FpML 4.0 - Asset Component Definitions

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1 Global Elements

1.1 bond

1.1.1 Description:

Defines the underlying asset when it is a bond.

1.1.2 Contents:

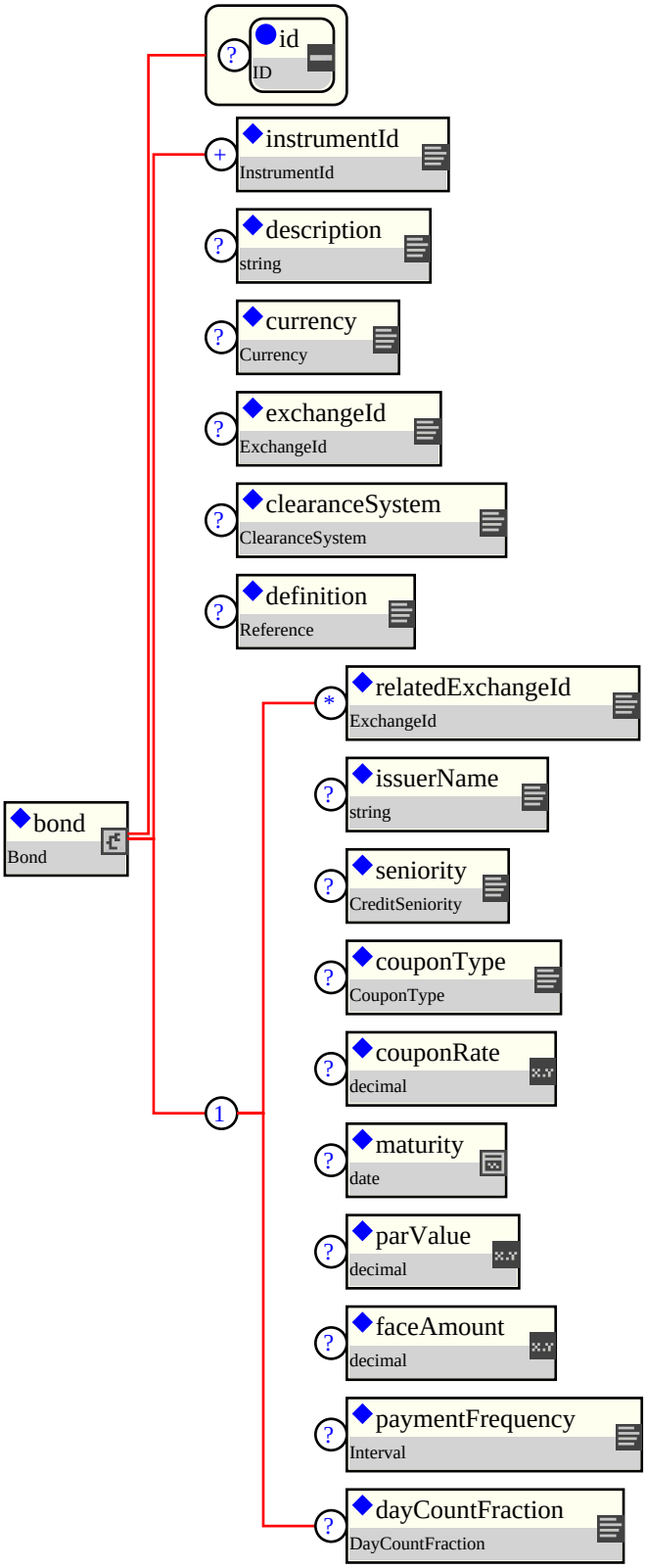
Element bond is defined by the complex type Bond

1.1.3 Used by:

- Complex type: BondReference
- Complex type: ReferenceObligation

1.1.4 Substituted by:

1.1.5 Figure:



1.1.6 Schema Fragment:

```
<xsd:element name="bond" type="Bond" substitutionGroup="underlyingAsset">
  <xsd:annotation>
```

```
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a bond.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.2 cash

1.2.1 Description:

Defines a simple underlying asset type that is a cash payment. Used for specifying discounting factors for future cash flows in the pricing and risk model.

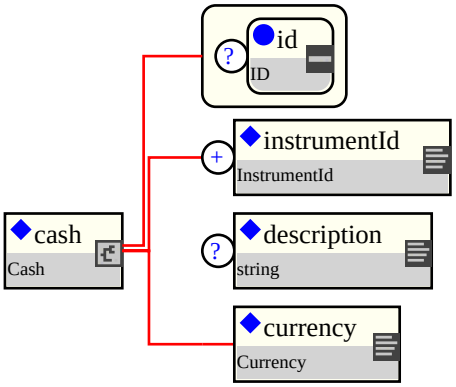
1.2.2 Contents:

Element cash is defined by the complex type Cash

1.2.3 Used by:

1.2.4 Substituted by:

1.2.5 Figure:



1.2.6 Schema Fragment:

```
<xsd:element name="cash" type="Cash" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset type that is a cash payment.
      Used for specifying discounting factors for future cash flows in
      the pricing and risk model.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.3 convertibleBond

1.3.1 Description:

Defines the underlying asset when it is a convertible bond.

1.3.2 Contents:

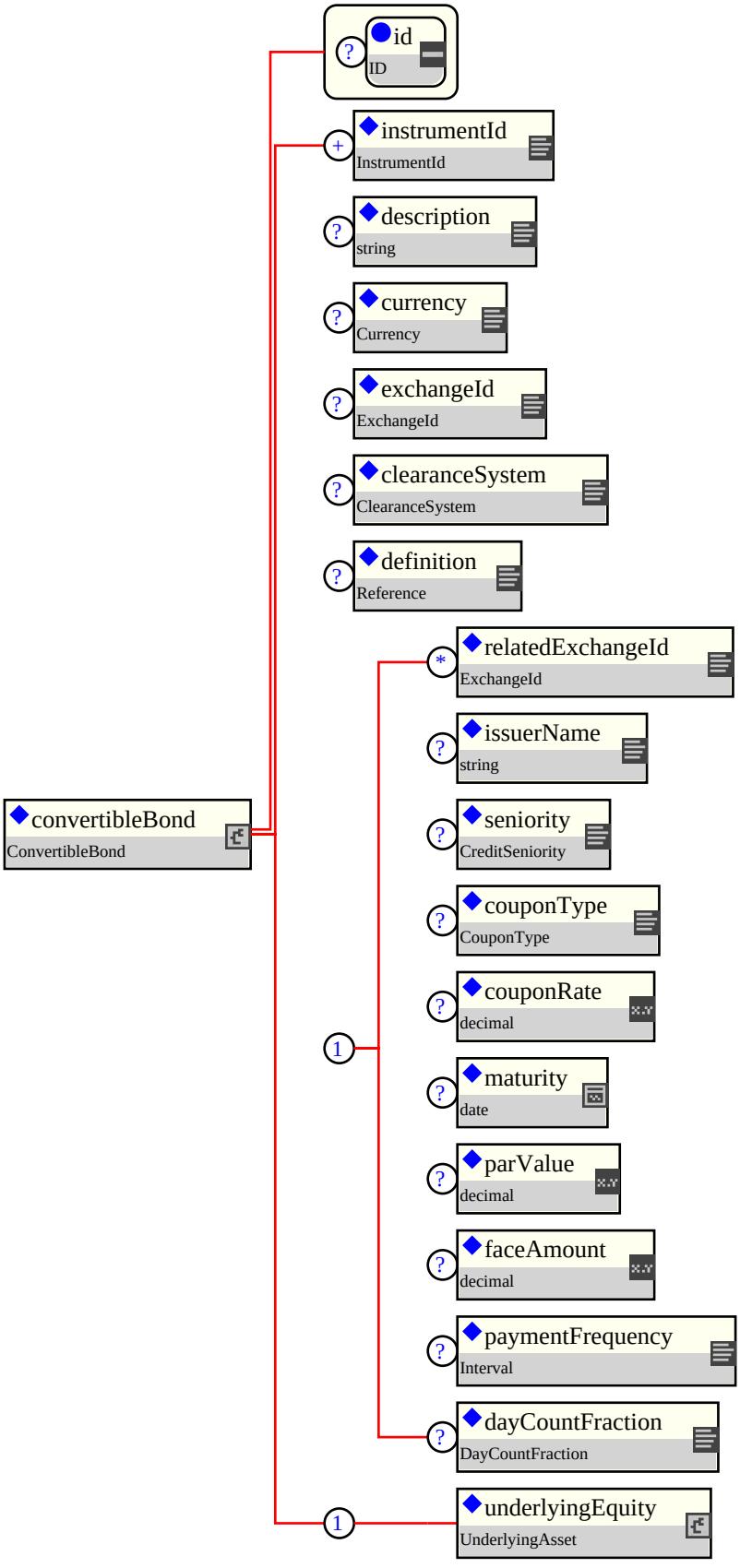
Element convertibleBond is defined by the complex type ConvertibleBond

1.3.3 Used by:

- Complex type: ReferenceObligation

1.3.4 Substituted by:

1.3.5 Figure:


id
ID
instrumentId
InstrumentId
description
string
currency
Currency
exchangeId
ExchangeId
clearanceSystem
ClearanceSystem
definition
Reference
relatedExchangeId
ExchangeId
issuerName
string
convertibleBond
ConvertibleBond
seniority
CreditSeniority
couponType
CouponType
couponRate
decimal
maturity
date
parValue
decimal
faceAmount
decimal
paymentFrequency
Interval
dayCountFraction
DayCountFraction
underlyingEquity
UnderlyingAsset

1.3.6 Schema Fragment:

```
<xsd:element name="convertibleBond" type="ConvertibleBond" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a convertible bond.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.4 deposit

1.4.1 Description:

Defines a simple underlying asset that is a term deposit.

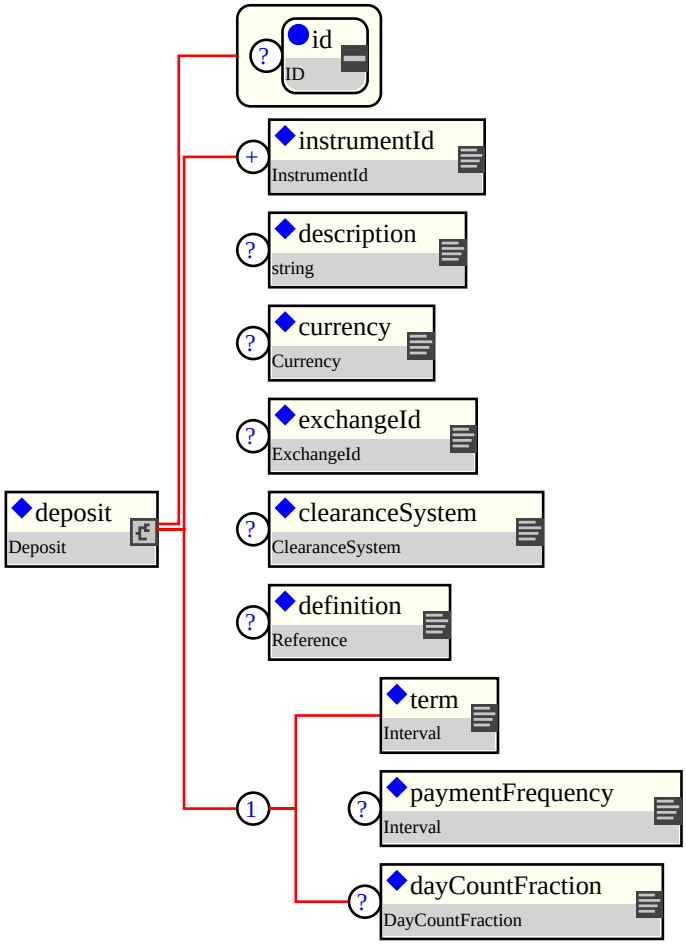
1.4.2 Contents:

Element deposit is defined by the complex type Deposit

1.4.3 Used by:

1.4.4 Substituted by:

1.4.5 Figure:



1.4.6 Schema Fragment:

```
<xsd:element name="deposit" type="Deposit" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is a term deposit.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.5 equity

1.5.1 Description:

Defines the underlying asset when it is a listed equity.

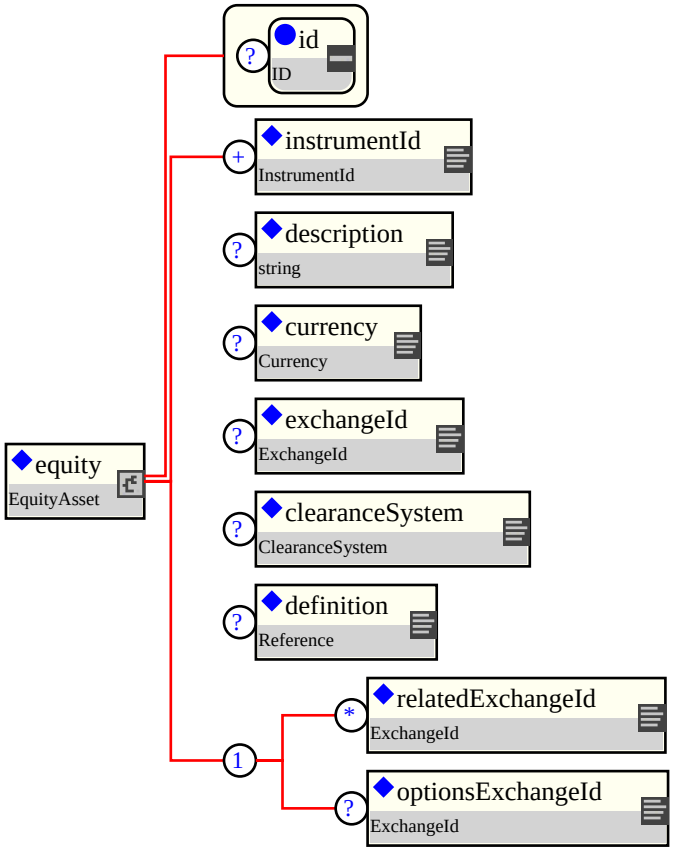
1.5.2 Contents:

Element equity is defined by the complex type EquityAsset

1.5.3 Used by:

1.5.4 Substituted by:

1.5.5 Figure:



1.5.6 Schema Fragment:

```
<xsd:element name="equity" type="EquityAsset" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a listed equity.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.6 exchangeTradedFund

1.6.1 Description:

Defines the underlying asset when it is an exchange-traded fund.

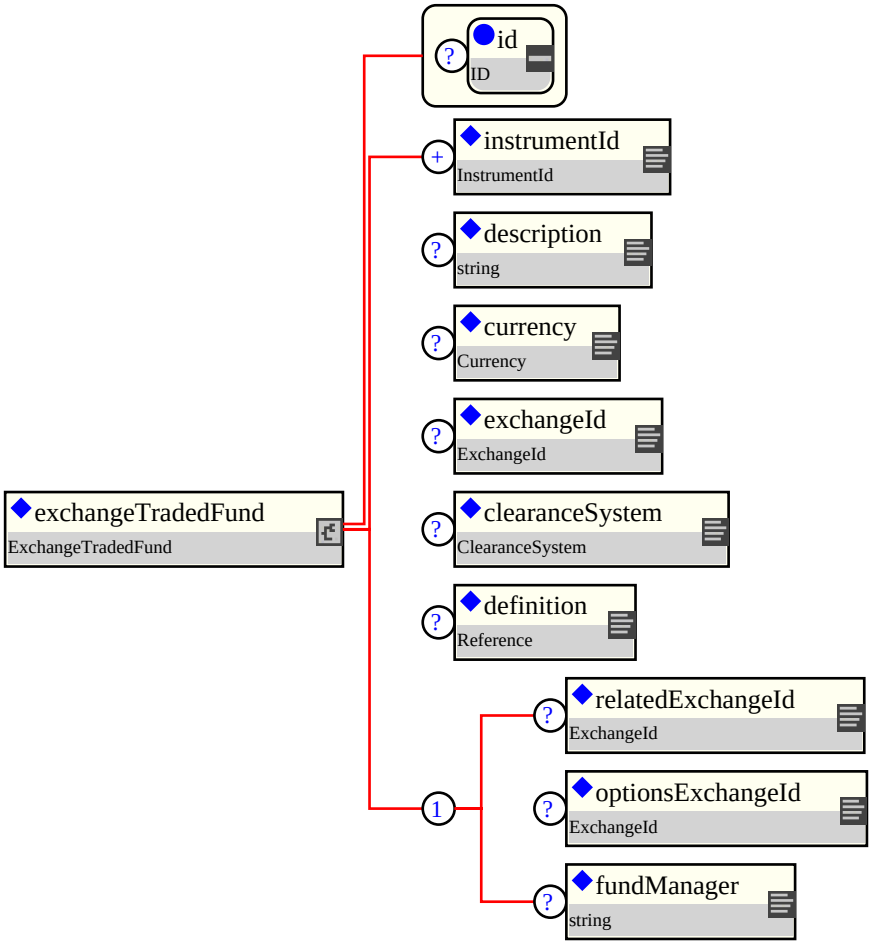
1.6.2 Contents:

Element exchangeTradedFund is defined by the complex type ExchangeTradedFund

1.6.3 Used by:

1.6.4 Substituted by:

1.6.5 Figure:



1.6.6 Schema Fragment:

```
<xsd:element name="exchangeTradedFund" type="ExchangeTradedFund" substitutionGroup="underlyingA
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is an exchange-traded fund.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.7 future

1.7.1 Description:

Defines the underlying asset when it is a listed future contract.

