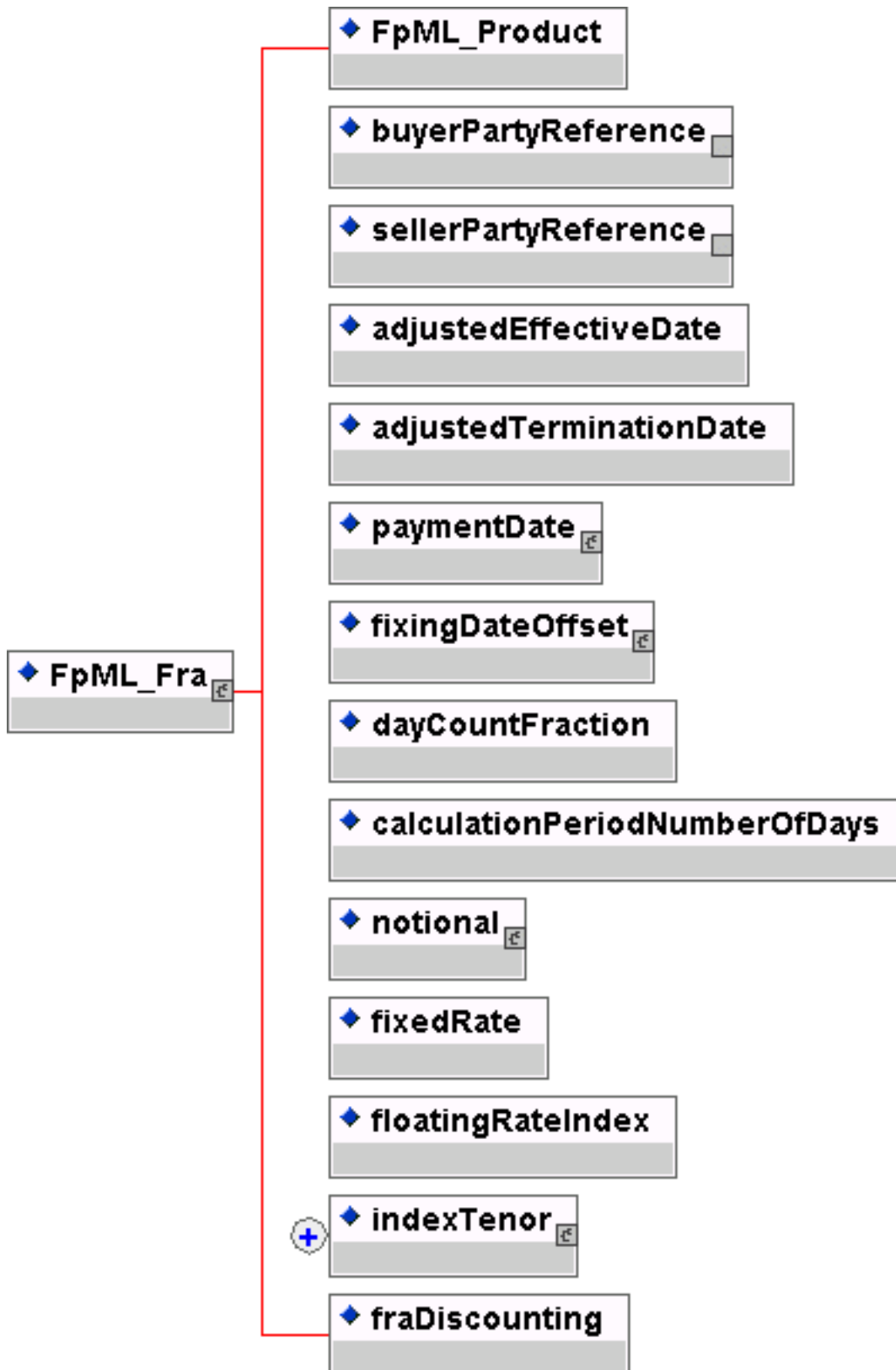
## FpML\_Fra

### ***Description:***

An entity for defining the forward rate agreement (FRA) product.

### ***Figure:***





## Contents:

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_Product)

- The base entity which all FpML products extend.

**buyerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the buyer of the instrument.

**sellerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the seller of the instrument.

**adjustedEffectiveDate** (exactly one occurrence; of type *date*)

- The start date of the calculation period. This date should already be adjusted for any applicable business day convention. This is also the date when the observed rate is applied, the reset date.

**adjustedTerminationDate** (exactly one occurrence; of type *date*)

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

**paymentDate** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_AdjustableDate)

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

**fixingDateOffset** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_RelativeDateOffset)

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

**dayCountFraction** (exactly one occurrence; of type *string*, an enumerated domain value defined by *dayCountFractionScheme*)

- The day count fraction.

**calculationPeriodNumberOfDays** (exactly one occurrence; of type *positiveInteger*)

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

**notional** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Money)

- The notional amount.

**fixedRate** (exactly one occurrence; of type *decimal*)

- The calculation period fixed rate. A per annum rate, expressed as a decimal. A fixed rate of 5% would be represented as 0.05.

**floatingRateIndex** (exactly one occurrence; of type *string*, an enumerated domain value defined by *floatingRateIndexScheme*)

- The ISDA Floating Rate Option, i.e. the floating rate index.

**indexTenor** (one or more occurrences; contains the sub-element(s) defined by exactly one

occurrence of the entity FpML Interval)

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

**fraDiscounting** (exactly one occurrence; of type *boolean*)

- A true/false flag to indicate whether ISDA FRA Discounting applies. If false, then the calculation will be based on a par value and no discounting will apply.

***Used by:***

- fra

***DTD Fragment:***

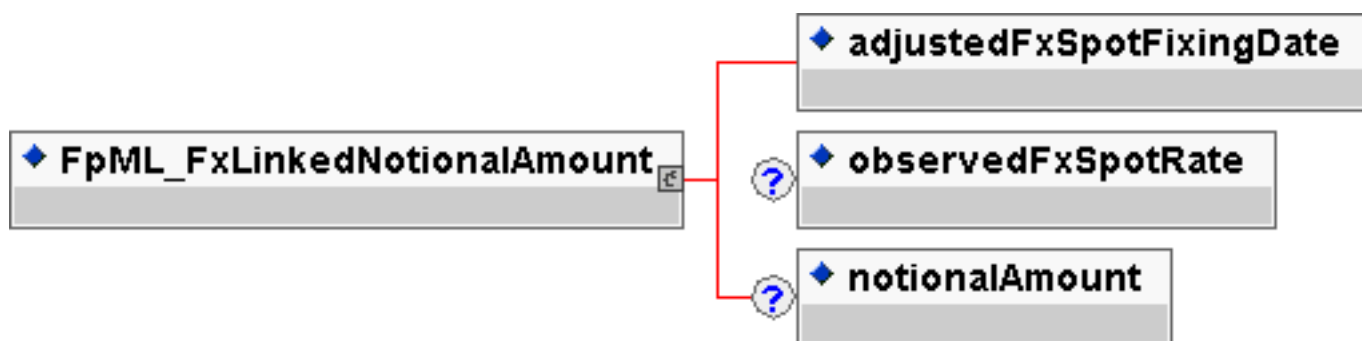
```
<!ENTITY % FpML_Fra "%FpML_Product; , buyerPartyReference , sellerPartyReference ,  
adjustedEffectiveDate , adjustedTerminationDate , paymentDate , fixingDateOffset , dayCountFraction ,  
calculationPeriodNumberOfDays , notional , fixedRate , floatingRateIndex , indexTenor+ , fraDiscounting">
```

## FpML\_FxLinkedNotionalAmount

### Description:

An entity to describe the cashflow representation for fx linked notionals.

### Figure:



### Contents:

**adjustedFxSpotFixingDate** (exactly one occurrence; of type *date*)

- The date on which the fx spot rate is observed. This date should already be adjusted for any applicable business day convention.

**observedFxSpotRate** (zero or one occurrence; of type *decimal*)

- The actual observed fx spot rate.

**notionalAmount** (zero or one occurrence; of type *decimal*)

- The calculation period notional amount.