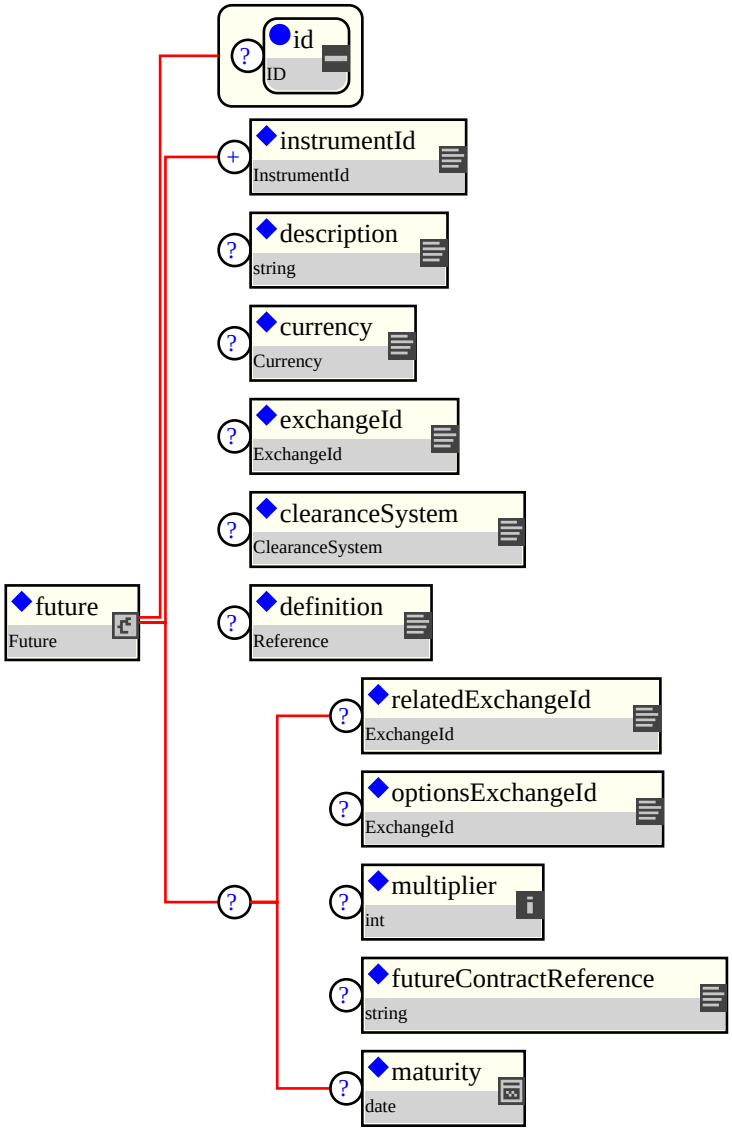
1.7.2 Contents:

Element future is defined by the complex type Future

1.7.3 Used by:

1.7.4 Substituted by:

1.7.5 Figure:



1.7.6 Schema Fragment:

```
<xsd:element name="future" type="Future" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a listed future contract.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.8 fxRate

1.8.1 Description:

Defines a simple underlying asset type that is an FX rate. Used for specifying FX rates in the pricing and risk model.

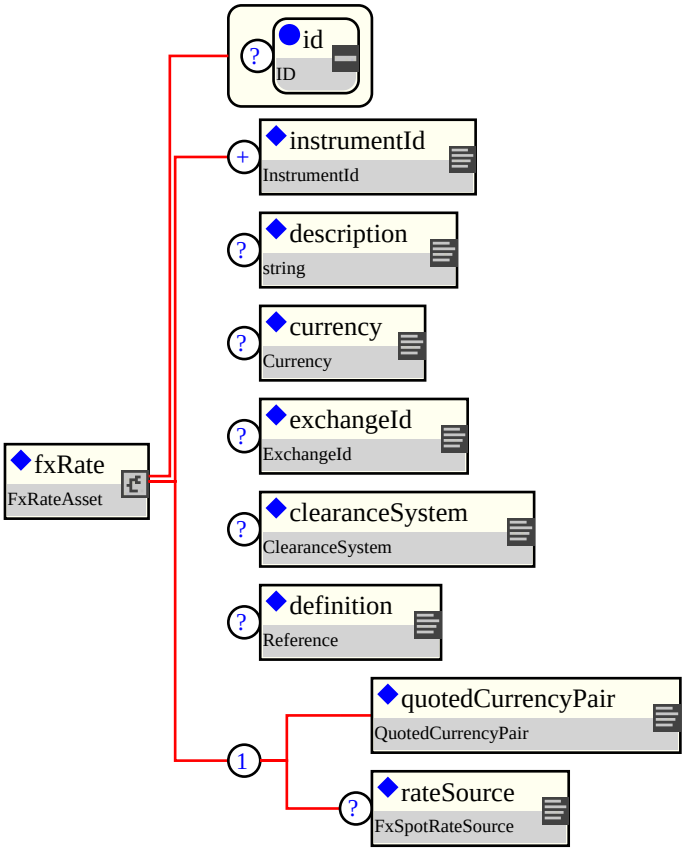
1.8.2 Contents:

Element fxRate is defined by the complex type FxRateAsset

1.8.3 Used by:

1.8.4 Substituted by:

1.8.5 Figure:



1.8.6 Schema Fragment:

```
<xsd:element name="fxRate" type="FxRateAsset" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset type that is an FX rate. Used
      for specifying FX rates in the pricing and risk model.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.9 index

1.9.1 Description:

Defines the underlying asset when it is a financial index.

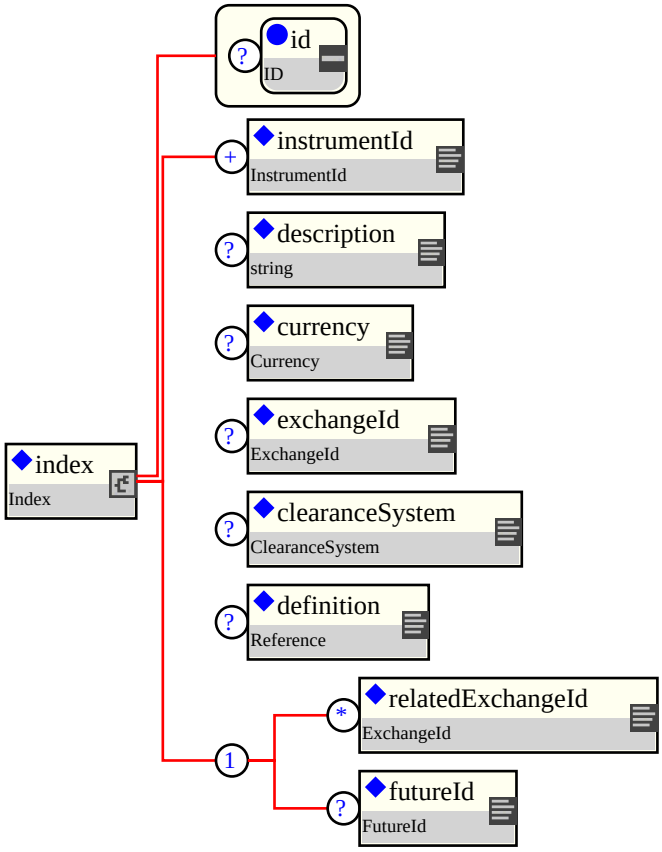
1.9.2 Contents:

Element index is defined by the complex type Index

1.9.3 Used by:

1.9.4 Substituted by:

1.9.5 Figure:



1.9.6 Schema Fragment:

```
<xsd:element name="index" type="Index" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a financial index.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.10 mutualFund

1.10.1 Description:

Defines the underlying asset when it is a mutual fund.

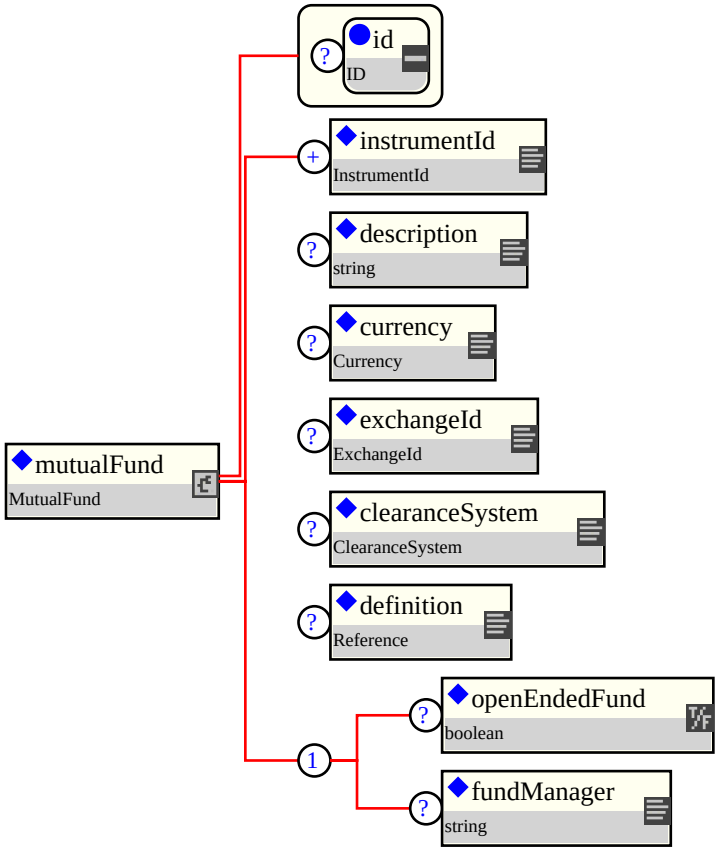
1.10.2 Contents:

Element mutualFund is defined by the complex type MutualFund

1.10.3 Used by:

1.10.4 Substituted by:

1.10.5 Figure:



1.10.6 Schema Fragment:

```
<xsd:element name="mutualFund" type="MutualFund" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a mutual fund.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.11 rateIndex

1.11.1 Description:

Defines a simple underlying asset that is an interest rate index. Used for specifying benchmark assets in the market environment in the pricing and risk model.

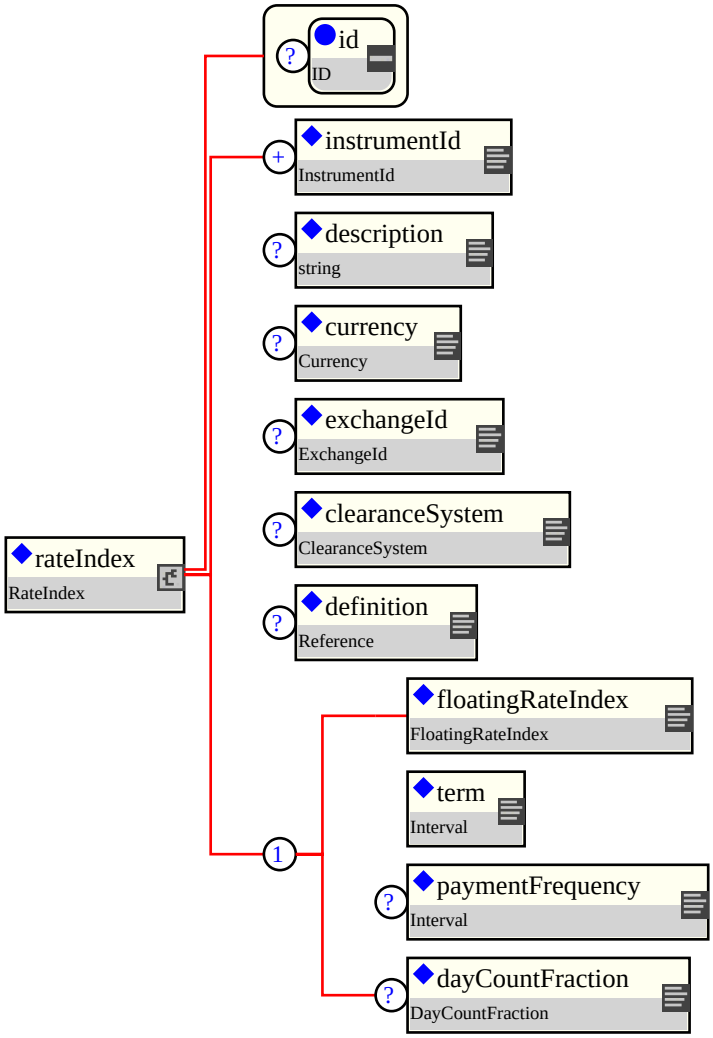
1.11.2 Contents:

Element rateIndex is defined by the complex type RateIndex

1.11.3 Used by:

1.11.4 Substituted by:

1.11.5 Figure:



1.11.6 Schema Fragment:

```
<xsd:element name="rateIndex" type="RateIndex" substitutionGroup="underlyingAsset">
```

```
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is an interest rate index.
      Used for specifying benchmark assets in the market environment in
      the pricing and risk model.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.12 simpleCreditDefaultSwap

1.12.1 Description:

Defines a simple underlying asset that is a credit default swap.

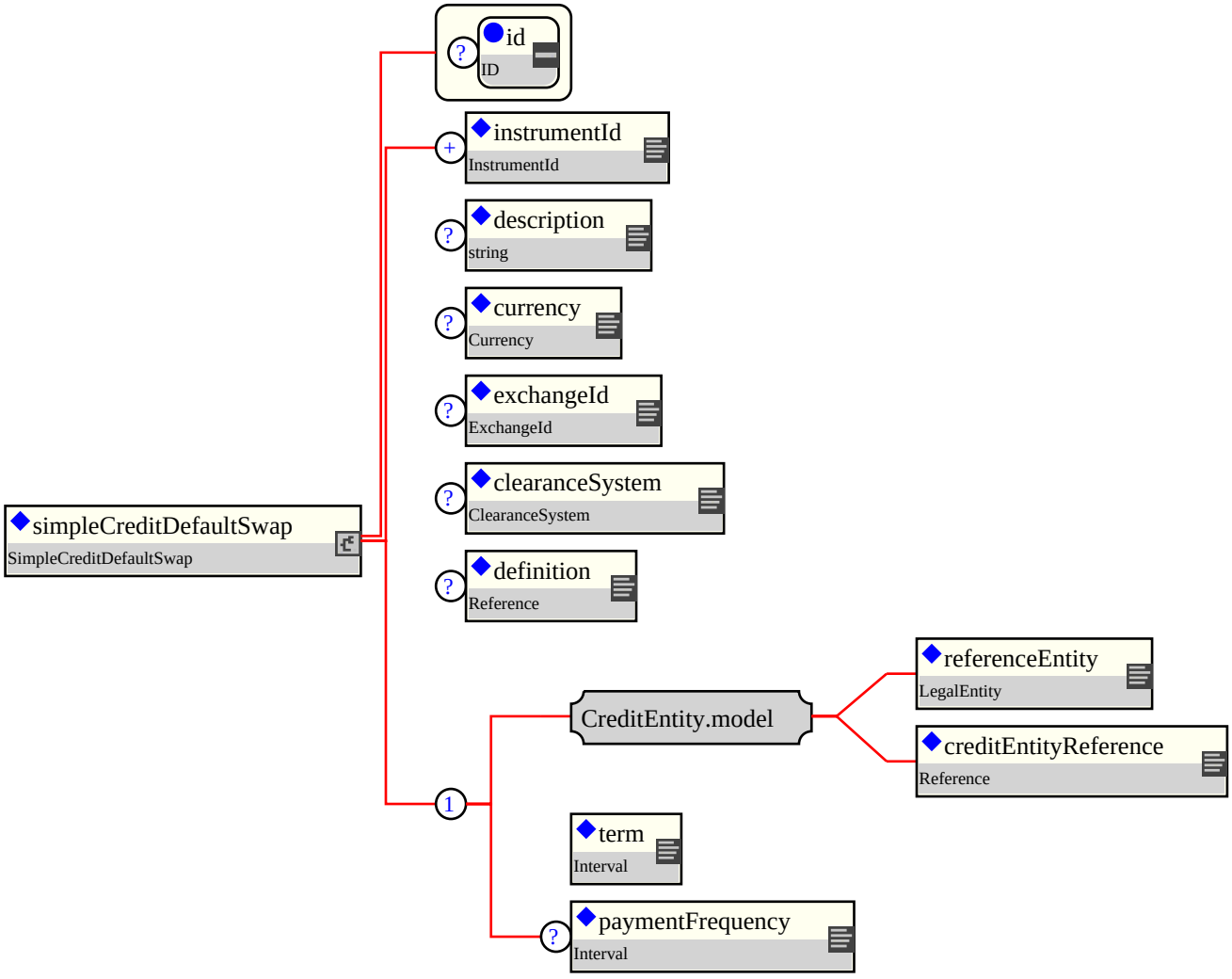
1.12.2 Contents:

Element simpleCreditDefaultSwap is defined by the complex type SimpleCreditDefaultSwap

1.12.3 Used by:

1.12.4 Substituted by:

1.12.5 Figure:



1.12.6 Schema Fragment:

```
<xsd:element name="simpleCreditDefaultSwap" type="SimpleCreditDefaultSwap" substitutionGroup="u
  <xsd:annotation>
```

```
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is a credit default swap.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.13 simpleFra

1.13.1 Description:

Defines a simple underlying asset that is a forward rate agreement.

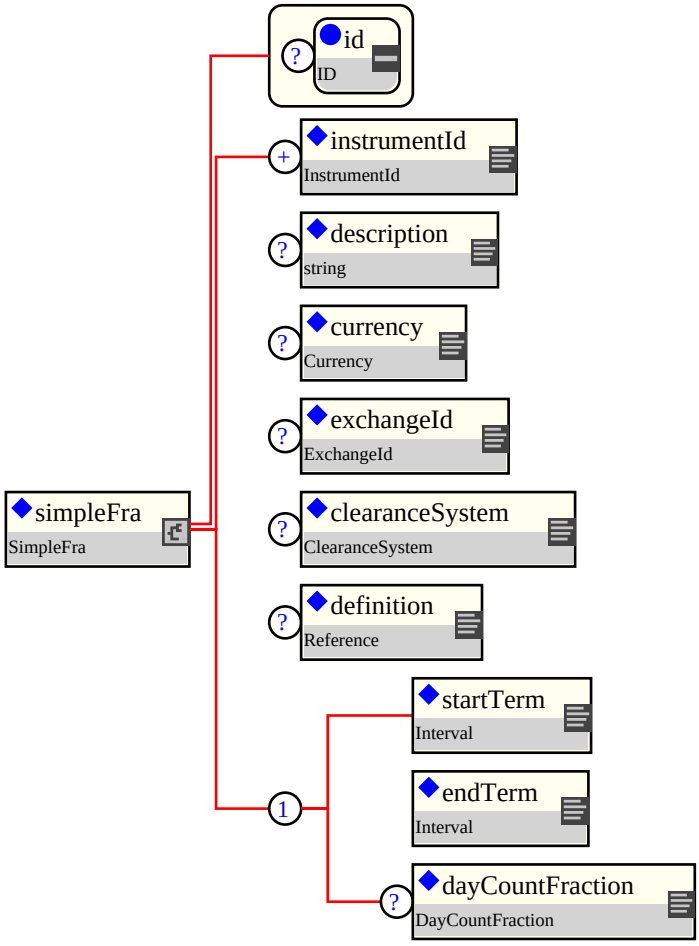
1.13.2 Contents:

Element simpleFra is defined by the complex type SimpleFra

1.13.3 Used by:

1.13.4 Substituted by:

1.13.5 Figure:



1.13.6 Schema Fragment:

```
<xsd:element name="simpleFra" type="SimpleFra" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is a forward rate
      agreement.
    </xsd:documentation>
  </xsd:annotation>
```

```
</xsd:element>
```

1.14 simpleIrSwap

1.14.1 Description:

Defines a simple underlying asset that is a swap.

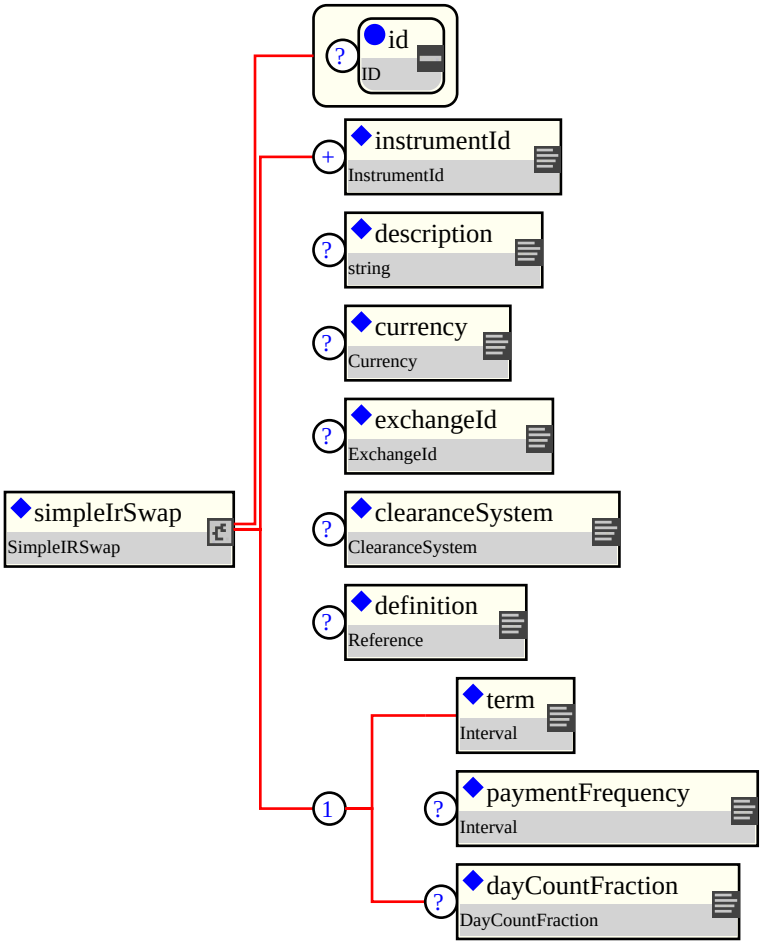
1.14.2 Contents:

Element simpleIrSwap is defined by the complex type SimpleIRSwap

1.14.3 Used by:

1.14.4 Substituted by:

1.14.5 Figure:



1.14.6 Schema Fragment:

```
<xsd:element name="simpleIrSwap" type="SimpleIRSwap" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is a swap.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

1.15 underlyingAsset

1.15.1 Description:

Define the underlying asset when it is a listed security.

1.15.2 Contents:

Element underlyingAsset is defined by the complex type UnderlyingAsset

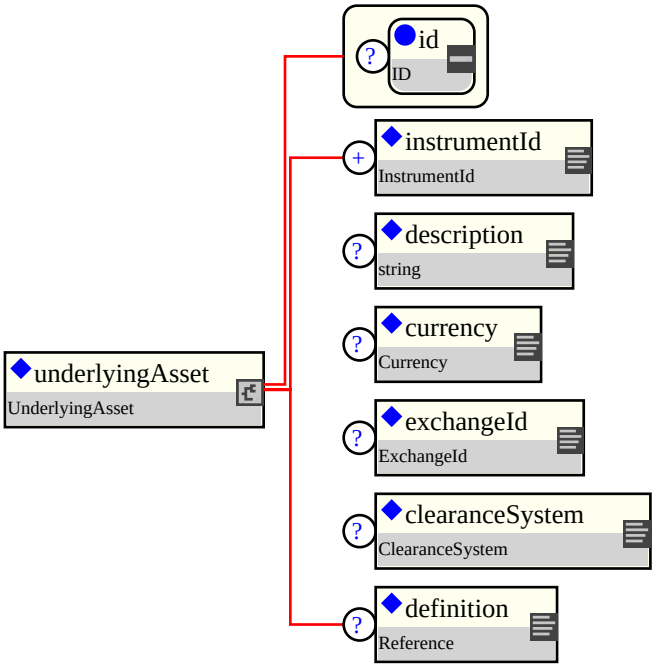
1.15.3 Used by:

- Complex type: BasketConstituent
- Complex type: CashflowObservation
- Complex type: InstrumentSet
- Complex type: SingleUnderlyer
- Complex type: TradeUnderlyer

1.15.4 Substituted by:

- Element: bond
- Element: cash
- Element: convertibleBond
- Element: deposit
- Element: equity
- Element: exchangeTradedFund
- Element: future
- Element: fxRate
- Element: index
- Element: mutualFund
- Element: rateIndex
- Element: simpleCreditDefaultSwap
- Element: simpleFra
- Element: simpleIrSwap

1.15.5 Figure:



1.15.6 Schema Fragment:

```
<xsd:element name="underlyingAsset" type="UnderlyingAsset" abstract="true">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Define the underlying asset when it is a listed security.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

2 Global Complex Types

2.1 ActualPrice

2.1.1 Description:

2.1.2 Contents:

currency (zero or one occurrence; of the type Currency) Specifies the currency associated with the net price. This element is not present if the price is expressed in percentage terms (as specified through the priceExpression element).

amount (exactly one occurrence; of the type xsd:decimal) Specifies the net price amount. In the case of a fixed income security or a convertible bond, this price includes the accrued interests.

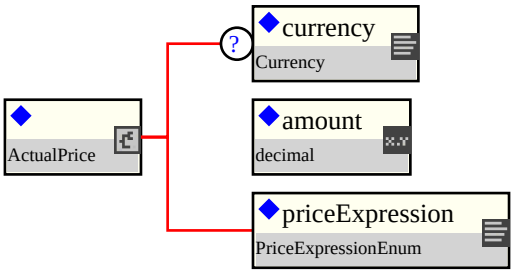
priceExpression (exactly one occurrence; of the type PriceExpressionEnum) Specifies whether the price is expressed in absolute or relative terms.

2.1.3 Used by:

- Complex type: Price

2.1.4 Derived Types:

2.1.5 Figure:



2.1.6 Schema Fragment:

```
<xsd:complexType name="ActualPrice">
  <xsd:sequence>
    <xsd:element name="currency" type="Currency" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the currency associated with the net price. This
          element is not present if the price is expressed in
          percentage terms (as specified through the priceExpression
          element).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="amount" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the net price amount. In the case of a fixed income
          security or a convertible bond, this price includes the
          accrued interests.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="priceExpression" type="PriceExpressionEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies whether the price is expressed in absolute or
          relative terms.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
```

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

2.2 Basket

2.2.1 Description:

A type describing the underlyer features of a basket swap. Each of the basket constituents are described through an embedded component, the basketConstituentsType.

2.2.2 Contents:

openUnits (zero or one occurrence; of the type xsd:decimal) The number of units (index or securities) that constitute the underlyer of the swap. In the case of a basket swap, this element is used to reference both the number of basket units, and the number of each asset components of the basket when these are expressed in absolute terms.

basketConstituent (one or more occurrences; of the type BasketConstituent) Describes each of the components of the basket.

basketDivisor (zero or one occurrence; of the type xsd:decimal) Specifies the basket divisor amount. This value is normally used to adjust the constituent weight for pricing or to adjust for dividends, or other corporate actions.

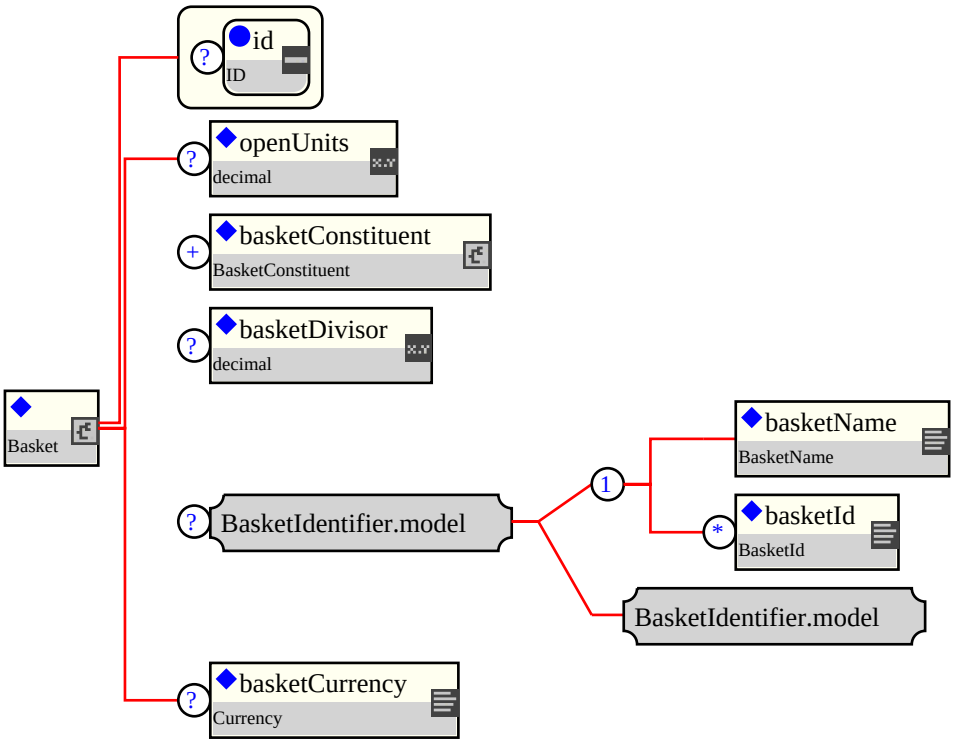
basketCurrency (zero or one occurrence; of the type Currency) Specifies the currency for this basket.

2.2.3 Used by:

- Complex type: Underlyer

2.2.4 Derived Types:

2.2.5 Figure:



2.2.6 Schema Fragment:

```
<xsd:complexType name="Basket">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the underlyer features of a basket swap. Each
      of the basket constituents are described through an embedded
      component, the basketConstituentsType.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="openUnits" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The number of units (index or securities) that constitute the
          underlyer of the swap. In the case of a basket swap, this
          element is used to reference both the number of basket units,
          and the number of each asset components of the basket when
          these are expressed in absolute terms.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="basketConstituent" type="BasketConstituent" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Describes each of the components of the basket.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="basketDivisor" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the basket divisor amount. This value is normally
          used to adjust the constituent weight for pricing or to
          adjust for dividends, or other corporate actions.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:group ref="BasketIdentifier.model" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Reuses the group that specifies a name and an identifier for
          a given basket.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:group>
    <xsd:element name="basketCurrency" type="Currency" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the currency for this basket.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID" use="optional"/>
</xsd:complexType>
```

2.3 BasketConstituent

2.3.1 Description:

A type describing each of the constituents of a basket swap.

2.3.2 Contents:

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

constituentWeight (zero or one occurrence; of the type ConstituentWeight) Specifies the weight of each of the underlyer constituent within the basket, either in absolute or relative terms. This is an optional component, as certain swaps do not specify a specific weight for each of their basket constituents.

dividendPayout (zero or one occurrence; of the type DividendPayout) Specifies the dividend payout ratio associated with an equity underlyer. A basket swap can have different payout ratios across the various underlying constituents. In certain cases the actual ratio is not known on trade inception, and only general conditions are then specified.

underlyerPrice (zero or one occurrence; of the type Price) Specifies the price that is associated with each of the basket constituents. This component is optional, as it is not absolutely required to accurately describe the economics of the trade, considering the price that characterizes the equity swap is associated to the leg of the trade.

underlyerNotional (zero or one occurrence; of the type Money) Specifies the notional (i.e. price * quantity) that is associated with each of the basket constituents. This component is optional, as it is not absolutely required to accurately describe the economics of the trade, considering the notional that characterizes the equity swap is associated to the leg of the trade.

underlyerSpread (zero or one occurrence; of the type Reference) Provides a link to the spread schedule used for this underlyer.

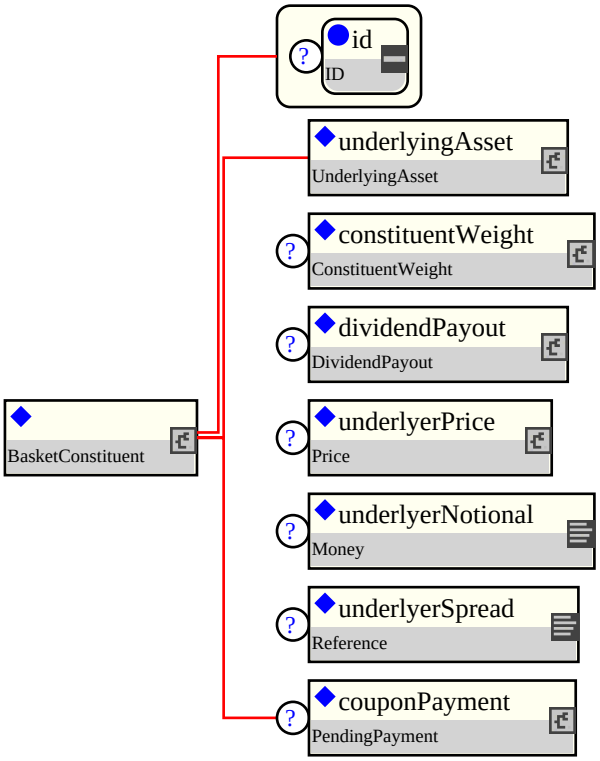
couponPayment (zero or one occurrence; of the type PendingPayment) The next upcoming coupon payment.

2.3.3 Used by:

- Complex type: Basket

2.3.4 Derived Types:

2.3.5 Figure:



2.3.6 Schema Fragment:

```
<xsd:complexType name="BasketConstituent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing each of the constituents of a basket swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="underlyingAsset"/>
    <xsd:element name="constituentWeight" type="ConstituentWeight" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the weight of each of the underlyer constituent
          within the basket, either in absolute or relative terms. This
          is an optional component, as certain swaps do not specify a
          specific weight for each of their basket constituents.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="dividendPayout" type="DividendPayout" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the dividend payout ratio associated with an equity
          underlyer. A basket swap can have different payout ratios
          across the various underlying constituents. In certain cases
          the actual ratio is not known on trade inception, and only
          general conditions are then specified.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="underlyerPrice" type="Price" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the price that is associated with each of the
          basket constituents. This component is optional, as it is not
          absolutely required to accurately describe the economics of
          the trade, considering the price that characterizes the
          equity swap is associated to the leg of the trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="underlyerNotional" type="Money" minOccurs="0">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">
          Specifies the notional (i.e. price * quantity) that is
          associated with each of the basket constituents. This
          component is optional, as it is not absolutely required to
          accurately describe the economics of the trade, considering
          the notional that characterizes the equity swap is associated
          to the leg of the trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="underlyerSpread" type="Reference" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Provides a link to the spread schedule used for this
          underlyer.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="couponPayment" type="PendingPayment" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The next upcoming coupon payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID" use="optional"/>
</xsd:complexType>
```

2.4 BasketId

2.4.1 Description:

2.4.2 Contents:

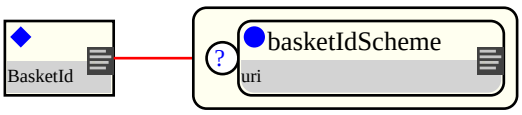
Inherited element(s): (This definition inherits the content defined by the type xsd:normalizedString)

•

2.4.3 Used by:

2.4.4 Derived Types:

2.4.5 Figure:



2.4.6 Schema Fragment:

```
<xsd:complexType name="BasketId">
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="basketIdScheme" type="xsd:anyURI"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

2.5 BasketName

2.5.1 Description:

2.5.2 Contents:

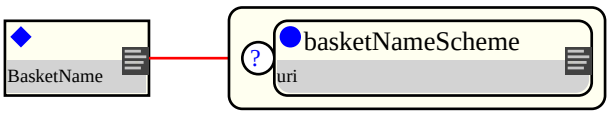
Inherited element(s): (This definition inherits the content defined by the type xsd:normalizedString)

•

2.5.3 Used by:

2.5.4 Derived Types:

2.5.5 Figure:



2.5.6 Schema Fragment:

```
<xsd:complexType name="BasketName">
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="basketNameScheme" type="xsd:anyURI"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

2.6 Bond

2.6.1 Description:

2.6.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

relatedExchangeId (zero or more occurrences; of the type ExchangeId) A short form unique identifier for a related exchange. If the element is not present then the exchange shall be the primary exchange on which listed futures and options on the underlying are listed. The term "Exchange" is assumed to have the meaning as defined in the ISDA 2002 Equity Derivatives Definitions.

issuerName (zero or one occurrence; of the type xsd:string) Specifies the issuer name of a fixed income security or convertible bond.

seniority (zero or one occurrence; of the type CreditSeniority) The repayment precedence of a debt instrument.

couponType (zero or one occurrence; of the type CouponType) Specifies if the bond has a variable coupon, step-up/down coupon or a zero-coupon.

couponRate (zero or one occurrence; of the type xsd:decimal) Specifies the coupon rate (expressed in percentage) of a fixed income security or convertible bond.

maturity (zero or one occurrence; of the type xsd:date) The date when the principal amount of a security becomes due and payable.

parValue (zero or one occurrence; of the type xsd:decimal) Specifies the nominal amount of a fixed income security or convertible bond.

faceAmount (zero or one occurrence; of the type xsd:decimal) Specifies the total amount of the issue. Corresponds to the par value multiplied by the number of issued security.

paymentFrequency (zero or one occurrence; of the type Interval) Specifies the frequency at which the bond pays, e.g. 6M.

dayCountFraction (zero or one occurrence; of the type DayCountFraction) The day count basis for the bond.