### Used by:

- fxLinkedNotionalAmount

### DTD Fragment:

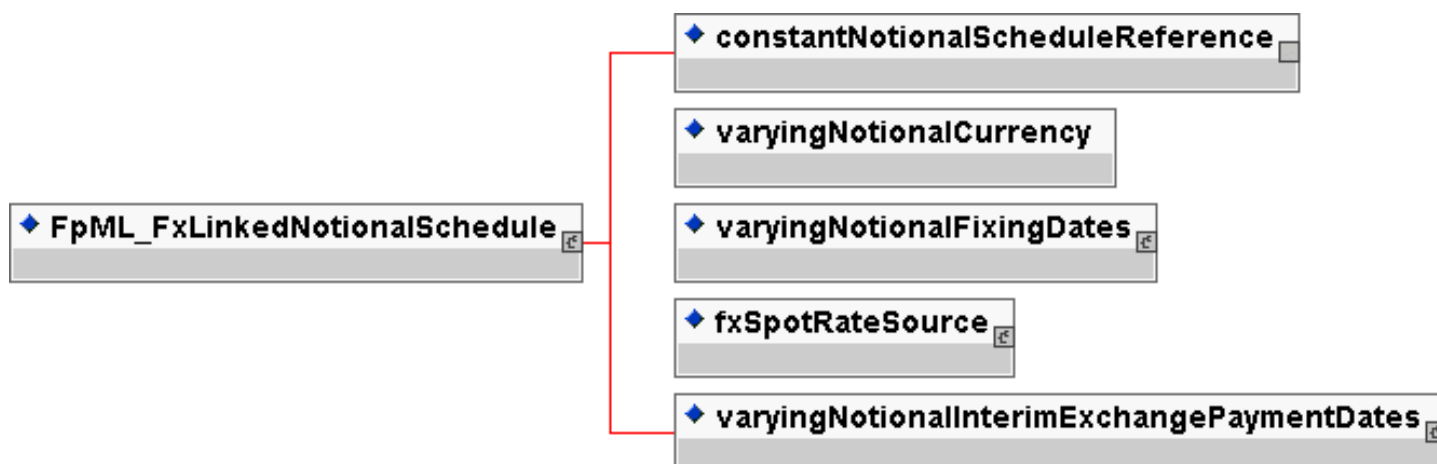
```
<!ENTITY % FpML_FxLinkedNotionalAmount "adjustedFxSpotFixingDate , observedFxSpotRate? , notionalAmount?">
```

## FpML\_FxLinkedNotionalSchedule

### Description:

An entity to describe a notional amount 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.

### Figure:



### Contents:

**constantNotionalScheduleReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- 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.

**varyingNotionalCurrency** (exactly one occurrence; of type *string*, an enumerated domain value defined by *currencyScheme*)

- The currency of the varying notional amount, i.e. the notional amount being determined periodically based on observation of a spot currency exchange rate.

**varyingNotionalFixingDates** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_RelativeDateOffset)

- The dates on which spot currency exchange rates are observed for purposes of determining the varying notional currency amount that will apply to a calculation period.

**fxSpotRateSource** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_FxSpotRateSource)

- The information source and time at which the spot currency exchange rate will be observed.

**varyingNotionalInterimExchangePaymentDates** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_RelativeDateOffset)

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

***Used by:***

- fxLinkedNotionalSchedule

***DTD Fragment:***

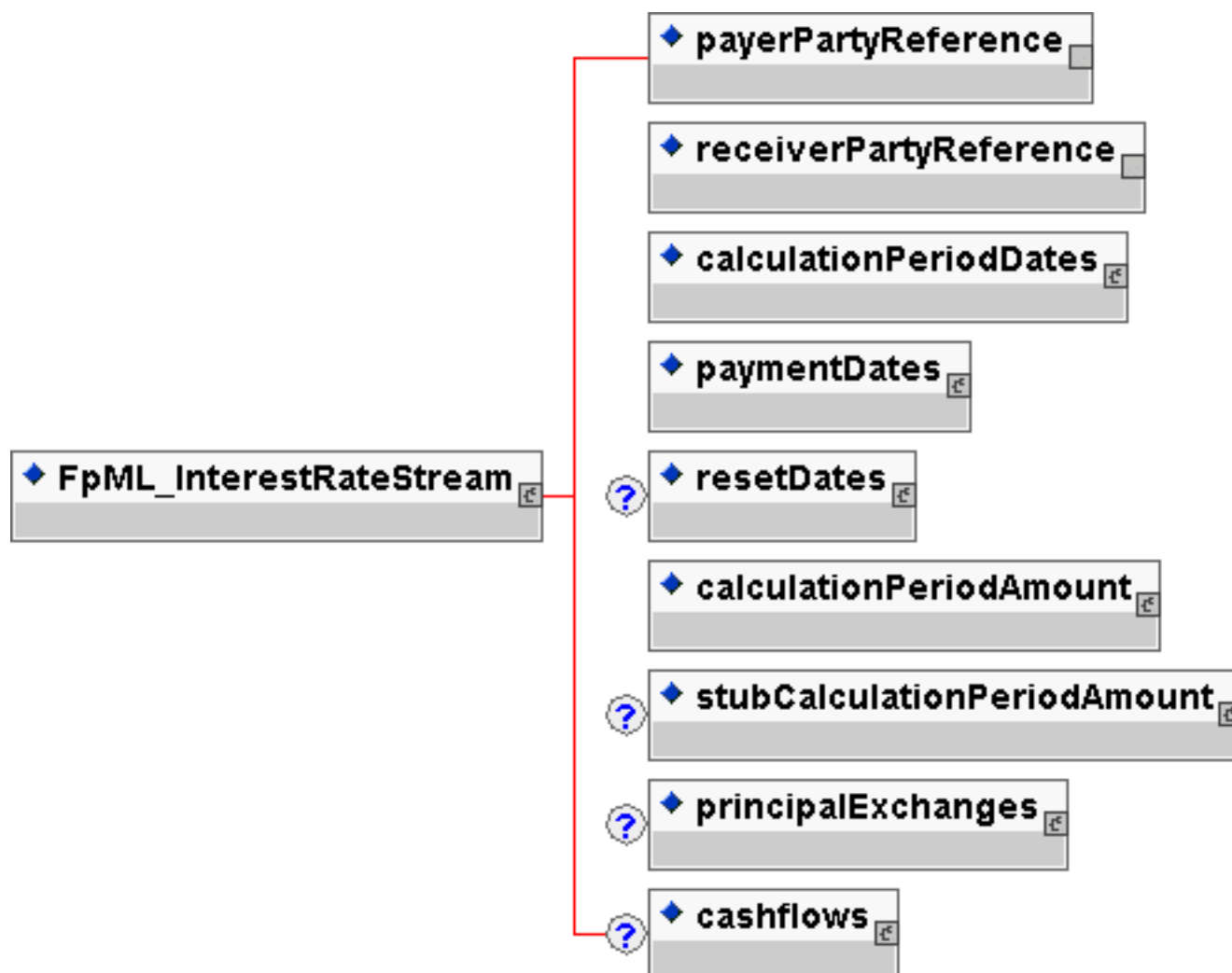
```
<!ENTITY % FpML_FxLinkedNotionalSchedule "constantNotionalScheduleReference ,  
varyingNotionalCurrency , varyingNotionalFixingDates , fxSpotRateSource ,  
varyingNotionalInterimExchangePaymentDates">
```

## FpML\_InterestRateStream

### Description:

An entity for defining the components specifying an interest rate payments stream, including both a parametric and cashflows representation for the stream of payments.

### Figure:



### Contents:

**payerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document.

**receiverPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document.

**calculationPeriodDates** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CalculationPeriodDates)

- The calculation periods dates schedule.

**paymentDates** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_PaymentDates)

- The payment dates schedule.

**resetDates** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_ResetDates)

- The reset dates schedule. The reset dates schedule only applies for a floating rate stream.

**calculationPeriodAmount** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CalculationPeriodAmount)

- The calculation period amount parameters.

**stubCalculationPeriodAmount** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_StubCalculationPeriodAmount)

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

**principalExchanges** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_PrincipalExchanges)

- The true/false flags indicating whether initial, intermediate or final exchanges of principal should occur.

**cashflows** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Cashflows)

- The cashflows representation of the swap stream.