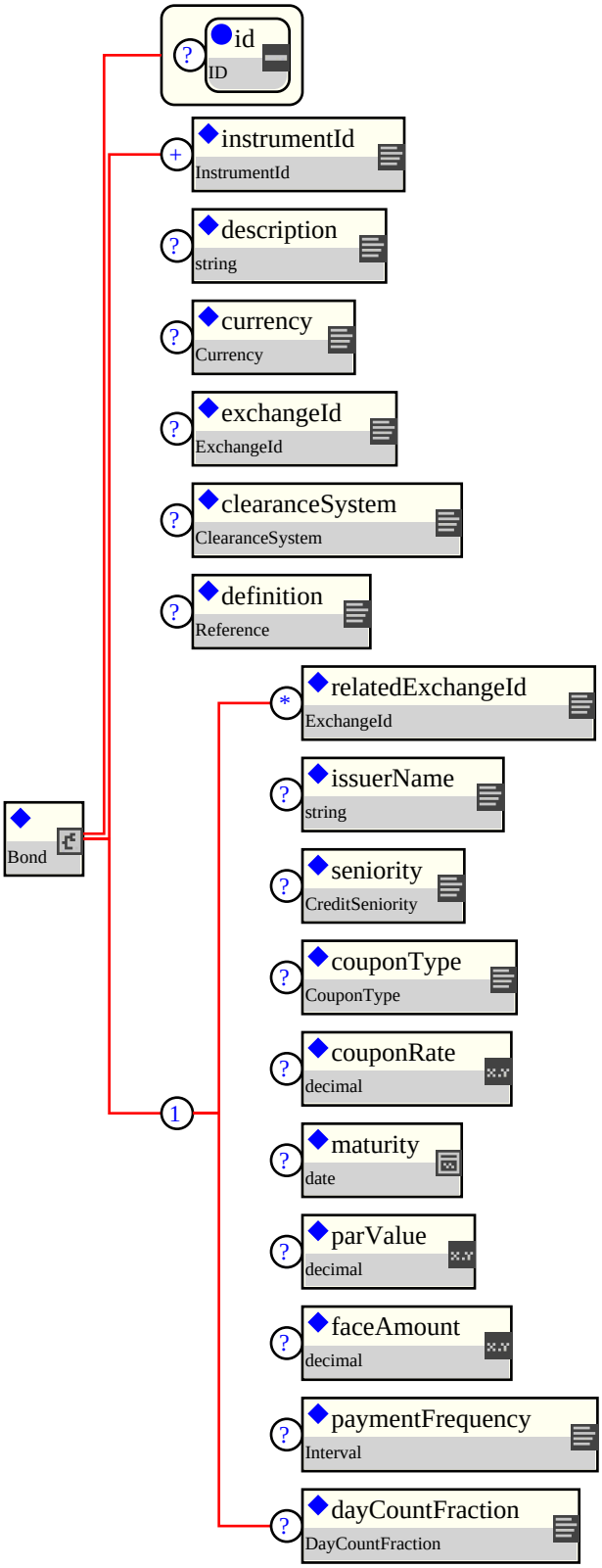
2.6.3 Used by:

- Element: bond
- Complex type: ConvertibleBond

2.6.4 Derived Types:

- Complex type: ConvertibleBond

2.6.5 Figure:



2.6.6 Schema Fragment:

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

```
<xsd:extension base="UnderlyingAsset">
  <xsd:sequence>
    <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0" maxOccurs="unbour
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          A short form unique identifier for a related exchange. If
          the element is not present then the exchange shall be the
          primary exchange on which listed futures and options on
          the underlying are listed. The term "Exchange" is assumed
          to have the meaning as defined in the ISDA 2002 Equity
          Derivatives Definitions.
        </xsd:documentation>
        <xsd:documentation xml:lang="de">
          Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
          Element, gilt die Hauptbörse, an der börsengehandelte
          Futures- und Optionskontrakte auf den Basiswert notiert
          sind, als "Börse" im Sinne der ISDA-Definitionen zu
          Aktienderivaten von 2002.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="issuerName" type="xsd:string" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the issuer name of a fixed income security or
          convertible bond.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="seniority" type="CreditSeniority" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The repayment precedence of a debt instrument.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="couponType" type="CouponType" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies if the bond has a variable coupon, step-up/down
          coupon or a zero-coupon.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="couponRate" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the coupon rate (expressed in percentage) of a
          fixed income security or convertible bond.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="maturity" type="xsd:date" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date when the principal amount of a security becomes
          due and payable.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="parValue" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the nominal amount of a fixed income security
          or convertible bond.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="faceAmount" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the total amount of the issue. Corresponds to
          the par value multiplied by the number of issued
          security.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the frequency at which the bond pays, e.g. 6M.
        </xsd:documentation>
      </xsd:annotation>
```

```
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the bond.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.7 Cash

2.7.1 Description:

2.7.2 Contents:

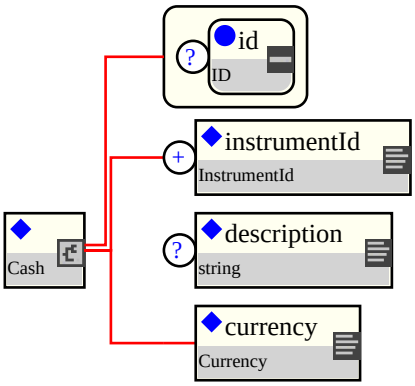
Inherited element(s): (This definition restricts the content defined by the type UnderlyingAsset)
instrumentId (one or more occurrences; of the type InstrumentId)
description (zero or one occurrence; of the type xsd:string) The long name of a security.
currency (exactly one occurrence; of the type Currency) The currency in which an amount is denominated.

2.7.3 Used by:

- Element: cash

2.7.4 Derived Types:

2.7.5 Figure:



2.7.6 Schema Fragment:

```
<xsd:complexType name="Cash">
  <xsd:complexContent>
    <xsd:restriction base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="instrumentId" type="InstrumentId" maxOccurs="unbounded"/>
        <xsd:element name="description" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The long name of a security.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Vollständige Wertpapierbezeichnung.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="currency" type="Currency">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The currency in which an amount is denominated.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:restriction>
  </xsd:complexContent>
</xsd:complexType>
```

2.8 Commission

2.8.1 Description:

A type describing the commission that will be charged for each of the hedge transactions.

2.8.2 Contents:

commissionDenomination (exactly one occurrence; of the type CommissionDenominationEnum) The type of units used to express a commission.

commissionAmount (exactly one occurrence; of the type xsd:decimal) The commission amount, expressed in the way indicated by the commissionType element.

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

commissionPerTrade (zero or one occurrence; of the type xsd:decimal) The total commission per trade.

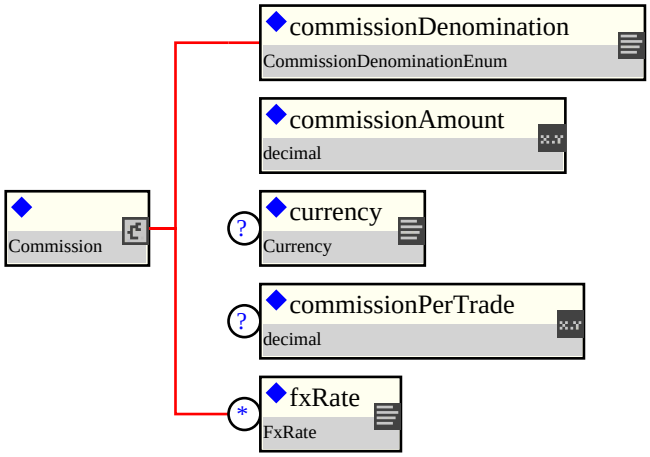
fxRate (zero or more occurrences; of the type FxRate) FX Rates that have been used to convert commissions to a single currency.

2.8.3 Used by:

- Complex type: Price

2.8.4 Derived Types:

2.8.5 Figure:



2.8.6 Schema Fragment:

```
<xsd:complexType name="Commission">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the commission that will be charged for each of
      the hedge transactions.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="commissionDenomination" type="CommissionDenominationEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The type of units used to express a commission.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="commissionAmount" type="xsd:decimal">
      <xsd:annotation>
```

```
        <xsd:documentation xml:lang="en">
          The commission amount, expressed in the way indicated by the
          commissionType element.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="currency" type="Currency" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which an amount is denominated.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="commissionPerTrade" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The total commission per trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fxRate" type="FxRate" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          FX Rates that have been used to convert commissions to a
          single currency.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.9 ConstituentWeight

2.9.1 Description:

A type describing the weight of each of the underlyer constituent within the basket, either in absolute or relative terms.

2.9.2 Contents:

Either

openUnits (exactly one occurrence; of the type xsd:decimal) The number of units (index or securities) that constitute the underlyer of the swap. In the case of a basket swap, this element is used to reference both the number of basket units, and the number of each asset components of the basket when these are expressed in absolute terms.

Or

basketPercentage (exactly one occurrence; of the type xsd:decimal) The relative weight of each respective basket constituent, expressed in percentage.

Or

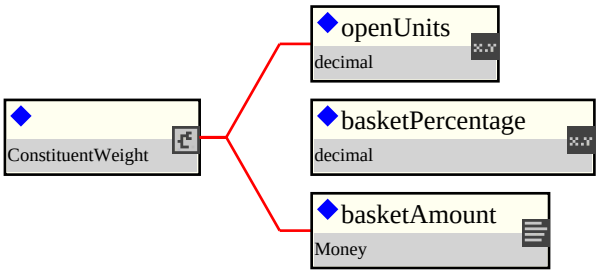
basketAmount (exactly one occurrence; of the type Money) The relative weight of each respective basket constituent, expressed as a monetary amount.

2.9.3 Used by:

- Complex type: BasketConstituent
- Complex type: ReferencePoolItem

2.9.4 Derived Types:

2.9.5 Figure:



2.9.6 Schema Fragment:

```
<xsd:complexType name="ConstituentWeight">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the weight of each of the underlyer constituent
      within the basket, either in absolute or relative terms.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="openUnits" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The number of units (index or securities) that constitute the
          underlyer of the swap. In the case of a basket swap, this
          element is used to reference both the number of basket units,
          and the number of each asset components of the basket when
          these are expressed in absolute terms.
        </xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:element>
    <xsd:element name="basketPercentage" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The relative weight of each respective basket constituent,
          expressed in percentage.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="basketAmount" type="Money">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The relative weight of each respective basket constituent,
          expressed as a monetary amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
</xsd:complexType>
```

2.10 ConvertibleBond

2.10.1 Description:

2.10.2 Contents:

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

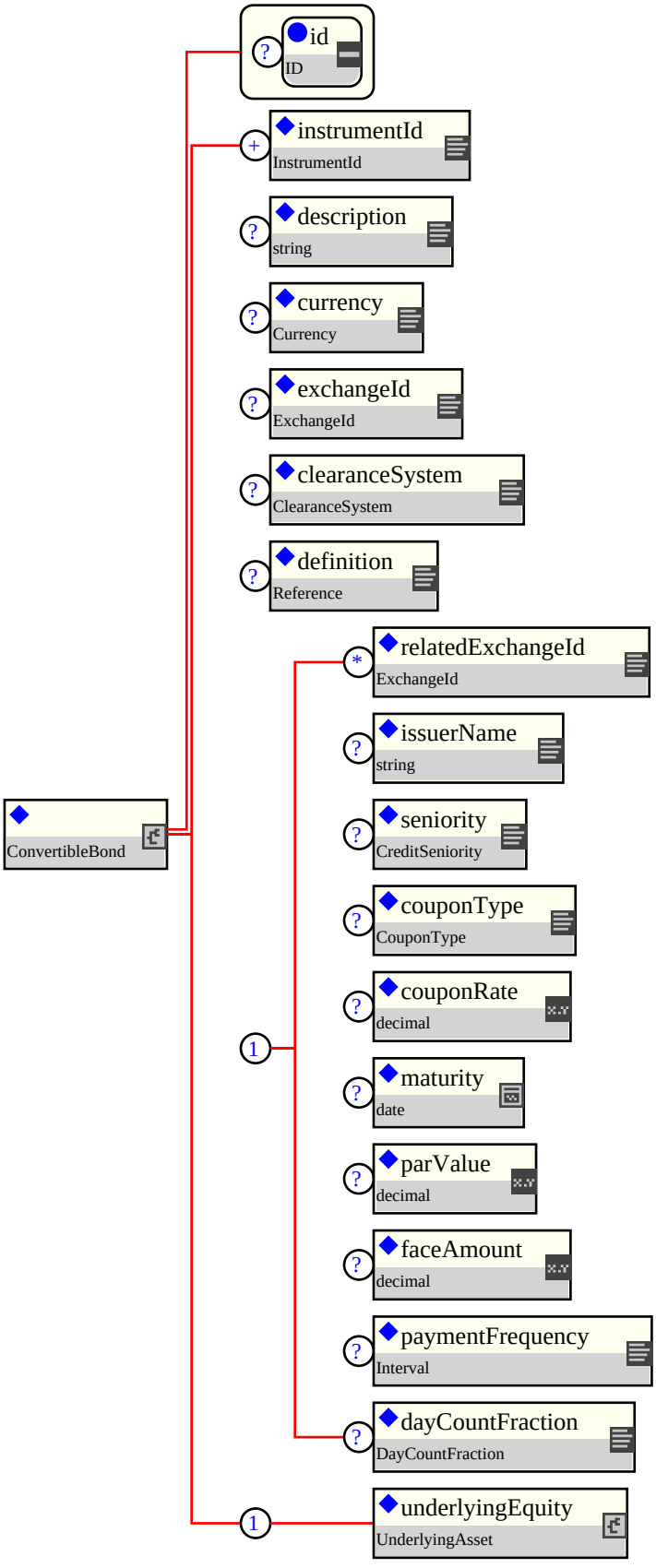
- **underlyingEquity** (exactly one occurrence; of the type UnderlyingAsset) Specifies the equity in which the comnvertible bond can be converted.

2.10.3 Used by:

- Element: convertibleBond

2.10.4 Derived Types:

2.10.5 Figure:


id
ID
instrumentId
InstrumentId
description
string
currency
Currency
exchangeId
ExchangeId
clearanceSystem
ClearanceSystem
definition
Reference
relatedExchangeId
ExchangeId
issuerName
string
seniority
CreditSeniority
couponType
CouponType
couponRate
decimal
maturity
date
parValue
decimal
faceAmount
decimal
paymentFrequency
Interval
dayCountFraction
DayCountFraction
underlyingEquity
UnderlyingAsset
ConvertibleBond

2.10.6 Schema Fragment:

```
<xsd:complexType name="ConvertibleBond">
  <xsd:complexContent>
    <xsd:extension base="Bond">
      <xsd:sequence>
        <xsd:element name="underlyingEquity" type="UnderlyingAsset">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the equity in which the comnvertible bond can
              be converted.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.11 CouponType

2.11.1 Description:

Defines a scheme of values for specifiying if the bond has a variable coupon, step-up/down coupon or a zero-coupon.

2.11.2 Contents:

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

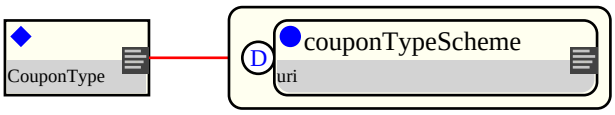
•

2.11.3 Used by:

- Complex type: Bond

2.11.4 Derived Types:

2.11.5 Figure:



2.11.6 Schema Fragment:

```
<xsd:complexType name="CouponType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a scheme of values for specifiying if the bond has a
      variable coupon, step-up/down coupon or a zero-coupon.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="couponTypeScheme" type="xsd:anyURI" default="http://www.fpml.org/coo
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

2.12 Deposit

2.12.1 Description:

2.12.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

term (exactly one occurrence; of the type Interval) Specifies the term of the deposit, e.g. 5Y.

paymentFrequency (zero or one occurrence; of the type Interval) Specifies the frequency at which the deposit pays, e.g. 6M.

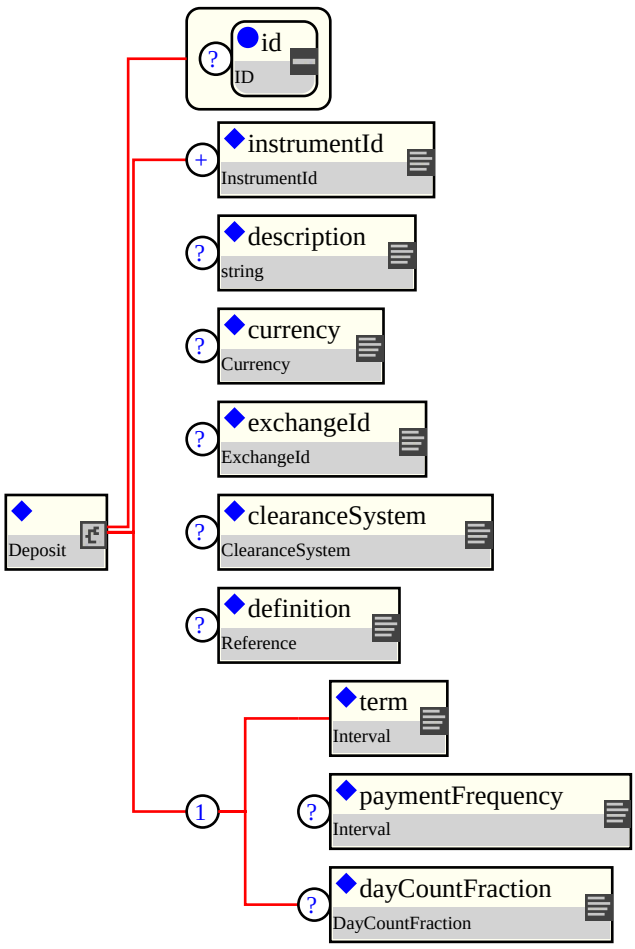
dayCountFraction (zero or one occurrence; of the type DayCountFraction) The day count basis for the deposit.