### ***Used by:***

- capFloorStream
- swapStream

### ***DTD Fragment:***

```
<!ENTITY % FpML_InterestRateStream "payerPartyReference , receiverPartyReference ,
calculationPeriodDates , paymentDates , resetDates? , calculationPeriodAmount ,
stubCalculationPeriodAmount? , principalExchanges? , cashflows?">
```

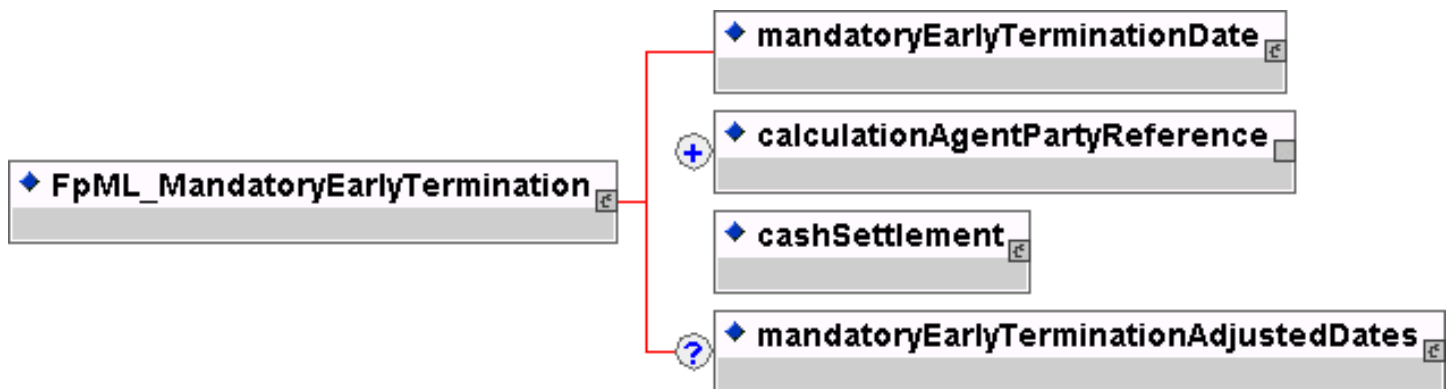


## FpML\_MandatoryEarlyTermination

### Description:

An entity to define the an early termination provision for which exercise is mandatory.

### Figure:



### Contents:

**mandatoryEarlyTerminationDate** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_AdjustableDate)

- The early termination date associated with a mandatory early termination of a swap.

**calculationAgentPartyReference** (one or more occurrences; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the ISDA Calculation Agent for the trade. If more than one party is referenced then the parties are assumed to be co-calculation agents, i.e. they have joint responsibility.

**cashSettlement** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CashSettlement)

- If specified, this means that cash settlement is applicable to the transaction and defines the parameters associated with the cash settlement procedure. If not specified, then physical settlement is applicable.

**mandatoryEarlyTerminationAdjustedDates** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_MandatoryEarlyTerminationAdjustedDates)

- The adjusted dates associated with a mandatory early termination provision. These dates have been adjusted for any applicable business day convention.

### Used by:

- mandatoryEarlyTermination

### DTD Fragment:

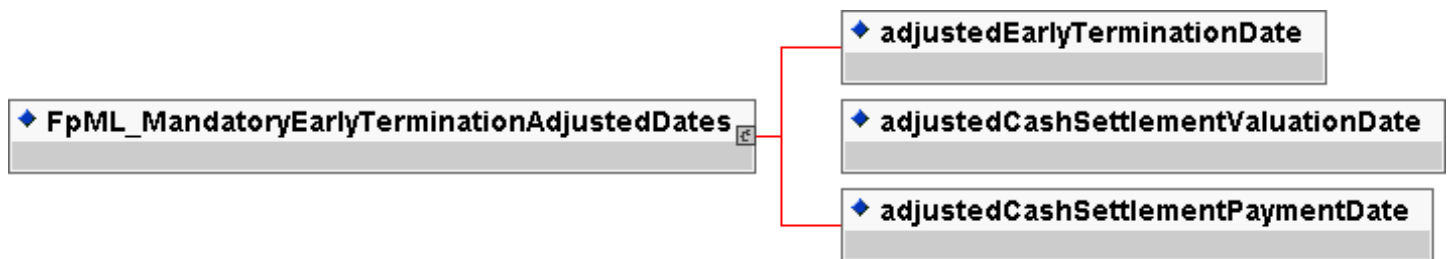
```
<!ENTITY % FpML_MandatoryEarlyTermination "mandatoryEarlyTerminationDate ,
calculationAgentPartyReference+ , cashSettlement , mandatoryEarlyTerminationAdjustedDates?">
```

## FpML\_MandatoryEarlyTerminationAdjustedDates

### Description:

An entity to define the adjusted dates associated with a mandatory early termination provision.

### Figure:



### Contents:

**adjustedEarlyTerminationDate** (exactly one occurrence; of type *date*)

- The early termination date that is applicable if an early termination provision is exercised. This date should already be adjusted for any applicable business day convention.

**adjustedCashSettlementValuationDate** (exactly one occurrence; of type *date*)

- The date by which the cash settlement amount must be agreed. This date should already be adjusted for any applicable business day convention.

**adjustedCashSettlementPaymentDate** (exactly one occurrence; of type *date*)

- The date on which the cash settlement amount is paid. This date should already be adjusted for any applicable business day convention.

### Used by:

- mandatoryEarlyTerminationAdjustedDates

### DTD Fragment:

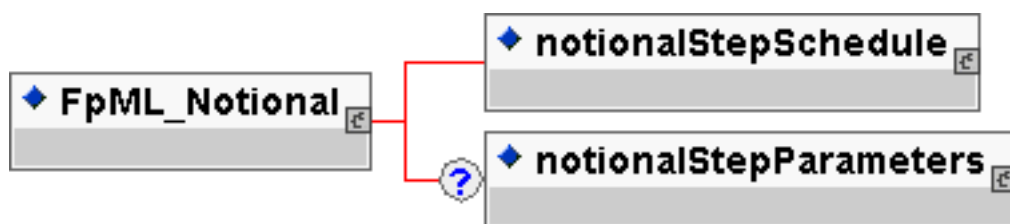
```
<!ENTITY % FpML_MandatoryEarlyTerminationAdjustedDates "adjustedEarlyTerminationDate ,
adjustedCashSettlementValuationDate , adjustedCashSettlementPaymentDate">
```

## FpML\_Notional

### Description:

An entity for defining the notional amount or notional amount schedule associated with a swap stream. The notional schedule will be captured by 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.

### Figure:



### Contents:

**notionalStepSchedule** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_AmountSchedule)

- The notional amount or notional amount schedule expressed as explicit outstanding notional amounts and dates. In the case of a schedule, the step dates may be subject to adjustment in accordance with any adjustments specified in calculationPeriodDatesAdjustments.

**notionalStepParameters** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_NotionalStepRule)

- A parametric representation of the notional step schedule, i.e. parameters used to generate the notional schedule.

### Used by:

- notionalSchedule

### DTD Fragment:

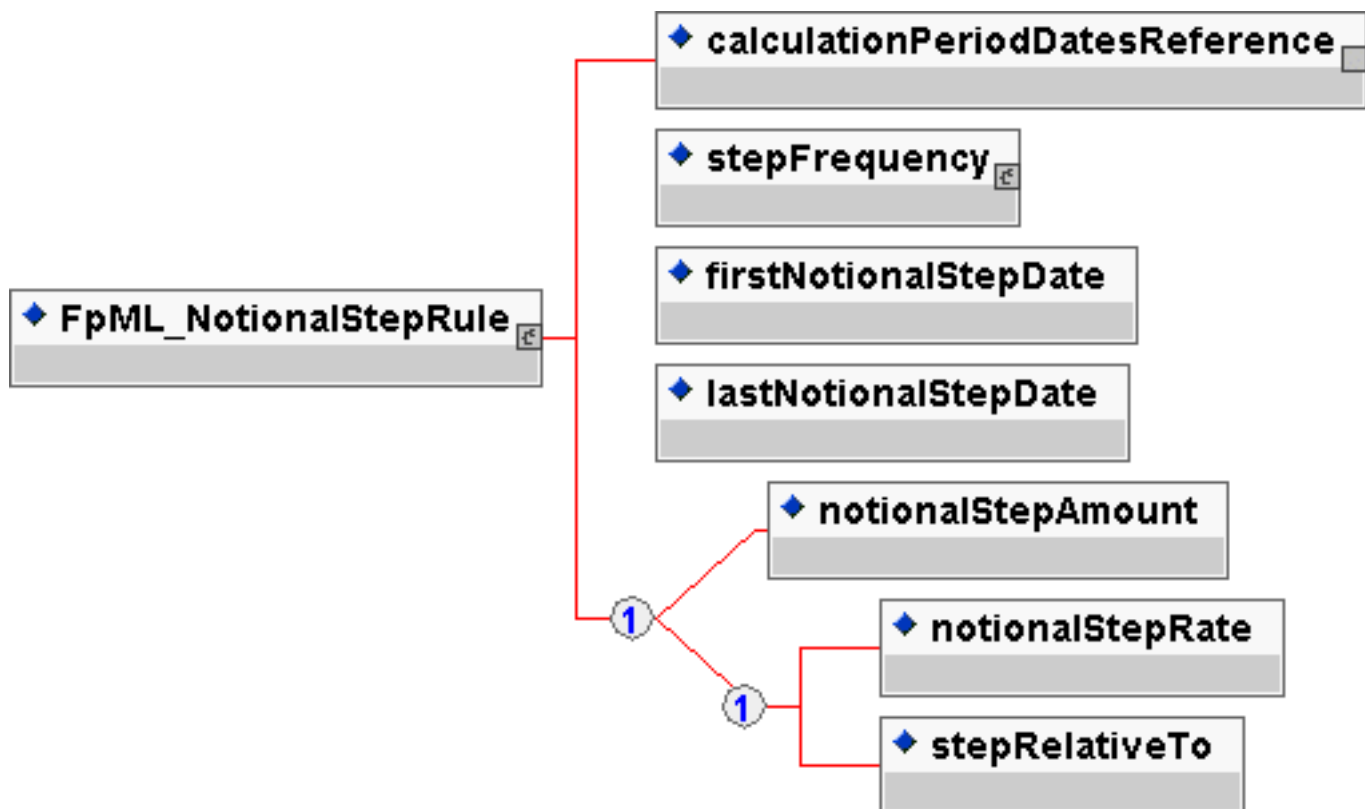
```
<!ENTITY % FpML_Notional "notionalStepSchedule , notionalStepParameters?">
```

## FpML\_NotionalStepRule

### Description:

An entity for 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.

### Figure:



### Contents:

**calculationPeriodDatesReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to the associated calculation period dates component defined elsewhere in the document.

**stepFrequency** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML Interval)

- The frequency at which the step changes occur. This frequency must be a multiple of the stream calculation period frequency.

**firstNotionalStepDate** (exactly one occurrence; of type *date*)

- The unadjusted calculation period start date of the first change in notional. This day may be subject to adjustment in accordance with any adjustments specified in *calculationPeriodDatesAdjustments*.

**lastNotionalStepDate** (exactly one occurrence; of type *date*)

- The unadjusted calculation period end date of the last change in notional. This day may be subject to adjustment in accordance with any adjustments specified in `calculationPeriodDatesAdjustments`.

**Either**

**notionalStepAmount** (exactly one occurrence; of type *decimal*)

- The explicit amount that the notional changes on each step date. This can be a positive or negative amount.

**Or**

**notionalStepRate** (exactly one occurrence; of type *decimal*)

- 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.

**Or**

**stepRelativeTo** (exactly one occurrence; of type *string*, an enumerated domain value defined by *stepRelativeToScheme*)

- Specifies whether the `notionalStepRate` should be applied to the initial notional or the previous notional in order to calculate the notional step change amount.

***Used by:***

- `notionalStepParameters`

***DTD Fragment:***

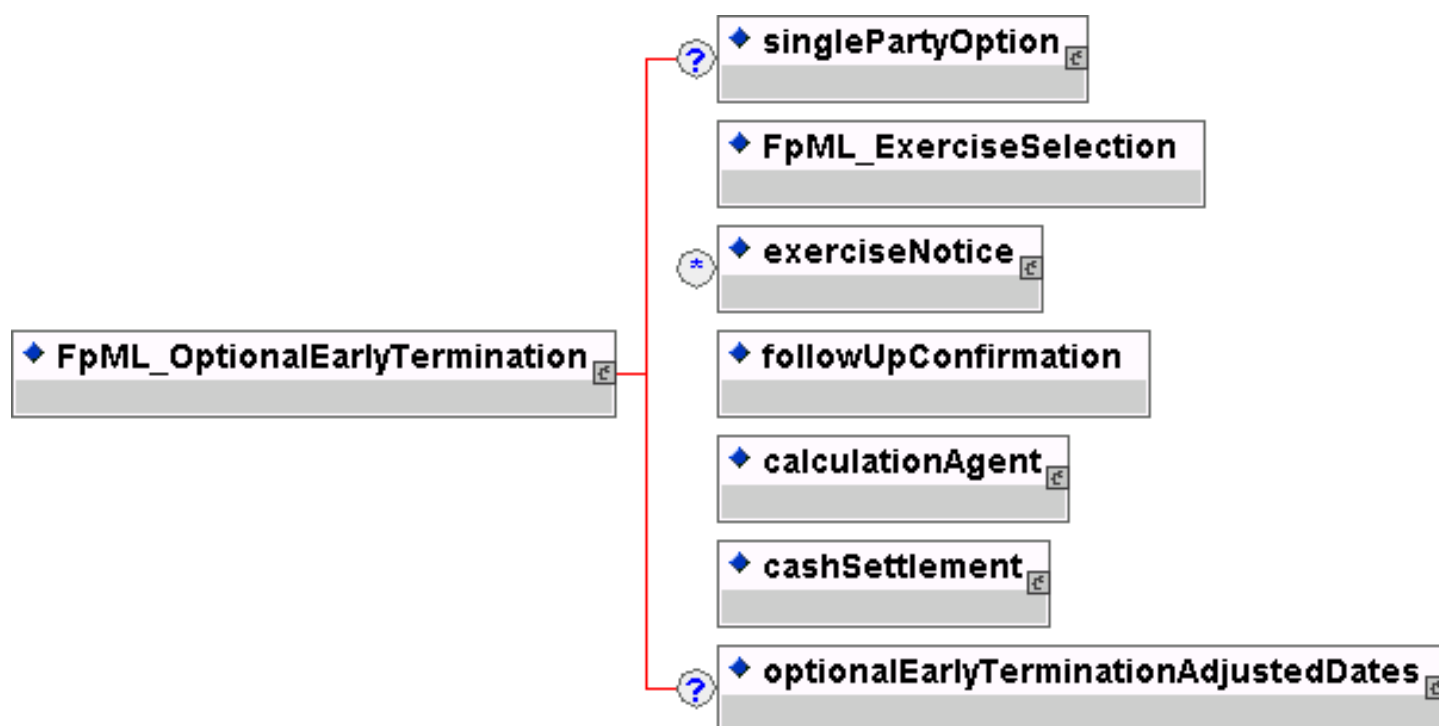
```
<!ENTITY % FpML_NotionalStepRule "calculationPeriodDatesReference , stepFrequency ,
firstNotionalStepDate , lastNotionalStepDate , (notionalStepAmount | (notionalStepRate , stepRelativeTo))">
```

## FpML\_OptionalEarlyTermination

### Description:

An entity to define an early termination provision where either or both parties have the right to exercise.

### Figure:



### Contents:

**singlePartyOption** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_SinglePartyOption)

- If optional early termination is not available to both parties then this component specifies the buyer and seller of the option.

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_ExerciseSelection)

- Entity to defined the types of exercise. The choice is european, bermudan or american exercise.

**exerciseNotice** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_ExerciseNotice)

- Definition of the party to whom notice of exercise should be given.

**followUpConfirmation** (exactly one occurrence; of type *boolean*)

- A flag to indicate whether follow-up confirmation of exercise (written or electronic) is required following telephonic notice by the buyer to the seller or seller's agent.

**calculationAgent** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CalculationAgent)

- The ISDA Calculation Agent responsible for performing duties associated with an optional early termination.

**cashSettlement** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CashSettlement)

- If specified, this means that cash settlement is applicable to the transaction and defines the parameters associated with the cash settlement procedure. If not specified, then physical settlement is applicable.

**optionalEarlyTerminationAdjustedDates** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_OptionalEarlyTerminationAdjustedDates)

- An early termination provision to terminate the trade at fair value where one or both parties have the right to decide on termination.

### ***Used by:***

- optionalEarlyTermination

### ***DTD Fragment:***

```
<!ENTITY % FpML_OptionalEarlyTermination "singlePartyOption? , (%FpML_ExerciseSelection;) ,
exerciseNotice* , followUpConfirmation , calculationAgent , cashSettlement ,
optionalEarlyTerminationAdjustedDates?">
```

## FpML\_OptionalEarlyTerminationAdjustedDates

### Description:

An entity to define the adjusted dates associated with an optional early termination provision.

### Figure:



### Contents:

**earlyTerminationEvent** (one or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_EarlyTerminationEvent)

- The adjusted dates associated with an individual early termination date.

### Used by:

- optionalEarlyTerminationAdjustedDates

### DTD Fragment:

```
<!ENTITY % FpML_OptionalEarlyTerminationAdjustedDates "earlyTerminationEvent+ ">
```

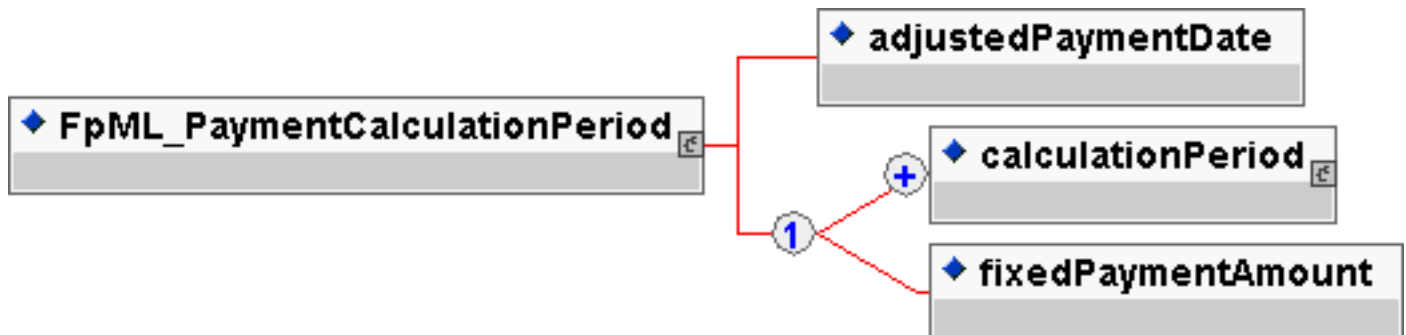


## FpML\_PaymentCalculationPeriod

### Description:

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

### Figure:



### Contents:

**adjustedPaymentDate** (exactly one occurrence; of type *date*)

- The adjusted payment date. This date should already be adjusted for any applicable business day convention.