2.12.3 Used by:

- Element: deposit

2.12.4 Derived Types:

2.12.5 Figure:



2.12.6 Schema Fragment:

```
<xsd:complexType name="Deposit">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="term" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the term of the deposit, e.g. 5Y.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the frequency at which the deposit pays, e.g.
              6M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the deposit.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.13 DividendPayout

2.13.1 Description:

A type describing the dividend payout ratio associated with an equity underlyer. In certain cases the actual ratio is not known on trade inception, and only general conditions are then specified.

2.13.2 Contents:

Either

dividendPayoutRatio (exactly one occurrence; of the type xsd:decimal) Specifies the actual dividend payout ratio associated with the equity underlyer.

Or

dividendPayoutConditions (exactly one occurrence; of the type xsd:string) Specifies the dividend payout conditions that will be applied in the case where the actual ratio is not known, typically because of regulatory or legal uncertainties.

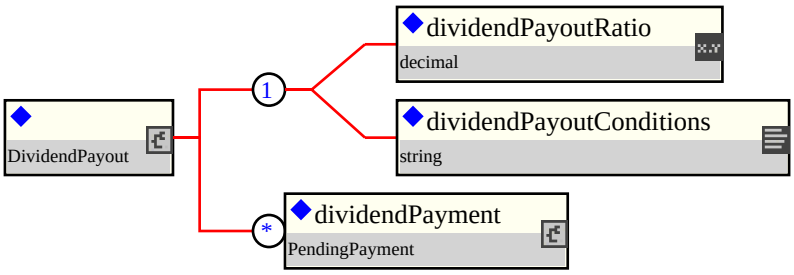
dividendPayment (zero or more occurrences; of the type PendingPayment) The next upcoming dividend payment or payments.

2.13.3 Used by:

- Complex type: BasketConstituent
- Complex type: SingleUnderlyer

2.13.4 Derived Types:

2.13.5 Figure:



2.13.6 Schema Fragment:

```
<xsd:complexType name="DividendPayout">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the dividend payout ratio associated with an
      equity underlyer. In certain cases the actual ratio is not known
      on trade inception, and only general conditions are then
      specified.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="dividendPayoutRatio" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the actual dividend payout ratio associated with
            the equity underlyer.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="dividendPayoutConditions" type="xsd:string">
        <xsd:annotation>
```

```
          <xsd:documentation xml:lang="en">
            Specifies the dividend payout conditions that will be
            applied in the case where the actual ratio is not known,
            typically because of regulatory or legal uncertainties.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:element name="dividendPayment" type="PendingPayment" minOccurs="0" maxOccurs="unbounde
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The next upcoming dividend payment or payments.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.14 EquityAsset

2.14.1 Description:

2.14.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

relatedExchangeId (zero or more occurrences; of the type ExchangeId) A short form unique identifier for a related exchange. If the element is not present then the exchange shall be the primary exchange on which listed futures and options on the underlying are listed. The term "Exchange" is assumed to have the meaning as defined in the ISDA 2002 Equity Derivatives Definitions.

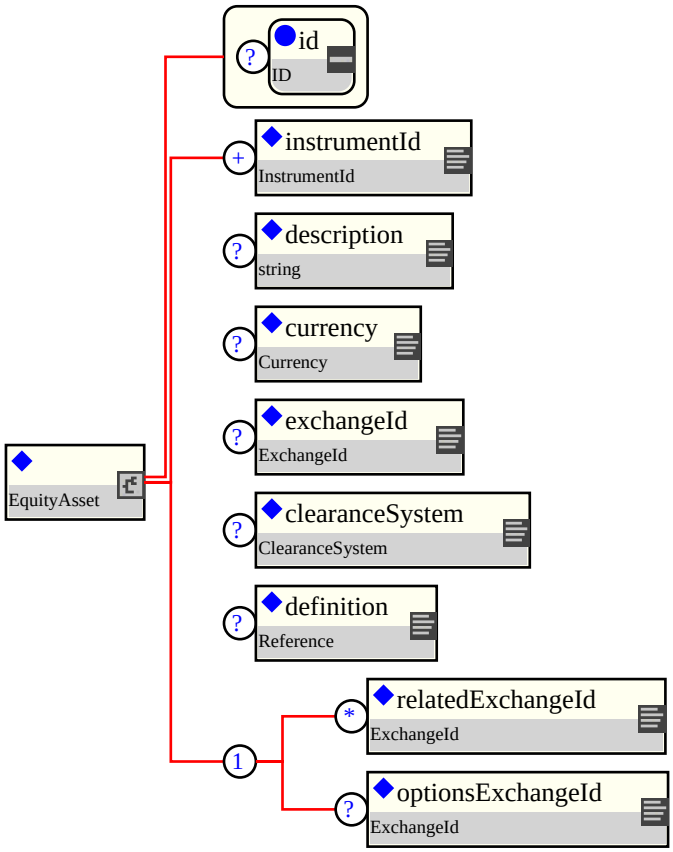
optionsExchangeId (zero or one occurrence; of the type ExchangeId) A short form unique identifier for an exchange on which the reference option contract is listed. This is to address the case where the reference exchange for the future is different than the one for the option. The options Exchange is referenced on share options when Merger Elections are selected as Options Exchange Adjustment.

2.14.3 Used by:

- Element: equity

2.14.4 Derived Types:

2.14.5 Figure:



2.14.6 Schema Fragment:

```
<xsd:complexType name="EquityAsset">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0" maxOccurs="unbour
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange. If
              the element is not present then the exchange shall be the
              primary exchange on which listed futures and options on
              the underlying are listed. The term "Exchange" is assumed
              to have the meaning as defined in the ISDA 2002 Equity
              Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="optionsExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for an exchange on which
              the reference option contract is listed. This is to
              address the case where the reference exchange for the
              future is different than the one for the option. The
              options Exchange is referenced on share options when
              Merger Elections are selected as Options Exchange
              Adjustment.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.15 ExchangeTradedContract

2.15.1 Description:

A type an Exchange Traded Contract

2.15.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

relatedExchangeId (zero or one occurrence; of the type ExchangeId) A short form unique identifier for a related exchange. If the element is not present then the exchange shall be the primary exchange on which listed futures and options on the underlying are listed. The term "Exchange" is assumed to have the meaning as defined in the ISDA 2002 Equity Derivatives Definitions.

optionsExchangeId (zero or one occurrence; of the type ExchangeId) A short form unique identifier for an exchange on which the reference option contract is listed. This is to address the case where the reference exchange for the future is different than the one for the option. The options Exchange is referenced on share options when Merger Elections are selected as Options Exchange Adjustment.

multiplier (zero or one occurrence; of the type xsd:integer) Specifies the contract multiplier that can be associated with the number of units.

contractReference (zero or one occurrence; of the type xsd:string) Specifies the contract that can be referenced, besides the undelyer type.

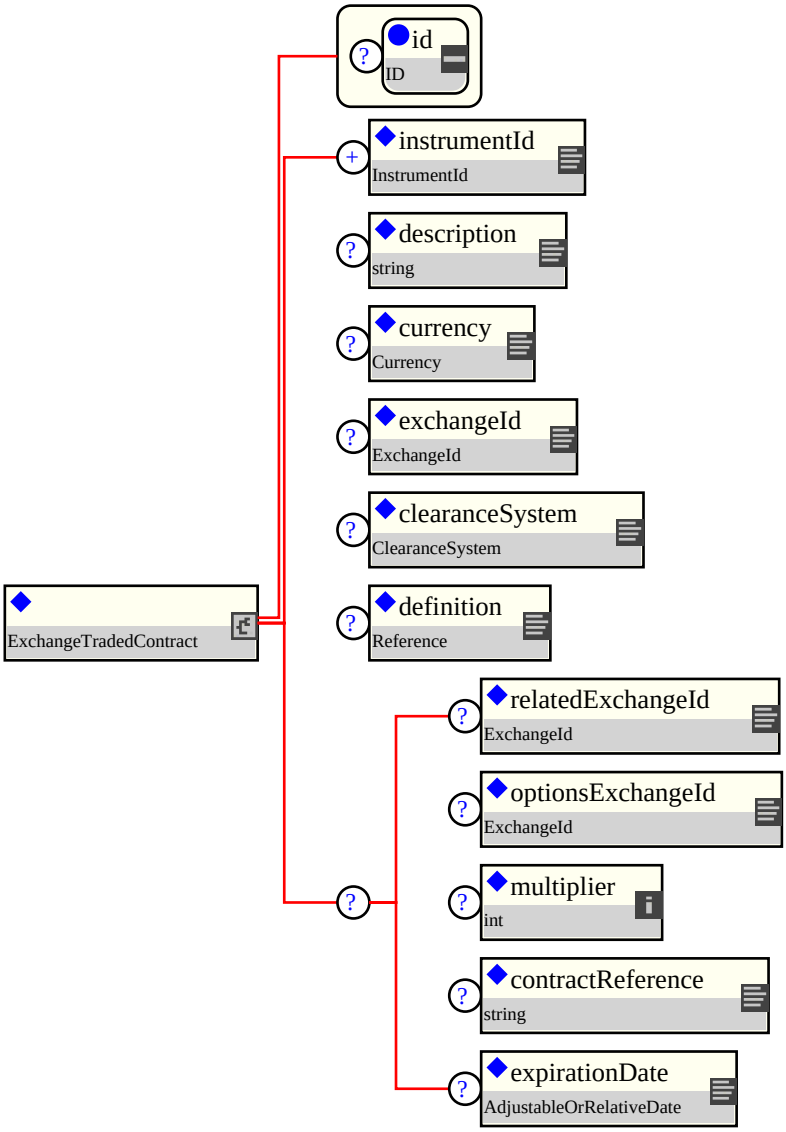
expirationDate (zero or one occurrence; of the type AdjustableOrRelativeDate) The date when the contract expires.

2.15.3 Used by:

- Complex type: Variance

2.15.4 Derived Types:

2.15.5 Figure:



2.15.6 Schema Fragment:

```
<xsd:complexType name="ExchangeTradedContract">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type an Exchange Traded Contract
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence minOccurs="0">
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange. If
              the element is not present then the exchange shall be the
              primary exchange on which listed futures and options on
              the underlying are listed. The term "Exchange" is assumed
              to have the meaning as defined in the ISDA 2002 Equity
              Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
```

```
            Aktienderivaten von 2002.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="optionsExchangeId" type="ExchangeId" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A short form unique identifier for an exchange on which
            the reference option contract is listed. This is to
            address the case where the reference exchange for the
            future is different than the one for the option. The
            options Exchange is referenced on share options when
            Merger Elections are selected as Options Exchange
            Adjustment.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="multiplier" type="xsd:integer" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the contract multiplier that can be associated
            with the number of units.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="contractReference" type="xsd:string" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the contract that can be referenced, besides
            the undelyer type.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="expirationDate" type="AdjustableOrRelativeDate" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The date when the contract expires.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
```

2.16 ExchangeTradedFund

2.16.1 Description:

2.16.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

relatedExchangeId (zero or one occurrence; of the type ExchangeId) A short form unique identifier for a related exchange. If the element is not present then the exchange shall be the primary exchange on which listed futures and options on the underlying are listed. The term "Exchange" is assumed to have the meaning as defined in the ISDA 2002 Equity Derivatives Definitions.

optionsExchangeId (zero or one occurrence; of the type ExchangeId) A short form unique identifier for an exchange on which the reference option contract is listed. This is to address the case where the reference exchange for the future is different than the one for the option. The options Exchange is referenced on share options when Merger Elections are selected as Options Exchange Adjustment.

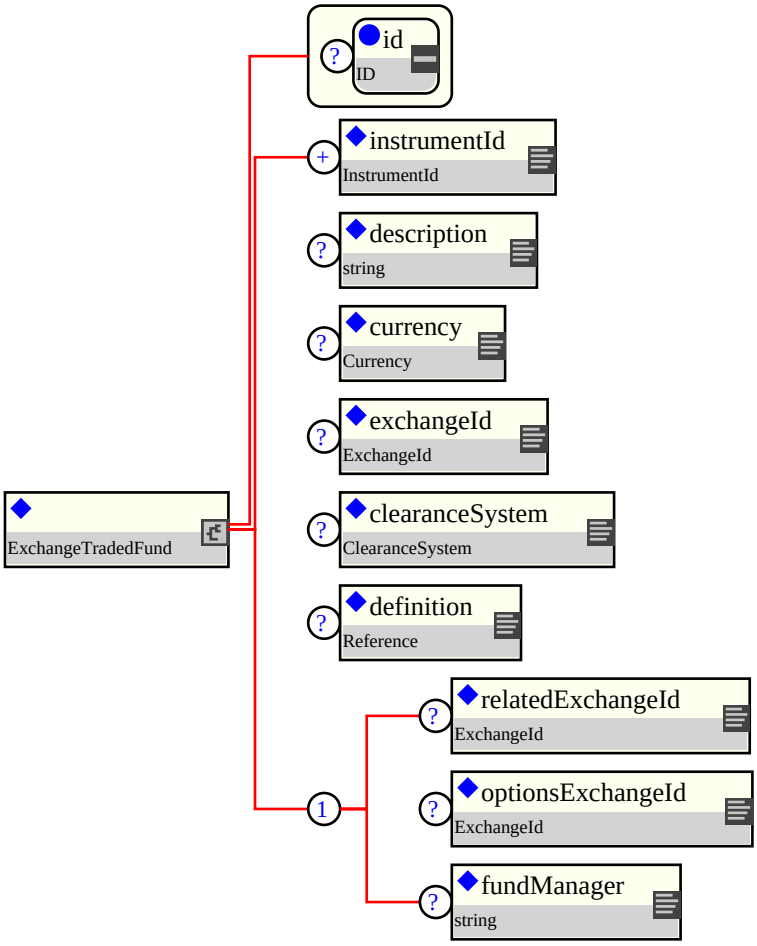
fundManager (zero or one occurrence; of the type xsd:string) Specifies the fund manager that is in charge of the fund.

2.16.3 Used by:

- Element: exchangeTradedFund

2.16.4 Derived Types:

2.16.5 Figure:



2.16.6 Schema Fragment:

```
<xsd:complexType name="ExchangeTradedFund">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange. If
              the element is not present then the exchange shall be the
              primary exchange on which listed futures and options on
              the underlying are listed. The term "Exchange" is assumed
              to have the meaning as defined in the ISDA 2002 Equity
              Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="optionsExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for an exchange on which
              the reference option contract is listed. This is to
              address the case where the reference exchange for the
              future is different than the one for the option. The
              options Exchange is referenced on share options when
              Merger Elections are selected as Options Exchange
              Adjustment.
```

```
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fundManager" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the fund manager that is in charge of the fund.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.17 Future

2.17.1 Description:

2.17.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

relatedExchangeId (zero or one occurrence; of the type ExchangeId) A short form unique identifier for a related exchange. If the element is not present then the exchange shall be the primary exchange on which listed futures and options on the underlying are listed. The term "Exchange" is assumed to have the meaning as defined in the ISDA 2002 Equity Derivatives Definitions.

optionsExchangeId (zero or one occurrence; of the type ExchangeId) A short form unique identifier for an exchange on which the reference option contract is listed. This is to address the case where the reference exchange for the future is different than the one for the option. The options Exchange is referenced on share options when Merger Elections are selected as Options Exchange Adjustment.

multiplier (zero or one occurrence; of the type xsd:integer) Specifies the contract multiplier that can be associated with the number of units.

futureContractReference (zero or one occurrence; of the type xsd:string) Specifies the future contract that can be referenced, besides the equity or index reference defined as part of the UnderlyerAsset type.

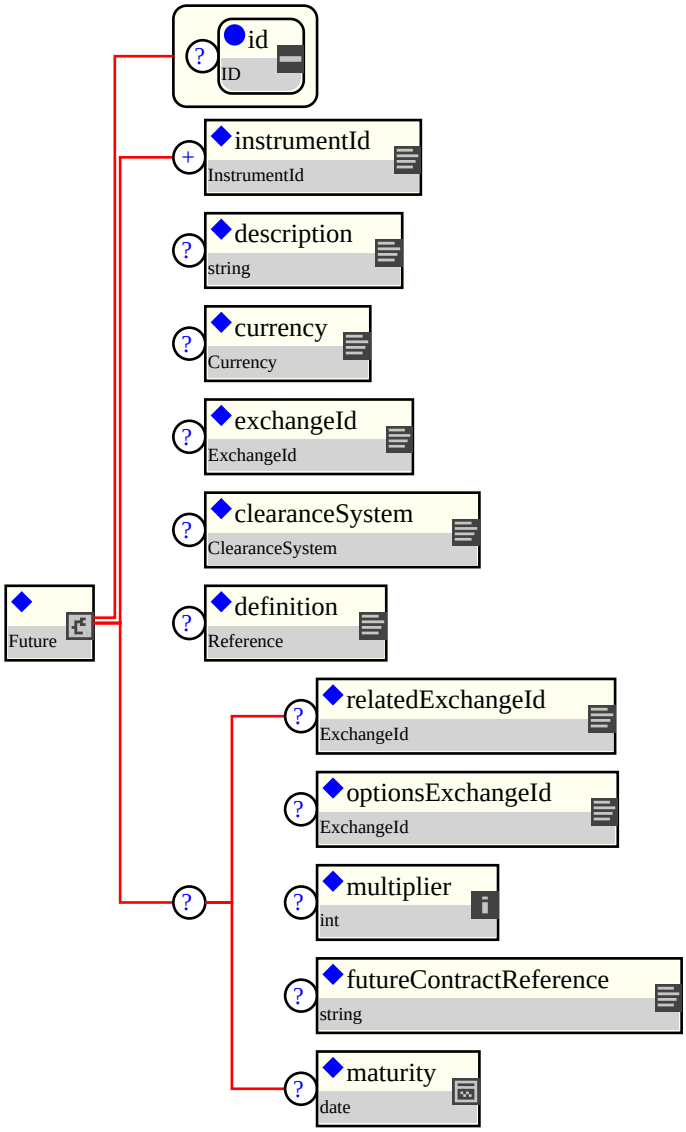
maturity (zero or one occurrence; of the type xsd:date) The date when the future contract expires.

2.17.3 Used by:

- Element: future

2.17.4 Derived Types:

2.17.5 Figure:



2.17.6 Schema Fragment:

```
<xsd:complexType name="Future">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence minOccurs="0">
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange. If
              the element is not present then the exchange shall be the
              primary exchange on which listed futures and options on
              the underlying are listed. The term "Exchange" is assumed
              to have the meaning as defined in the ISDA 2002 Equity
              Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="optionsExchangeId" type="ExchangeId" minOccurs="0">
```

```
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for an exchange on which
              the reference option contract is listed. This is to
              address the case where the reference exchange for the
              future is different than the one for the option. The
              options Exchange is referenced on share options when
              Merger Elections are selected as Options Exchange
              Adjustment.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="multiplier" type="xsd:integer" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the contract multiplier that can be associated
              with the number of units.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="futureContractReference" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the future contract that can be referenced,
              besides the equity or index reference defined as part of
              the UnderlyerAsset type.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="maturity" type="xsd:date" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date when the future contract expires.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.18 FutureId

2.18.1 Description:

A type defining a short form unique identifier for a future contract.

2.18.2 Contents:

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

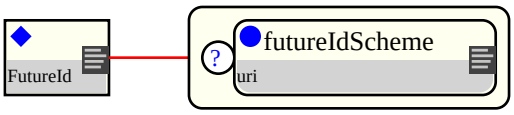
•

2.18.3 Used by:

- Complex type: Index

2.18.4 Derived Types:

2.18.5 Figure:



2.18.6 Schema Fragment:

```
<xsd:complexType name="FutureId">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining a short form unique identifier for a future
      contract.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="futureIdScheme" type="xsd:anyURI"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

2.19 FxConversion

2.19.1 Description:

2.19.2 Contents:

Either

amountRelativeTo (exactly one occurrence; of the type Reference)

Or

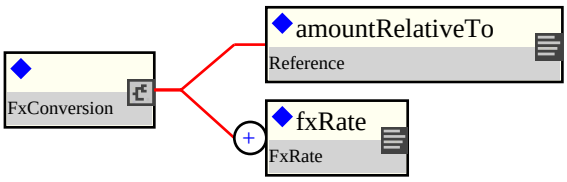
fxRate (one or more occurrences; of the type FxRate) Specifies a currency conversion rate.