Either

**calculationPeriod** (one or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CalculationPeriod)

- The parameters used in the calculation of a fixed or floating rate calculation period amount. A list of calculation period elements may be ordered in the document by ascending adjusted start date. An FpML document which contains an unordered list of calculation periods is still regarded as a conformant document.

Or

**fixedPaymentAmount** (exactly one occurrence; of type *decimal*)

- A known fixed payment amount.

### Used by:

- paymentCalculationPeriod

### DTD Fragment:

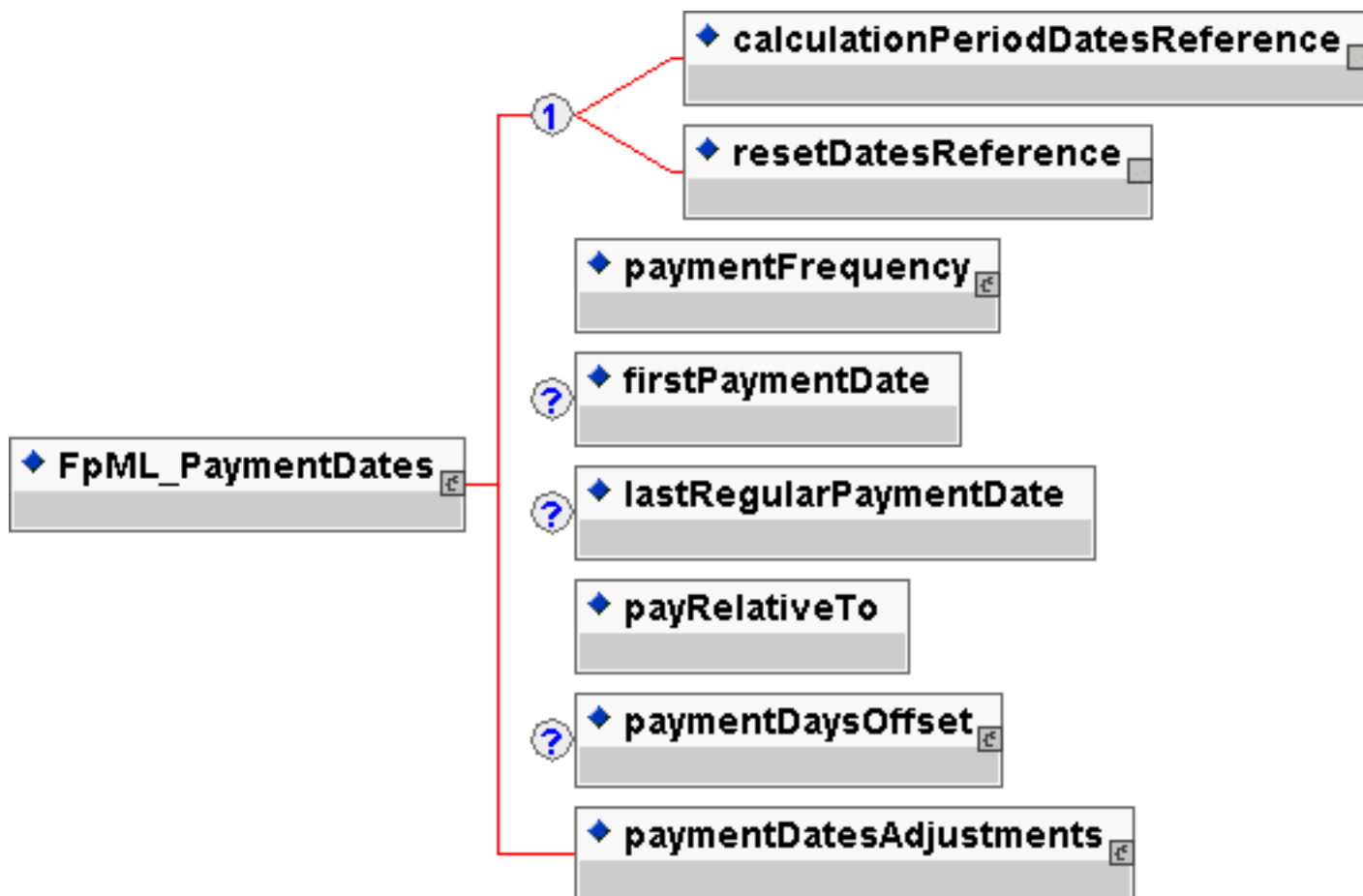
```
<!ENTITY % FpML_PaymentCalculationPeriod "adjustedPaymentDate , (calculationPeriod+ | fixedPaymentAmount)">
```

## FpML\_PaymentDates

### Description:

An entity for defining the parameters used to generate the payment dates schedule, including the specification of early or delayed payments. Payment dates are determined relative to the calculation periods dates or the reset dates.

### Figure:



### Contents:

Either

**calculationPeriodDatesReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to the associated calculation period dates component defined elsewhere in the document.

Or

**resetDatesReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to the associated reset dates component defined elsewhere in the document.

**paymentFrequency** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML Interval)

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

**firstPaymentDate** (zero or one occurrence; of type *date*)

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

**lastRegularPaymentDate** (zero or one occurrence; of type *date*)

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

**payRelativeTo** (exactly one occurrence; of type *string*, an enumerated domain value defined by `payRelativeToScheme`)

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

**paymentDaysOffset** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML Offset)

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

indicated by a positive periodMultiplier element value.

**paymentDatesAdjustments** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_BusinessDayAdjustments)

- The business day convention to apply to each payment date if it would otherwise fall on a day that is not a business day in the specified financial business centers.

***Used by:***

- paymentDates

***DTD Fragment:***

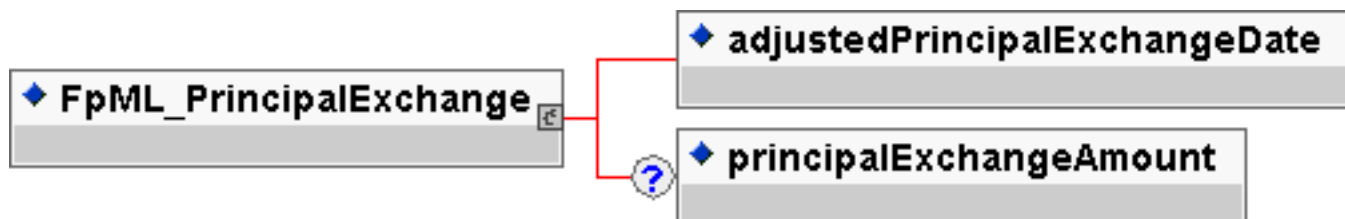
```
<!ENTITY % FpML_PaymentDates "((calculationPeriodDatesReference | resetDatesReference),
paymentFrequency, firstPaymentDate?, lastRegularPaymentDate?, payRelativeTo, paymentDaysOffset?,
paymentDatesAdjustments)">
```

## FpML\_PrincipalExchange

### Description:

An entity for defining a principal exchange amount and adjusted exchange date. This entity forms part of the cashflows representation of a swap stream.

### Figure:



### Contents:

**adjustedPrincipalExchangeDate** (exactly one occurrence; of type *date*)

- The principal exchange date. This date should already be adjusted for any applicable business day convention.

**principalExchangeAmount** (zero or one occurrence; of type *decimal*)

- The principal exchange amount. This amount should be positive if the stream payer is paying the exchange amount and signed negative if they are receiving it.