2.19.3 Used by:

- Complex type: Price

2.19.4 Derived Types:

2.19.5 Figure:



2.19.6 Schema Fragment:

```
<xsd:complexType name="FxConversion">
  <xsd:choice>
    <xsd:element name="amountRelativeTo" type="Reference"/>
    <xsd:element name="fxRate" type="FxRate" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies a currency conversion rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
</xsd:complexType>
```

2.20 FxRateAsset

2.20.1 Description:

2.20.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

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

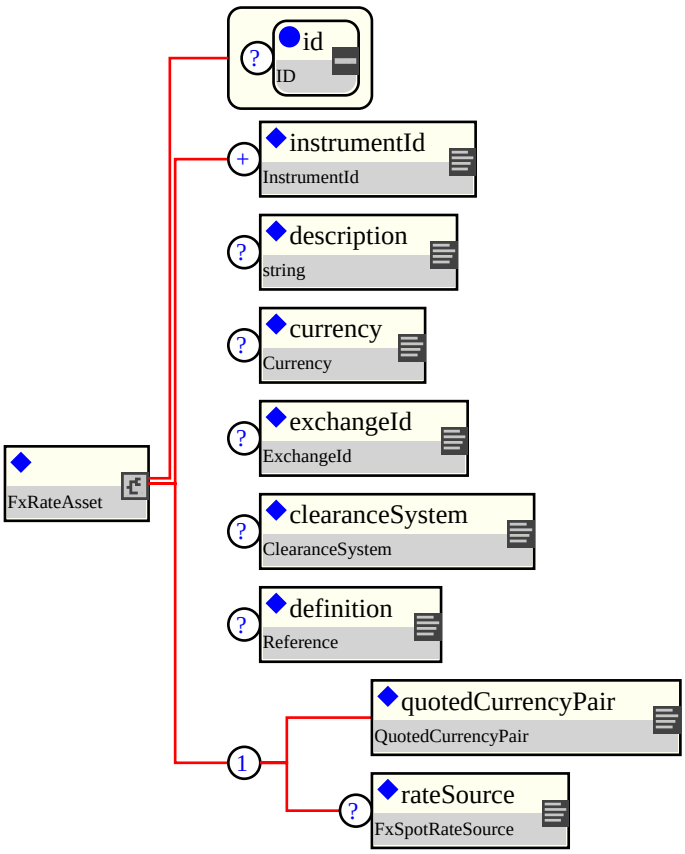
rateSource (zero or one occurrence; of the type FxSpotRateSource) Defines the source of the FX rate.

2.20.3 Used by:

- Element: fxRate

2.20.4 Derived Types:

2.20.5 Figure:



2.20.6 Schema Fragment:

```
<xsd:complexType name="FxRateAsset">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
```

```
      <xsd:sequence>
        <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Defines the two currencies for an FX trade and the
              quotation relationship between the two currencies.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="rateSource" type="FxSpotRateSource" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Defines the source of the FX rate.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.21 Index

2.21.1 Description:

2.21.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

relatedExchangeId (zero or more occurrences; of the type ExchangeId) A short form unique identifier for a related exchange. If the element is not present then the exchange shall be the primary exchange on which listed futures and options on the underlying are listed. The term "Exchange" is assumed to have the meaning as defined in the ISDA 2002 Equity Derivatives Definitions.

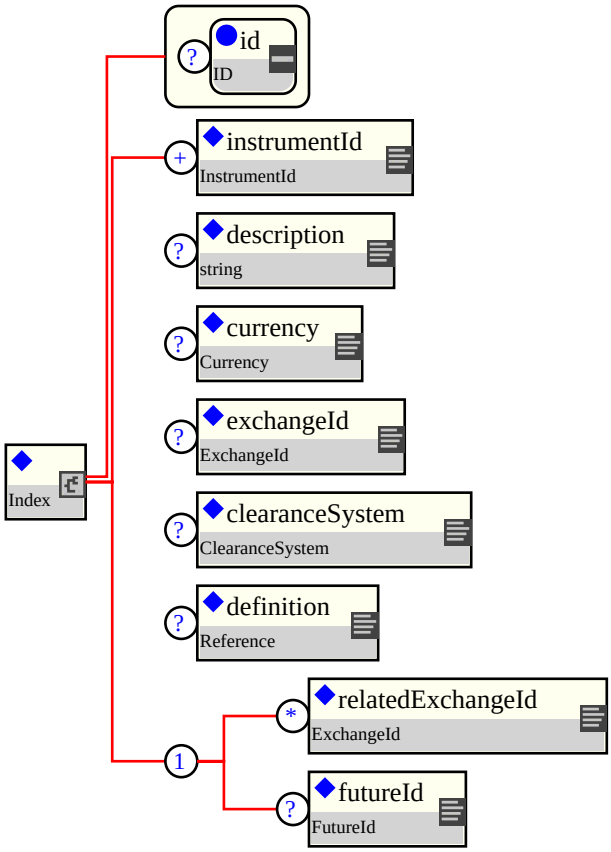
futureId (zero or one occurrence; of the type FutureId) A short form unique identifier for the reference future contract in the case of an index underlyer.

2.21.3 Used by:

- Element: index

2.21.4 Derived Types:

2.21.5 Figure:



2.21.6 Schema Fragment:

```
<xsd:complexType name="Index">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0" maxOccurs="unbour
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange. If
              the element is not present then the exchange shall be the
              primary exchange on which listed futures and options on
              the underlying are listed. The term "Exchange" is assumed
              to have the meaning as defined in the ISDA 2002 Equity
              Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="futureId" type="FutureId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for the reference future
              contract in the case of an index underlyer.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.22 MutualFund

2.22.1 Description:

2.22.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

openEndedFund (zero or one occurrence; of the type xsd:boolean) Boolean indicator to specify whether the mutual fund is an open-ended mutual fund.

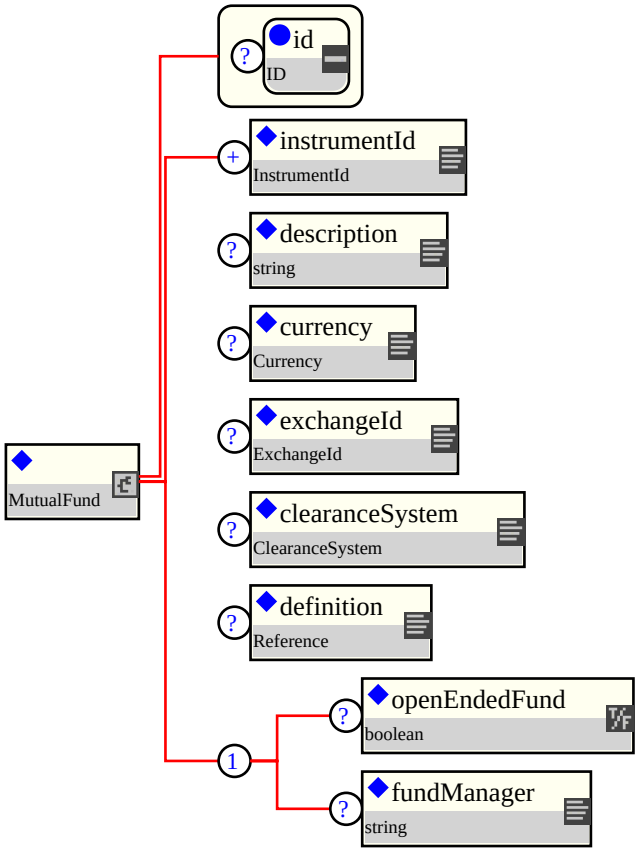
fundManager (zero or one occurrence; of the type xsd:string) Specifies the fund manager that is in charge of the fund.

2.22.3 Used by:

- Element: mutualFund

2.22.4 Derived Types:

2.22.5 Figure:



2.22.6 Schema Fragment:

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

```
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="openEndedFund" type="xsd:boolean" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Boolean indicator to specify whether the mutual fund is
              an open-ended mutual fund.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fundManager" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the fund manager that is in charge of the fund.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.23 PendingPayment

2.23.1 Description:

2.23.2 Contents:

paymentDate (exactly one occurrence; of the type xsd:date) The date that the dividend or coupon is due.

amount (exactly one occurrence; of the type Money) The amount of the dividend or coupon payment. Value of dividends or coupon between ex and pay date. Stock: if we are between ex-date and pay-date and the dividend is payable under the swap, then this should be the ex-div amount * # of securities. Bond: regardless of where we are vis-a-vis resets: (coupon % * face of bonds on swap * (bond day count fraction using days last coupon pay date of the bond through today).

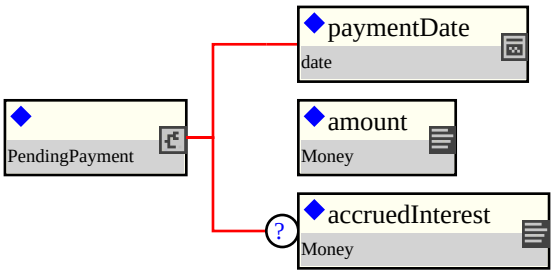
accruedInterest (zero or one occurrence; of the type Money) Accrued interest on the dividend or coupon payment. When the TRS is structured to pay a dividend or coupon on reset after payable date, you may earn interest on these amounts. This field indicates the interest accrued on dividend/coupon from pay date to statement date. This will only apply to a handful of agreements where dividendss are held to the next reset AND you receive/pay interest on unpaid amounts.

2.23.3 Used by:

- Complex type: BasketConstituent
- Complex type: DividendPayout
- Complex type: SingleUnderlyer

2.23.4 Derived Types:

2.23.5 Figure:



2.23.6 Schema Fragment:

```
<xsd:complexType name="PendingPayment">
  <xsd:annotation>
    <xsd:documentation>
      A structure representing a pending dividend or coupon payment.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="paymentDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date that the dividend or coupon is due.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="amount" type="Money">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The amount of the dividend or coupon payment. Value of
          dividends or coupon between ex and pay date. Stock: if we are
          between ex-date and pay-date and the dividend is payable
          under the swap, then this should be the ex-div amount * # of
```

```
          securities. Bond: regardless of where we are vis-a-vis
          resets: (coupon % * face of bonds on swap * (bond day count
          fraction using days last coupon pay date of the bond through
          today).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="accruedInterest" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Accrued interest on the dividend or coupon payment. When the
          TRS is structured to pay a dividend or coupon on reset after
          payable date, you may earn interest on these amounts. This
          field indicates the interest accrued on dividend/coupon from
          pay date to statement date. This will only apply to a handful
          of agreements where dividendss are held to the next reset AND
          you receive/pay interest on unpaid amounts.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.24 Price

2.24.1 Description:

A type describing the strike price.

2.24.2 Contents:

commission (zero or one occurrence; of the type Commission) This optional component specifies the commission to be charged for executing the hedge transactions.

Either

determinationMethod (exactly one occurrence; of the type xsd:string) Specifies the method according to which an amount or a date is determined.

Or

amountRelativeTo (exactly one occurrence; of the type Reference)

cleanNetPrice (zero or one occurrence; of the type xsd:decimal) The net price excluding accrued interest. The "Dirty Price" for bonds is put in the "netPrice" element, which includes accrued interest. Thus netPrice - cleanNetPrice = accruedInterest. The currency and price expression for this field are the same as those for the (dirty) netPrice.

quotationCharacteristics (zero or one occurrence; of the type QuotationCharacteristics)

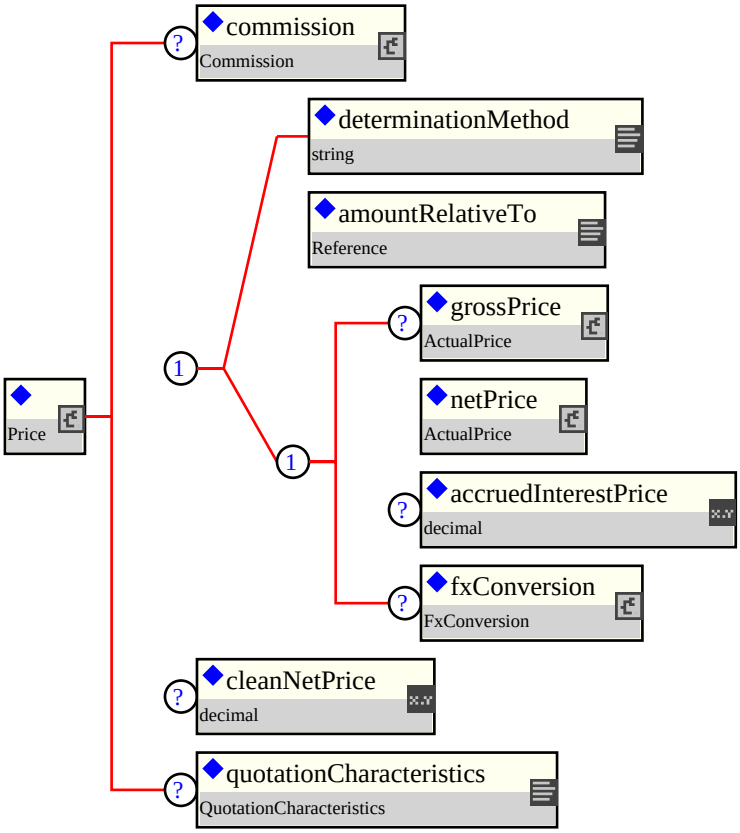
2.24.3 Used by:

- Complex type: DeprecatedEquityLegValuationPrice
- Complex type: ReturnLegValuationPrice
- Complex type: BasketConstituent

2.24.4 Derived Types:

- Complex type: DeprecatedEquityLegValuationPrice
- Complex type: ReturnLegValuationPrice

2.24.5 Figure:



2.24.6 Schema Fragment:

```
<xsd:complexType name="Price">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the strike price.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="commission" type="Commission" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          This optional component specifies the commission to be
          charged for executing the hedge transactions.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:choice>
      <xsd:element name="determinationMethod" type="xsd:string">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the method according to which an amount or a date
            is determined.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="amountRelativeTo" type="Reference"/>
      <xsd:sequence>
        <xsd:element name="grossPrice" type="ActualPrice" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the price of the underlyer, before commissions.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="netPrice" type="ActualPrice">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the price of the underlyer, net of commissions.
            </xsd:documentation>
```

```
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="accruedInterestPrice" type="xsd:decimal" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the accrued interest that are part of the dirty
            price in the case of a fixed income security or a
            convertible bond. Expressed in percentage of the
            notional.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="fxConversion" type="FxConversion" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the currency conversion rate that applies to an
            amount. This rate can either be defined elsewhere in the
            document (case of a quanto swap), or explicitly described
            through this component.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:choice>
  <xsd:element name="cleanNetPrice" type="xsd:decimal" minOccurs="0">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        The net price excluding accrued interest. The "Dirty Price"
        for bonds is put in the "netPrice" element, which includes
        accrued interest. Thus netPrice - cleanNetPrice =
        accruedInterest. The currency and price expression for this
        field are the same as those for the (dirty) netPrice.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="quotationCharacteristics" type="QuotationCharacteristics" minOccurs="0">
    <xsd:annotation>
      <xsd:documentation>
        Allows information about how the price was quoted to be
        provided.
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
</xsd:sequence>
</xsd:complexType>
```

2.25 RateIndex

2.25.1 Description:

2.25.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

floatingRateIndex (exactly one occurrence; of the type FloatingRateIndex)

term (exactly one occurrence; of the type Interval) Specifies the term of the simple swap, e.g. 5Y.

paymentFrequency (zero or one occurrence; of the type Interval) Specifies the frequency at which the index pays, e.g. 6M.

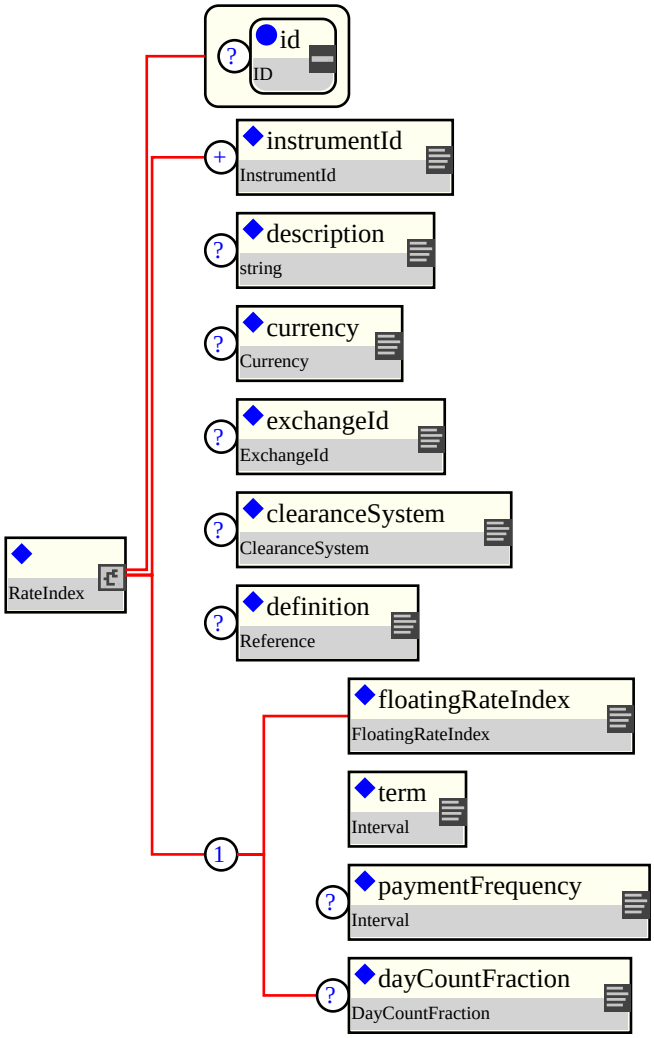
dayCountFraction (zero or one occurrence; of the type DayCountFraction) The day count basis for the index.

2.25.3 Used by:

- Element: rateIndex

2.25.4 Derived Types:

2.25.5 Figure:



2.25.6 Schema Fragment:

```
<xsd:complexType name="RateIndex">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="floatingRateIndex" type="FloatingRateIndex"/>
        <xsd:element name="term" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the term of the simple swap, e.g. 5Y.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the frequency at which the index pays, e.g. 6M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the index.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
```

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

2.26 SimpleCreditDefaultSwap

2.26.1 Description:

2.26.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

Either

referenceEntity (exactly one occurrence; of the type LegalEntity) The entity for which this is defined.

Or

creditEntityReference (exactly one occurrence; of the type Reference) An XML reference a credit entity defined elsewhere in the document.

term (exactly one occurrence; of the type Interval) Specifies the term of the simple CD swap, e.g. 5Y.

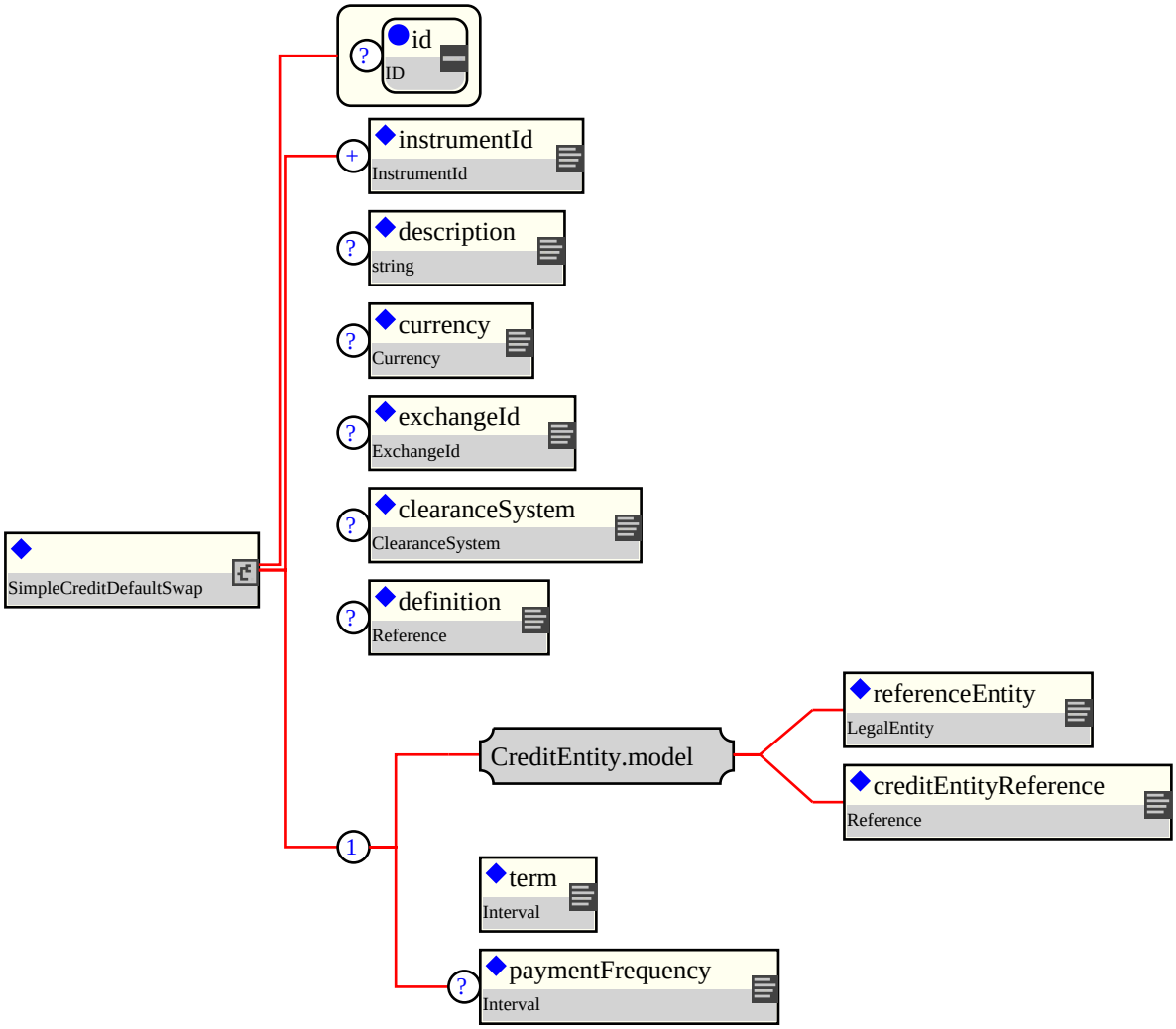
paymentFrequency (zero or one occurrence; of the type Interval) Specifies the frequency at which the swap pays, e.g. 6M.

2.26.3 Used by:

- Element: simpleCreditDefaultSwap

2.26.4 Derived Types:

2.26.5 Figure:



2.26.6 Schema Fragment:

```
<xsd:complexType name="SimpleCreditDefaultSwap">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:group ref="CreditEntity.model">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The reference entity, index, etc. upon which the CDS is
              based.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:group>
        <xsd:element name="term" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the term of the simple CD swap, e.g. 5Y.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the frequency at which the swap pays, e.g. 6M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
```

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

2.27 SimpleFra

2.27.1 Description:

2.27.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

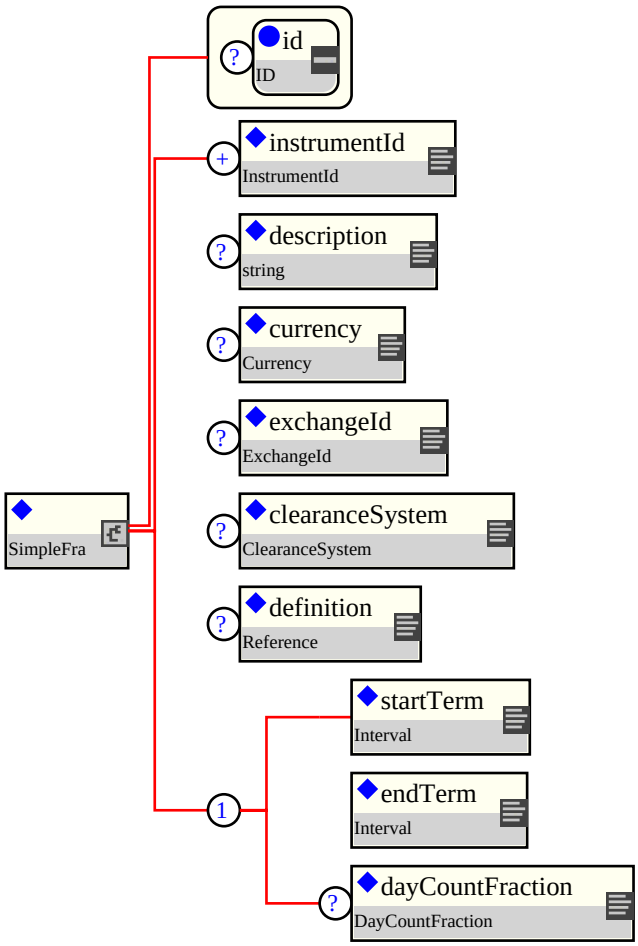
startTerm (exactly one occurrence; of the type Interval) Specifies the start term of the simple fra, e.g. 3M.
endTerm (exactly one occurrence; of the type Interval) Specifies the end term of the simple fra, e.g. 9M.
dayCountFraction (zero or one occurrence; of the type DayCountFraction) The day count basis for the FRA.

2.27.3 Used by:

- Element: simpleFra

2.27.4 Derived Types:

2.27.5 Figure:



2.27.6 Schema Fragment:

```
<xsd:complexType name="SimpleFra">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="startTerm" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the start term of the simple fra, e.g. 3M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="endTerm" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the end term of the simple fra, e.g. 9M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the FRA.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.28 SimpleIRSwap

2.28.1 Description:

2.28.2 Contents:

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

- A type describing the basic components of a security of index underlyer.

term (exactly one occurrence; of the type Interval) Specifies the term of the simple swap, e.g. 5Y.

paymentFrequency (zero or one occurrence; of the type Interval) Specifies the frequency at which the swap pays, e.g. 6M.

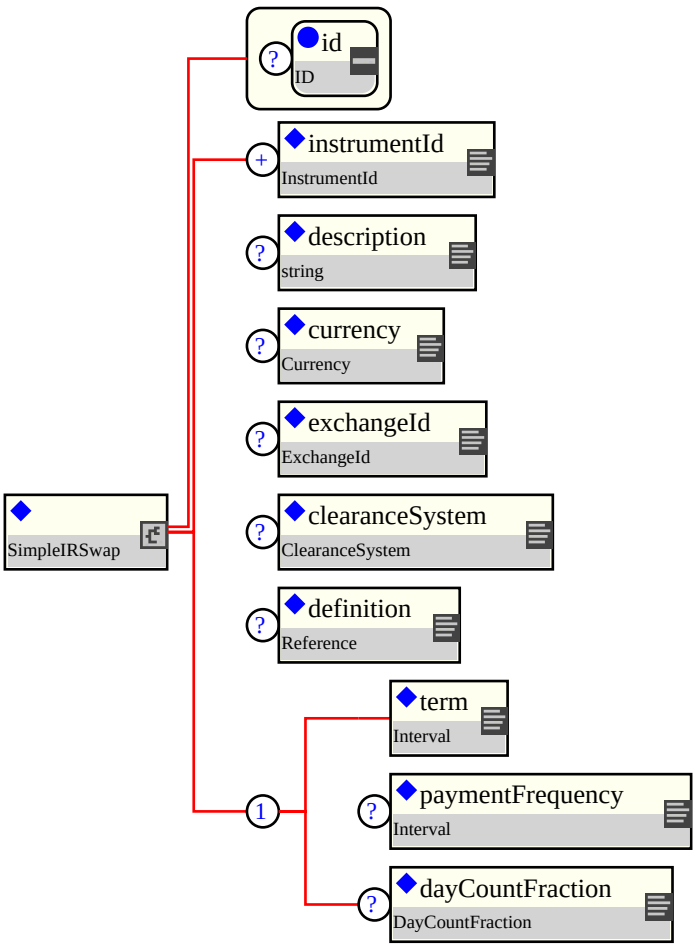
dayCountFraction (zero or one occurrence; of the type DayCountFraction) The day count basis for the swap.

2.28.3 Used by:

- Element: simpleIrSwap

2.28.4 Derived Types:

2.28.5 Figure:



2.28.6 Schema Fragment:

```
<xsd:complexType name="SimpleIRSwap">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="term" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the term of the simple swap, e.g. 5Y.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the frequency at which the swap pays, e.g. 6M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the swap.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

2.29 SingleUnderlyer

2.29.1 Description:

A type describing the single underlyer of a swap.

2.29.2 Contents:

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

openUnits (zero or one occurrence; of the type xsd:decimal) The number of units (index or securities) that constitute the underlyer of the swap. In the case of a basket swap, this element is used to reference both the number of basket units, and the number of each asset components of the basket when these are expressed in absolute terms.

dividendPayout (zero or one occurrence; of the type DividendPayout) Specifies the dividend payout ratio associated with an equity underlyer. A basket swap can have different payout ratios across the various underlying constituents. In certain cases the actual ratio is not known on trade inception, and only general conditions are then specified.

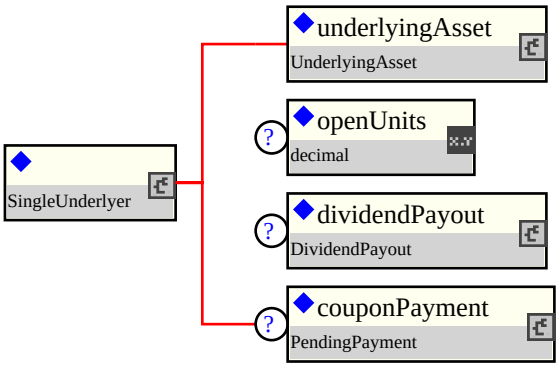
couponPayment (zero or one occurrence; of the type PendingPayment) The next upcoming coupon payment.

2.29.3 Used by:

- Complex type: Underlyer

2.29.4 Derived Types:

2.29.5 Figure:



2.29.6 Schema Fragment:

```
<xsd:complexType name="SingleUnderlyer">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the single underlyer of a swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="underlyingAsset"/>
    <xsd:element name="openUnits" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The number of units (index or securities) that constitute the
          underlyer of the swap. In the case of a basket swap, this
          element is used to reference both the number of basket units,
          and the number of each asset components of the basket when
          these are expressed in absolute terms.
        </xsd:documentation>
      </xsd:annotation>
```

```
    </xsd:element>
    <xsd:element name="dividendPayout" type="DividendPayout" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the dividend payout ratio associated with an equity
          underlyer. A basket swap can have different payout ratios
          across the various underlying constituents. In certain cases
          the actual ratio is not known on trade inception, and only
          general conditions are then specified.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="couponPayment" type="PendingPayment" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The next upcoming coupon payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

2.30 Underlyer

2.30.1 Description:

A type describing the whole set of possible underlyers: single underlyers or multiple underlyers, each of these having either security or index components.

2.30.2 Contents:

Either

singleUnderlyer (exactly one occurrence; of the type SingleUnderlyer) Describes the swap's underlyer when it has only one asset component.

Or

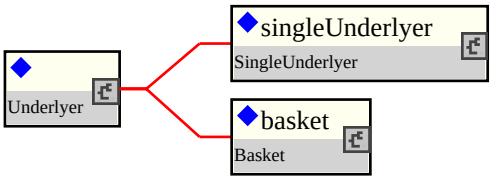
basket (exactly one occurrence; of the type Basket) Describes the swap's underlyer when it has multiple asset components.

2.30.3 Used by:

- Complex type: DeprecatedEquityLeg
- Complex type: EquityDerivativeBase
- Complex type: ReturnLeg
- Complex type: VarianceLeg

2.30.4 Derived Types:

2.30.5 Figure:



2.30.6 Schema Fragment:

```
<xsd:complexType name="Underlyer">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the whole set of possible underlyers: single
      underlyers or multiple underlyers, each of these having either
      security or index components.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="singleUnderlyer" type="SingleUnderlyer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Describes the swap's underlyer when it has only one asset
          component.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="basket" type="Basket">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Describes the swap's underlyer when it has multiple asset
          components.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
</xsd:complexType>
```

2.31 UnderlyingAsset

2.31.1 Description:

A type describing the basic components of a security of index underlyer.

2.31.2 Contents:

instrumentId (one or more occurrences; of the type InstrumentId)

description (zero or one occurrence; of the type xsd:string) The long name of a security.

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

exchangeId (zero or one occurrence; of the type ExchangeId)

clearanceSystem (zero or one occurrence; of the type ClearanceSystem)

definition (zero or one occurrence; of the type Reference) An optional reference to a full FpML product that defines the simple product in greater detail. In case of inconsistency between the terms of the simple product and those of the detailed definition, the values in the simple product override those in the detailed definition.

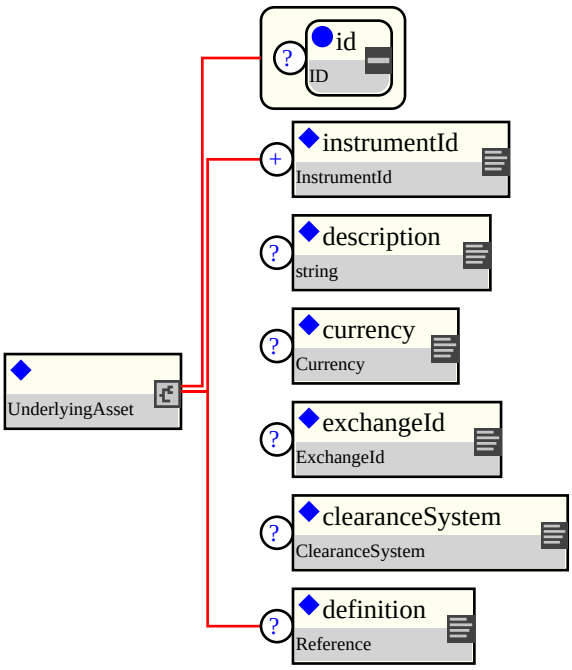
2.31.3 Used by:

- Element: underlyingAsset
- Complex type: Bond
- Complex type: Cash
- Complex type: Deposit
- Complex type: EquityAsset
- Complex type: ExchangeTradedContract
- Complex type: ExchangeTradedFund
- Complex type: Future
- Complex type: FxRateAsset
- Complex type: Index
- Complex type: MutualFund
- Complex type: RateIndex
- Complex type: SimpleCreditDefaultSwap
- Complex type: SimpleFra
- Complex type: SimpleIRSwap
- Complex type: ConvertibleBond

2.31.4 Derived Types:

- Complex type: Bond
- Complex type: Cash
- Complex type: Deposit
- Complex type: EquityAsset
- Complex type: ExchangeTradedContract
- Complex type: ExchangeTradedFund
- Complex type: Future
- Complex type: FxRateAsset
- Complex type: Index
- Complex type: MutualFund
- Complex type: RateIndex
- Complex type: SimpleCreditDefaultSwap
- Complex type: SimpleFra
- Complex type: SimpleIRSwap

2.31.5 Figure:



2.31.6 Schema Fragment:

```
<xsd:complexType name="UnderlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the basic components of a security of index
      underlyer.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="instrumentId" type="InstrumentId" maxOccurs="unbounded"/>
    <xsd:element name="description" type="xsd:string" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The long name of a security.
        </xsd:documentation>
        <xsd:documentation xml:lang="de">
          Vollständige Wertpapierbezeichnung.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="currency" type="Currency" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which an amount is denominated.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="exchangeId" type="ExchangeId" minOccurs="0"/>
    <xsd:element name="clearanceSystem" type="ClearanceSystem" minOccurs="0"/>
    <xsd:element name="definition" type="Reference" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An optional reference to a full FpML product that defines the
          simple product in greater detail. In case of inconsistency
          between the terms of the simple product and those of the
          detailed definition, the values in the simple product
          override those in the detailed definition.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
```