### Used by:

- principalExchange

### DTD Fragment:

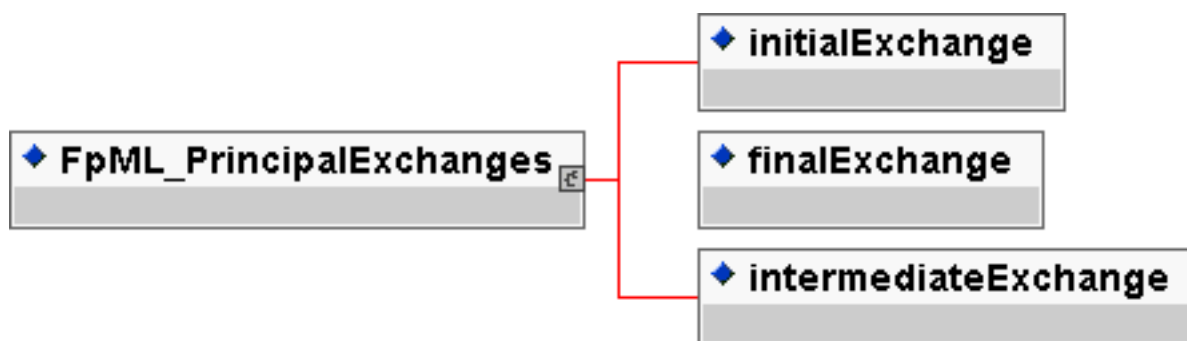
```
<!ENTITY % FpML_PrincipalExchange "adjustedPrincipalExchangeDate , principalExchangeAmount?">
```

## FpML\_PrincipalExchanges

### Description:

An entity for defining which principal exchanges occur for the stream.

### Figure:



### Contents:

**initialExchange** (exactly one occurrence; of type *boolean*)

- A true/false flag to indicate whether there is an initial exchange of principal on the effective date.

**finalExchange** (exactly one occurrence; of type *boolean*)

- A true/false flag to indicate whether there is a final exchange of principal on the termination date.

**intermediateExchange** (exactly one occurrence; of type *boolean*)

- A true/false flag to indicate whether there are intermediate or interim exchanges of principal during the term of the swap.

### Used by:

- principalExchanges

### DTD Fragment:

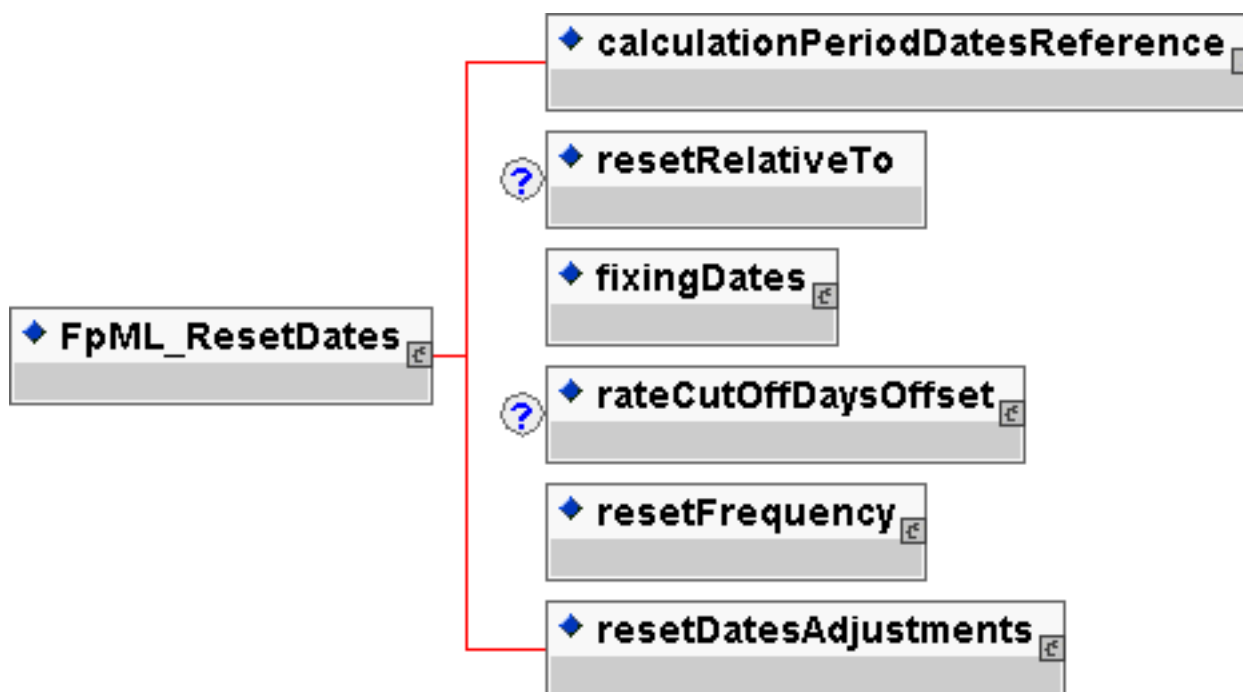
```
<!ENTITY % FpML_PrincipalExchanges "initialExchange , finalExchange , intermediateExchange">
```

## FpML\_ResetDates

### Description:

An entity for defining the parameters used to generate the reset dates schedule and associated fixing dates. The reset dates are determined relative to the calculation periods schedule dates.

### Figure:



### Contents:

**calculationPeriodDatesReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to the associated calculation period dates component defined elsewhere in the document.

**resetRelativeTo** (zero or one occurrence; of type *string*, an enumerated domain value defined by *resetRelativeToScheme*)

- 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.

**fixingDates** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity *FpML\_RelativeDateOffset*)

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

**rateCutOffDaysOffset** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Offset)

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

**resetFrequency** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_ResetFrequency)

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

**resetDatesAdjustments** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_BusinessDayAdjustments)

- The business day convention to apply to each reset date if it would otherwise fall on a day that is not a business day in the specified financial business centers.

### ***Used by:***

- resetDates

### ***DTD Fragment:***

```
<!ENTITY % FpML_ResetDates "calculationPeriodDatesReference , resetRelativeTo? , fixingDates , rateCutOffDaysOffset? , resetFrequency , resetDatesAdjustments">
```

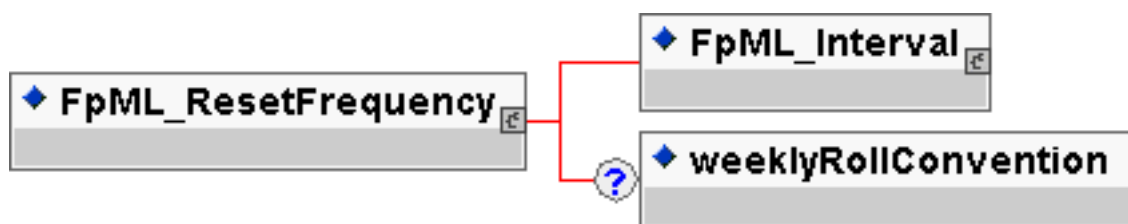


## FpML\_ResetFrequency

### Description:

An entity for defining the reset frequency. In the case of a weekly reset, also specifies the day of the week that the reset occurs. This entity inherits from a base entity, FpML\_Interval. 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. The specific averaging method of calculation is specified in the entity FpML\_FloatingRateCalculation.

### Figure:



### Contents:

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_Interval)

- An entity for defining a time interval or offset, e.g. one day, three months. Used for specifying frequencies at which events occur, the tenor of a floating rate or an offset relative to another date.

**weeklyRollConvention** (zero or one occurrence; of type *string*, an enumerated domain value defined by *weeklyRollConventionScheme*)

- The day of the week on which a weekly reset date occurs. This element must be included if the reset frequency is defined as weekly and not otherwise.

### Used by:

- resetFrequency

### DTD Fragment:

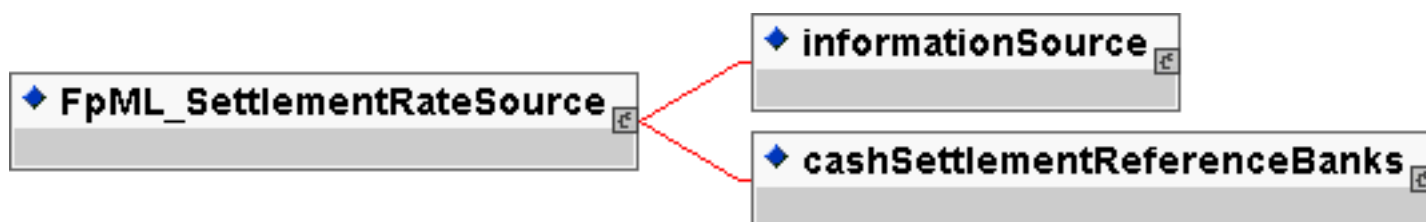
```
<!ENTITY % FpML_ResetFrequency "(%FpML_Interval; , weeklyRollConvention?)">
```

## FpML\_SettlementRateSource

### Description:

An entity to describe the method for obtaining a settlement rate.

### Figure:



### Contents:

Either

**informationSource** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML InformationSource)

- The information source where a published or displayed market rate will be obtained, e.g. Telerate Page 3750.

Or

**cashSettlementReferenceBanks** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML CashSettlementReferenceBanks)

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

### Used by:

- settlementRateSource

### DTD Fragment:

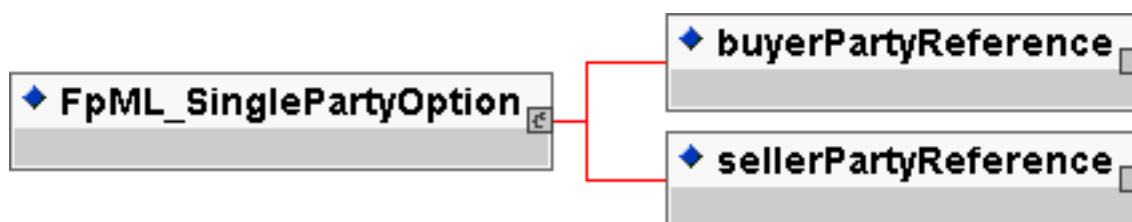
```
<!ENTITY % FpML_SettlementRateSource "informationSource | cashSettlementReferenceBanks">
```

## FpML\_SinglePartyOption

### Description:

An entity to describe the buyer and seller of a n option.

### Figure:



### Contents:

**buyerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the buyer of the instrument.

**sellerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the seller of the instrument.

### Used by:

- singlePartyOption

### DTD Fragment:

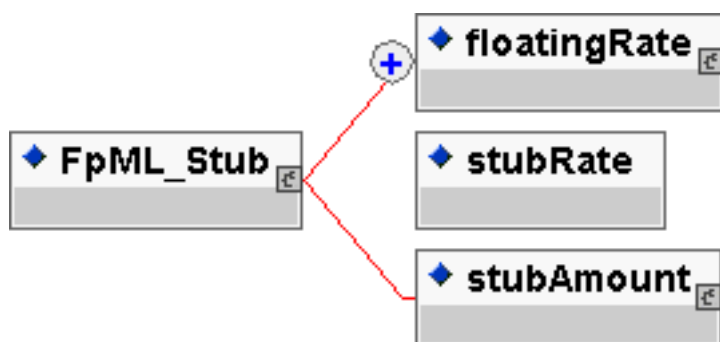
```
<!ENTITY % FpML_SinglePartyOption "buyerPartyReference , sellerPartyReference">
```

## FpML\_Stub

### Description:

An entity for defining how a stub calculation period 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 rate 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.

### Figure:



### Contents:

#### Either

**floatingRate** (one or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_FloatingRate)

- The rates to be applied to the initial or final stub may be the linear interpolation of two different rates. While the majority of the time, the rate indices will be the same as that specified in the stream and only the tenor itself will be different, it is possible to specify two different rates. For example, a 2 month stub period may use the linear interpolation of a 1 month and 3 month rate. The different rates would be specified in this component. Note that a maximum of two rates can be specified. If a stub period uses the same floating rate index, including tenor, as the regular calculation periods then this should not be specified again within this component, i.e. the stub calculation period amount component may not need to be specified even if there is an initial or final stub period. If a stub period uses a different floating rate index compared to the regular calculation periods then this should be specified within this component. If specified here, they are likely to have id attributes, allowing them to be referenced from within the cashflows component.

#### Or

**stubRate** (exactly one occurrence; of type *decimal*)

- An actual rate to apply for the initial or final stub period may have been agreed between the principal parties (in a similar way to how an initial rate may have been agreed for the first regular period). If an actual stub rate has been agreed then it would be included in this component. It will be a per annum rate, expressed as a decimal. A stub rate of 5% would be represented as 0.05.

#### Or

**stubAmount** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Money)

- An actual amount to apply for the initial or final stub period may have been agreed between the two parties. If an actual stub amount has been agreed then it would be included in this component.

***Used by:***

- finalStub
- initialStub

***DTD Fragment:***

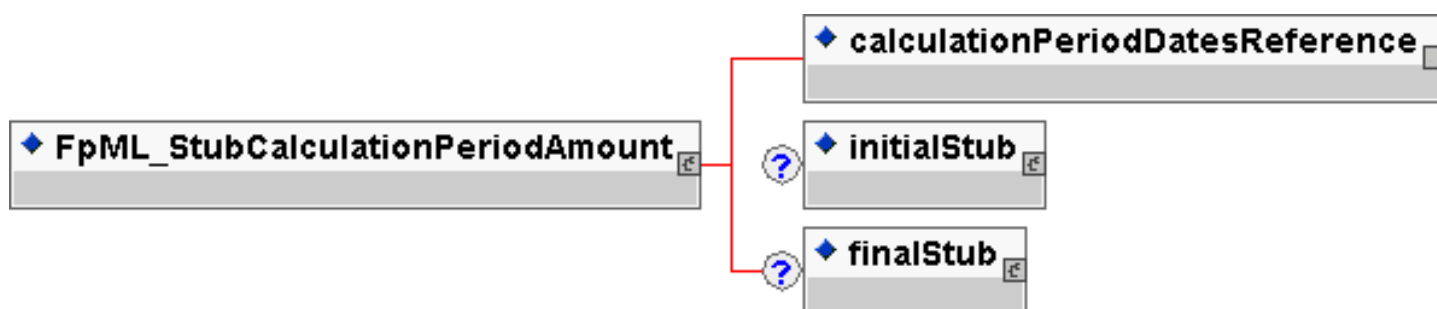
<!ENTITY % FpML\_Stub "(floatingRate+ | stubRate | stubAmount)">

## FpML\_StubCalculationPeriodAmount

### Description:

An entity for 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 use 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 element, as the case may be, must not be included.

### Figure:



### Contents:

**calculationPeriodDatesReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to the associated calculation period dates component defined elsewhere in the document.

**initialStub** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Stub)

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

**finalStub** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_Stub)

- 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.

### Used by:

- stubCalculationPeriodAmount

### DTD Fragment:

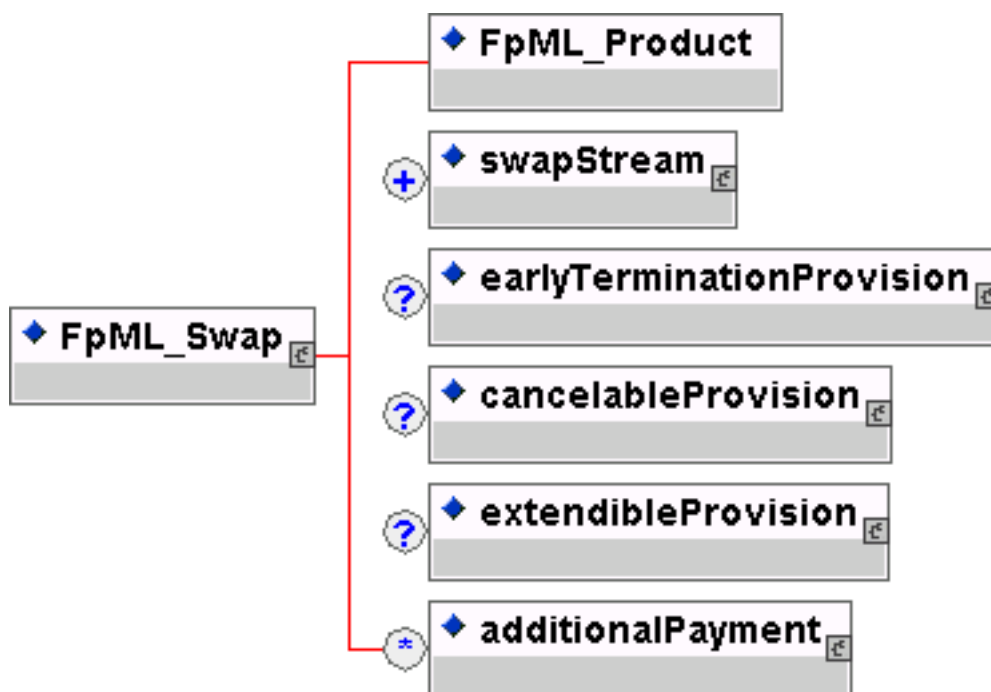
<!ENTITY % FpML\_StubCalculationPeriodAmount "calculationPeriodDatesReference , initialStub? , finalStub?">

## FpML\_Swap

### Description:

An entity for defining swap streams and additional payments between the principal parties involved in the swap.

### Figure:



### Contents:

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_Product)

- The base entity which all FpML products extend.

**swapStream** (one or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_InterestRateStream)

- The swap streams.

**earlyTerminationProvision** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_EarlyTerminationProvision)

- Parameters specifying provisions relating to the optional and mandatory early termination of a swap transaction.

**cancelableProvision** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_CancelableProvision)

- A provision that allows the specification of an embedded option within a swap giving the buyer of the option the right to terminate the swap, in whole or in part, on the early termination date.