```
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
```

3 Schema listing

```
<xsd:schema targetNamespace="http://www.fpml.org/2005/FpML-4-2" elementFormDefault="qualified"
  <xsd:include schemaLocation="fpml-shared-4-2.xsd"/>
  <xsd:include schemaLocation="fpml-valuation-base-4-2.xsd"/>
  <xsd:complexType name="ActualPrice">
    <xsd:sequence>
      <xsd:element name="currency" type="Currency" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the currency associated with the net price. This
            element is not present if the price is expressed in
            percentage terms (as specified through the priceExpression
            element).
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="amount" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the net price amount. In the case of a fixed
            income security or a convertible bond, this price includes
            the accrued interests.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="priceExpression" type="PriceExpressionEnum">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies whether the price is expressed in absolute or
            relative terms.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="Basket">
    <xsd:annotation>
      <xsd:documentation xml:lang="en">
        A type describing the underlyer features of a basket swap. Each
        of the basket constituents are described through an embedded
        component, the basketConstituentsType.
      </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
      <xsd:element name="openUnits" type="xsd:decimal" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The number of units (index or securities) that constitute
            the underlyer of the swap. In the case of a basket swap,
            this element is used to reference both the number of basket
            units, and the number of each asset components of the
            basket when these are expressed in absolute terms.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="basketConstituent" type="BasketConstituent" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Describes each of the components of the basket.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="basketDivisor" type="xsd:decimal" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the basket divisor amount. This value is normally
            used to adjust the constituent weight for pricing or to
            adjust for dividends, or other corporate actions.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:group ref="BasketIdentifier.model" minOccurs="0">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Reuses the group that specifies a name and an identifier
            for a given basket.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:group>
      <xsd:element name="basketCurrency" type="Currency" minOccurs="0">
```

```
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the currency for this basket.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID" use="optional"/>
</xsd:complexType>
<xsd:complexType name="BasketConstituent">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing each of the constituents of a basket swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="underlyingAsset"/>
    <xsd:element name="constituentWeight" type="ConstituentWeight" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the weight of each of the underlyer constituent
          within the basket, either in absolute or relative terms.
          This is an optional component, as certain swaps do not
          specify a specific weight for each of their basket
          constituents.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="dividendPayout" type="DividendPayout" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the dividend payout ratio associated with an
          equity underlyer. A basket swap can have different payout
          ratios across the various underlying constituents. In
          certain cases the actual ratio is not known on trade
          inception, and only general conditions are then specified.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="underlyerPrice" type="Price" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the price that is associated with each of the
          basket constituents. This component is optional, as it is
          not absolutely required to accurately describe the
          economics of the trade, considering the price that
          characterizes the equity swap is associated to the leg of
          the trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="underlyerNotional" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the notional (i.e. price * quantity) that is
          associated with each of the basket constituents. This
          component is optional, as it is not absolutely required to
          accurately describe the economics of the trade, considering
          the notional that characterizes the equity swap is
          associated to the leg of the trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="underlyerSpread" type="Reference" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Provides a link to the spread schedule used for this
          underlyer.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="couponPayment" type="PendingPayment" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The next upcoming coupon payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID" use="optional"/>
</xsd:complexType>
<xsd:complexType name="BasketId">
  <xsd:simpleContent>
```

```
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="basketIdScheme" type="xsd:anyURI"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="BasketName">
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="basketNameScheme" type="xsd:anyURI"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="Bond">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0" maxOccurs="unbo
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange.
              If the element is not present then the exchange shall
              be the primary exchange on which listed futures and
              options on the underlying are listed. The term
              "Exchange" is assumed to have the meaning as defined in
              the ISDA 2002 Equity Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="issuerName" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the issuer name of a fixed income security or
              convertible bond.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="seniority" type="CreditSeniority" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The repayment precedence of a debt instrument.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="couponType" type="CouponType" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies if the bond has a variable coupon,
              step-up/down coupon or a zero-coupon.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="couponRate" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the coupon rate (expressed in percentage) of
              a fixed income security or convertible bond.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="maturity" type="xsd:date" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date when the principal amount of a security
              becomes due and payable.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="parValue" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the nominal amount of a fixed income security
              or convertible bond.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="faceAmount" type="xsd:decimal" minOccurs="0">
```

```
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the total amount of the issue. Corresponds to
              the par value multiplied by the number of issued
              security.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the frequency at which the bond pays, e.g.
              6M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the bond.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Cash">
  <xsd:complexContent>
    <xsd:restriction base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="instrumentId" type="InstrumentId" maxOccurs="unbounded"/>
        <xsd:element name="description" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The long name of a security.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Vollständige Wertpapierbezeichnung.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="currency" type="Currency">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The currency in which an amount is denominated.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:restriction>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Commission">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the commission that will be charged for each
      of the hedge transactions.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="commissionDenomination" type="CommissionDenominationEnum">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The type of units used to express a commission.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="commissionAmount" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The commission amount, expressed in the way indicated by
          the commissionType element.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="currency" type="Currency" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which an amount is denominated.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

```
    <xsd:element name="commissionPerTrade" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The total commission per trade.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="fxRate" type="FxRate" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          FX Rates that have been used to convert commissions to a
          single currency.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="ConstituentWeight">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the weight of each of the underlyer
      constituent within the basket, either in absolute or relative
      terms.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="openUnits" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The number of units (index or securities) that constitute
          the underlyer of the swap. In the case of a basket swap,
          this element is used to reference both the number of basket
          units, and the number of each asset components of the
          basket when these are expressed in absolute terms.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="basketPercentage" type="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The relative weight of each respective basket constituent,
          expressed in percentage.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="basketAmount" type="Money">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The relative weight of each respective basket constituent,
          expressed as a monetary amount.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="ConvertibleBond">
  <xsd:complexContent>
    <xsd:extension base="Bond">
      <xsd:sequence>
        <xsd:element name="underlyingEquity" type="UnderlyingAsset">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the equity in which the comnvertible bond can
              be converted.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="CouponType">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a scheme of values for specifiying if the bond has a
      variable coupon, step-up/down coupon or a zero-coupon.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="couponTypeScheme" type="xsd:anyURI" default="http://www.fpml.org/c
    </xsd:extension>
  </xsd:simpleContent>
```

```
</xsd:complexType>
<xsd:complexType name="Deposit">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="term" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the term of the deposit, e.g. 5Y.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the frequency at which the deposit pays, e.g.
              6M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the deposit.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="DividendPayout">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the dividend payout ratio associated with an
      equity underlyer. In certain cases the actual ratio is not
      known on trade inception, and only general conditions are then
      specified.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="dividendPayoutRatio" type="xsd:decimal">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the actual dividend payout ratio associated
            with the equity underlyer.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="dividendPayoutConditions" type="xsd:string">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the dividend payout conditions that will be
            applied in the case where the actual ratio is not known,
            typically because of regulatory or legal uncertainties.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
    <xsd:element name="dividendPayment" type="PendingPayment" minOccurs="0" maxOccurs="unbour
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The next upcoming dividend payment or payments.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="EquityAsset">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0" maxOccurs="unbo
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange.
              If the element is not present then the exchange shall
              be the primary exchange on which listed futures and
              options on the underlying are listed. The term
              "Exchange" is assumed to have the meaning as defined in
              the ISDA 2002 Equity Derivatives Definitions.
            </xsd:documentation>
```

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            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="optionsExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for an exchange on which
              the reference option contract is listed. This is to
              address the case where the reference exchange for the
              future is different than the one for the option. The
              options Exchange is referenced on share options when
              Merger Elections are selected as Options Exchange
              Adjustment.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="ExchangeTradedContract">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type an Exchange Traded Contract
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence minOccurs="0">
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange.
              If the element is not present then the exchange shall
              be the primary exchange on which listed futures and
              options on the underlying are listed. The term
              "Exchange" is assumed to have the meaning as defined in
              the ISDA 2002 Equity Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="optionsExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for an exchange on which
              the reference option contract is listed. This is to
              address the case where the reference exchange for the
              future is different than the one for the option. The
              options Exchange is referenced on share options when
              Merger Elections are selected as Options Exchange
              Adjustment.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="multiplier" type="xsd:integer" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the contract multiplier that can be
              associated with the number of units.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="contractReference" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the contract that can be referenced, besides
              the undelyer type.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
```

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        <xsd:element name="expirationDate" type="AdjustableOrRelativeDate" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date when the contract expires.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="ExchangeTradedFund">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange.
              If the element is not present then the exchange shall
              be the primary exchange on which listed futures and
              options on the underlying are listed. The term
              "Exchange" is assumed to have the meaning as defined in
              the ISDA 2002 Equity Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="optionsExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for an exchange on which
              the reference option contract is listed. This is to
              address the case where the reference exchange for the
              future is different than the one for the option. The
              options Exchange is referenced on share options when
              Merger Elections are selected as Options Exchange
              Adjustment.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fundManager" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the fund manager that is in charge of the
              fund.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Future">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence minOccurs="0">
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange.
              If the element is not present then the exchange shall
              be the primary exchange on which listed futures and
              options on the underlying are listed. The term
              "Exchange" is assumed to have the meaning as defined in
              the ISDA 2002 Equity Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="optionsExchangeId" type="ExchangeId" minOccurs="0">
```

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          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for an exchange on which
              the reference option contract is listed. This is to
              address the case where the reference exchange for the
              future is different than the one for the option. The
              options Exchange is referenced on share options when
              Merger Elections are selected as Options Exchange
              Adjustment.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="multiplier" type="xsd:integer" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the contract multiplier that can be
              associated with the number of units.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="futureContractReference" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the future contract that can be referenced,
              besides the equity or index reference defined as part
              of the UnderlyerAsset type.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="maturity" type="xsd:date" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The date when the future contract expires.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FutureId">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type defining a short form unique identifier for a future
      contract.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:normalizedString">
      <xsd:attribute name="futureIdScheme" type="xsd:anyURI"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="FxConversion">
  <xsd:choice>
    <xsd:element name="amountRelativeTo" type="Reference"/>
    <xsd:element name="fxRate" type="FxRate" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies a currency conversion rate.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="FxRateAsset">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="quotedCurrencyPair" type="QuotedCurrencyPair">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Defines the two currencies for an FX trade and the
              quotation relationship between the two currencies.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="rateSource" type="FxSpotRateSource" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Defines the source of the FX rate.
            </xsd:documentation>
          </xsd:annotation>
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        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Index">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="relatedExchangeId" type="ExchangeId" minOccurs="0" maxOccurs="unbo
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for a related exchange.
              If the element is not present then the exchange shall
              be the primary exchange on which listed futures and
              options on the underlying are listed. The term
              "Exchange" is assumed to have the meaning as defined in
              the ISDA 2002 Equity Derivatives Definitions.
            </xsd:documentation>
            <xsd:documentation xml:lang="de">
              Eindeutiges Kürzel einer relevanten Börse. Fehlt dieses
              Element, gilt die Hauptbörse, an der börsengehandelte
              Futures- und Optionskontrakte auf den Basiswert notiert
              sind, als "Börse" im Sinne der ISDA-Definitionen zu
              Aktienderivaten von 2002.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="futureId" type="FutureId" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              A short form unique identifier for the reference future
              contract in the case of an index underlyer.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="MutualFund">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="openEndedFund" type="xsd:boolean" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Boolean indicator to specify whether the mutual fund is
              an open-ended mutual fund.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fundManager" type="xsd:string" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the fund manager that is in charge of the
              fund.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="PendingPayment">
  <xsd:annotation>
    <xsd:documentation>
      A structure representing a pending dividend or coupon payment.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="paymentDate" type="xsd:date">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The date that the dividend or coupon is due.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="amount" type="Money">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The amount of the dividend or coupon payment. Value of
          dividends or coupon between ex and pay date. Stock: if we
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          are between ex-date and pay-date and the dividend is
          payable under the swap, then this should be the ex-div
          amount * # of securities. Bond: regardless of where we are
          vis-a-vis resets: (coupon % * face of bonds on swap * (bond
          day count fraction using days last coupon pay date of the
          bond through today).
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="accruedInterest" type="Money" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Accrued interest on the dividend or coupon payment. When
          the TRS is structured to pay a dividend or coupon on reset
          after payable date, you may earn interest on these amounts.
          This field indicates the interest accrued on
          dividend/coupon from pay date to statement date. This will
          only apply to a handful of agreements where dividendss are
          held to the next reset AND you receive/pay interest on
          unpaid amounts.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Price">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the strike price.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="commission" type="Commission" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          This optional component specifies the commission to be
          charged for executing the hedge transactions.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:choice>
      <xsd:element name="determinationMethod" type="xsd:string">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            Specifies the method according to which an amount or a
            date is determined.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="amountRelativeTo" type="Reference"/>
      <xsd:sequence>
        <xsd:element name="grossPrice" type="ActualPrice" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the price of the underlyer, before
              commissions.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="netPrice" type="ActualPrice">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the price of the underlyer, net of
              commissions.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="accruedInterestPrice" type="xsd:decimal" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the accrued interest that are part of the
              dirty price in the case of a fixed income security or a
              convertible bond. Expressed in percentage of the
              notional.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="fxConversion" type="FxConversion" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the currency conversion rate that applies to
              an amount. This rate can either be defined elsewhere in
              the document (case of a quanto swap), or explicitly
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              described through this component.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:choice>
    <xsd:element name="cleanNetPrice" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The net price excluding accrued interest. The "Dirty Price"
          for bonds is put in the "netPrice" element, which includes
          accrued interest. Thus netPrice - cleanNetPrice =
          accruedInterest. The currency and price expression for this
          field are the same as those for the (dirty) netPrice.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="quotationCharacteristics" type="QuotationCharacteristics" minOccurs="0
      <xsd:annotation>
        <xsd:documentation>
          Allows information about how the price was quoted to be
          provided.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="RateIndex">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="floatingRateIndex" type="FloatingRateIndex"/>
        <xsd:element name="term" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the term of the simple swap, e.g. 5Y.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the frequency at which the index pays, e.g.
              6M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the index.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="SimpleCreditDefaultSwap">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:group ref="CreditEntity.model">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The reference entity, index, etc. upon which the CDS is
              based.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:group>
        <xsd:element name="term" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the term of the simple CD swap, e.g. 5Y.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the frequency at which the swap pays, e.g.
              6M.
            </xsd:documentation>
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          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="SimpleFra">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="startTerm" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the start term of the simple fra, e.g. 3M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="endTerm" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the end term of the simple fra, e.g. 9M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the FRA.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="SimpleIRSwap">
  <xsd:complexContent>
    <xsd:extension base="UnderlyingAsset">
      <xsd:sequence>
        <xsd:element name="term" type="Interval">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the term of the simple swap, e.g. 5Y.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="paymentFrequency" type="Interval" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              Specifies the frequency at which the swap pays, e.g.
              6M.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="dayCountFraction" type="DayCountFraction" minOccurs="0">
          <xsd:annotation>
            <xsd:documentation xml:lang="en">
              The day count basis for the swap.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="SingleUnderlyer">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the single underlyer of a swap.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element ref="underlyingAsset"/>
    <xsd:element name="openUnits" type="xsd:decimal" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The number of units (index or securities) that constitute
          the underlyer of the swap. In the case of a basket swap,
          this element is used to reference both the number of basket
          units, and the number of each asset components of the
          basket when these are expressed in absolute terms.
        </xsd:documentation>
      </xsd:annotation>
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    </xsd:element>
    <xsd:element name="dividendPayout" type="DividendPayout" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Specifies the dividend payout ratio associated with an
          equity underlyer. A basket swap can have different payout
          ratios across the various underlying constituents. In
          certain cases the actual ratio is not known on trade
          inception, and only general conditions are then specified.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="couponPayment" type="PendingPayment" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The next upcoming coupon payment.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Underlyer">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the whole set of possible underlyers: single
      underlyers or multiple underlyers, each of these having either
      security or index components.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="singleUnderlyer" type="SingleUnderlyer">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Describes the swap's underlyer when it has only one asset
          component.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="basket" type="Basket">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          Describes the swap's underlyer when it has multiple asset
          components.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="UnderlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A type describing the basic components of a security of index
      underlyer.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="instrumentId" type="InstrumentId" maxOccurs="unbounded"/>
    <xsd:element name="description" type="xsd:string" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The long name of a security.
        </xsd:documentation>
        <xsd:documentation xml:lang="de">
          Vollständige Wertpapierbezeichnung.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="currency" type="Currency" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          The currency in which an amount is denominated.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="exchangeId" type="ExchangeId" minOccurs="0"/>
    <xsd:element name="clearanceSystem" type="ClearanceSystem" minOccurs="0"/>
    <xsd:element name="definition" type="Reference" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation xml:lang="en">
          An optional reference to a full FpML product that defines
          the simple product in greater detail. In case of
          inconsistency between the terms of the simple product and
          those of the detailed definition, the values in the simple
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          product override those in the detailed definition.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:ID"/>
</xsd:complexType>
<xsd:element name="bond" type="Bond" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a bond.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="cash" type="Cash" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset type that is a cash payment.
      Used for specifying discounting factors for future cash flows
      in the pricing and risk model.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="convertibleBond" type="ConvertibleBond" substitutionGroup="underlyingAsset
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a convertible bond.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="deposit" type="Deposit" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is a term deposit.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="equity" type="EquityAsset" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a listed equity.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="exchangeTradedFund" type="ExchangeTradedFund" substitutionGroup="underlyin
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is an exchange-traded
      fund.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="future" type="Future" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a listed future
      contract.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="fxRate" type="FxRateAsset" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset type that is an FX rate. Used
      for specifying FX rates in the pricing and risk model.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="index" type="Index" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a financial index.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="mutualFund" type="MutualFund" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines the underlying asset when it is a mutual fund.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="rateIndex" type="RateIndex" substitutionGroup="underlyingAsset">
```

```
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is an interest rate
      index. Used for specifying benchmark assets in the market
      environment in the pricing and risk model.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="simpleCreditDefaultSwap" type="SimpleCreditDefaultSwap" substitutionGroup=
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is a credit default
      swap.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="simpleFra" type="SimpleFra" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is a forward rate
      agreement.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="simpleIrSwap" type="SimpleIRSwap" substitutionGroup="underlyingAsset">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Defines a simple underlying asset that is a swap.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="underlyingAsset" type="UnderlyingAsset" abstract="true">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      Define the underlying asset when it is a listed security.
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:group name="BasketIdentifier.model">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      A group that specifies a name and an identifier for a given
      basket.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:sequence>
      <xsd:element name="basketName" type="BasketName">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The name of the basket expressed as a free format string.
            FpML does not define usage rules for this element.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="basketId" type="BasketId" minOccurs="0" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A CDS basket identifier
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
    <xsd:sequence>
      <xsd:element name="basketId" type="BasketId" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            A CDS basket identifier
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:choice>
</xsd:group>
<xsd:group name="CreditEntity.model">
  <xsd:annotation>
    <xsd:documentation xml:lang="en">
      An item which has credit characteristics that can be modeled,
      e.g. a firm, index, or region
    </xsd:documentation>
  </xsd:annotation>
  <xsd:choice>
    <xsd:element name="referenceEntity" type="LegalEntity">
```

```
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            The entity for which this is defined.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="creditEntityReference" type="Reference">
        <xsd:annotation>
          <xsd:documentation xml:lang="en">
            An XML reference a credit entity defined elsewhere in the
            document.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:choice>
  </xsd:group>
</xsd:schema>
```