**extendibleProvision** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML ExtendibleProvision)

- A provision that allows the specification of an embedded option within a swap giving the buyer of the option the right to extend the swap, in whole or in part, to the extended termination date.

**additionalPayment** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML Fee)

- Additional payments between the principal parties.

### ***Used by:***

- swap

### ***DTD Fragment:***

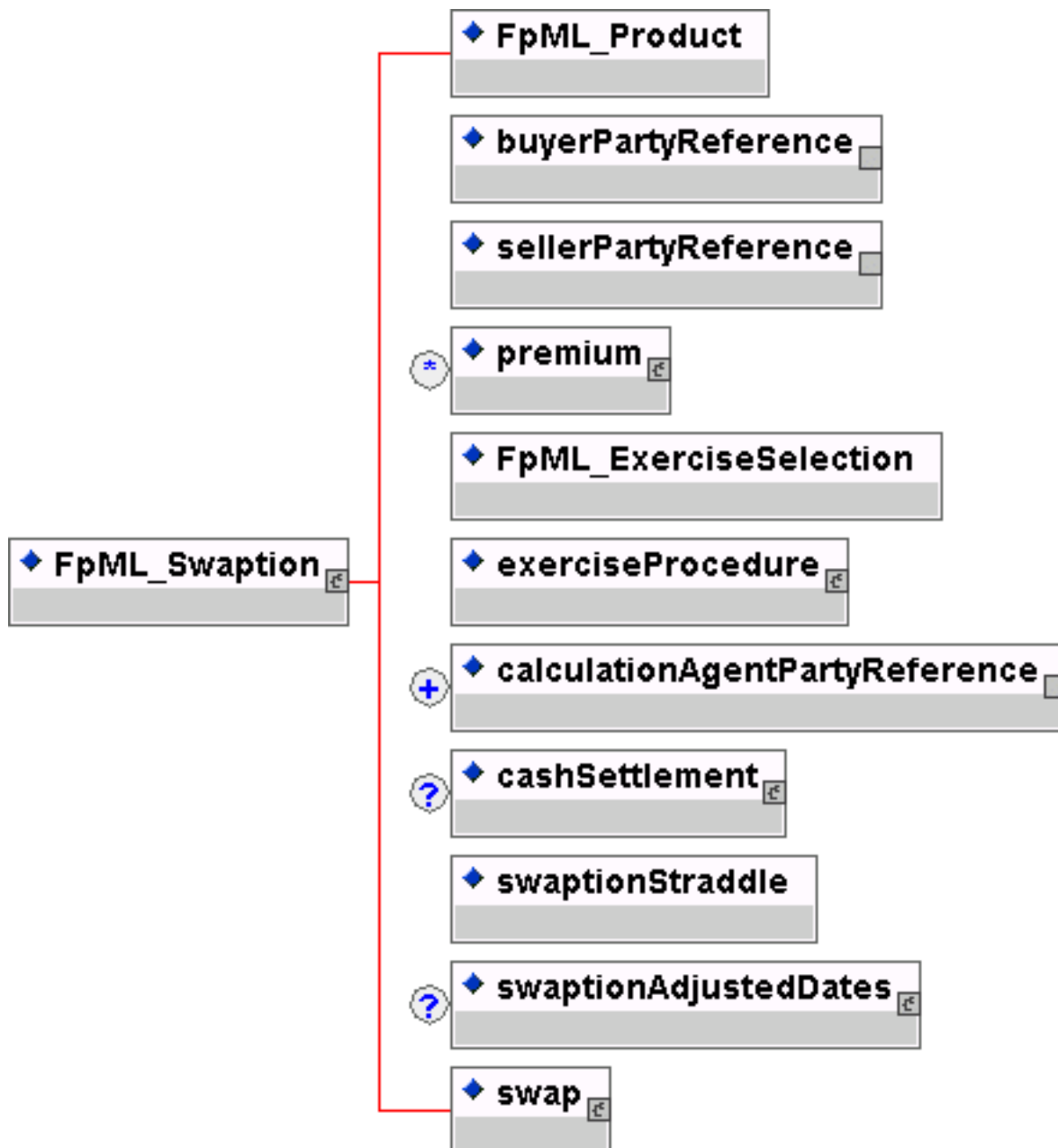
```
<!ENTITY % FpML_Swap "%FpML_Product; , swapStream+ , earlyTerminationProvision? ,
cancelableProvision? , extendibleProvision? , additionalPayment*">
```

## FpML\_SwapOption

### Description:

An entity to define a option on a swap.

### Figure:



### Contents:

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML\_Product)

- The base entity which all FpML products extend.

**buyerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the buyer of the instrument.

**sellerPartyReference** (exactly one occurrence; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the seller of the instrument.

**premium** (zero or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML Payment)

- The option premium amount payable by buyer to seller on the specified payment date.

**inherited element(s)** (this entity inherits the element(s) defined by exactly one occurrence of the entity FpML ExerciseSelection)

- Entity to defined the types of exercise. The choice is european, bermudan or american exercise.

**exerciseProcedure** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML ExerciseProcedure)

- A set of parameters defining procedures associated with the exercise.

**calculationAgentPartyReference** (one or more occurrences; an *empty* element containing an *href* attribute)

- A pointer style reference to a party identifier defined elsewhere in the document. The party referenced is the ISDA Calculation Agent for the trade. If more than one party is referenced then the parties are assumed to be co-calculation agents, i.e. they have joint responsibility.

**cashSettlement** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML CashSettlement)

- If specified, this means that cash settlement is applicable to the transaction and defines the parameters associated with the cash settlement procedure. If not specified, then physical settlement is applicable.

**swaptionStraddle** (exactly one occurrence; of type *boolean*)

- Whether the option is a swaption or a swaption straddle

**swaptionAdjustedDates** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML SwaptionAdjustedDates)

- The adjusted dates associated with swaption exercise. These dates have been adjusted for any applicable business day convention.

**swap** (exactly one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML Swap)

- A swap product definition.

### **Used by:**

- swaption

### **DTD Fragment:**

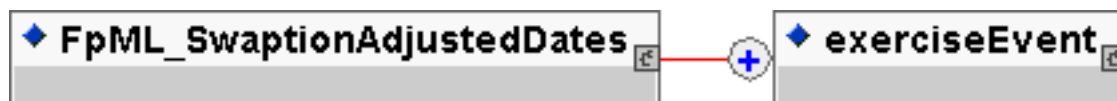
```
<!ENTITY % FpML_Swaption "%FpML_Product; , buyerPartyReference , sellerPartyReference , premium* , (%FpML_ExerciseSelection;), exerciseProcedure , calculationAgentPartyReference+ , cashSettlement? , swaptionStraddle , swaptionAdjustedDates? , swap">
```

## FpML\_SwaptionAdjustedDates

### Description:

An entity to describe the adjusted dates associated with swaption exercise and settlement.

### Figure:



### Contents:

**exerciseEvent** (one or more occurrences; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_ExerciseEvent)

- The adjusted dates associated with an individual swaption exercise date.

### Used by:

- swaptionAdjustedDates

### DTD Fragment:

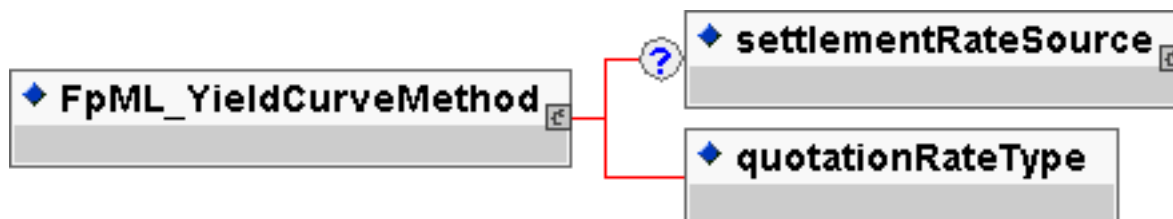
```
<!ENTITY % FpML_SwaptionAdjustedDates "exerciseEvent+">
```

## FpML\_YieldCurveMethod

### Description:

An entity to define the parameters required for each of the ISDA defined yield curve methods for cash settlement.

### Figure:



### Contents:

**settlementRateSource** (zero or one occurrence; contains the sub-element(s) defined by exactly one occurrence of the entity FpML\_SettlementRateSource)

- 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** (exactly one occurrence; of type *string*, an enumerated domain value defined by *quotationRateTypeScheme*)

- 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)

### Used by:

- parYieldCurveAdjustedMethod
- parYieldCurveUnadjustedMethod
- zeroCouponYieldAdjustedMethod

### DTD Fragment:

```
<!ENTITY % FpML_YieldCurveMethod "settlementRateSource? , quotationRateType">
```