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Appendix G VALUATION SUBMISSION THROUGH XML DOCUMENT (REPORTING)

A user submits valuation requests in a valuation request file. The request file should be a well-formed XML document that conforms to a HKTR-R system's specific XML Schema.

In response, an XML-encoded document will be returned to the user.

The HKTR-R system uses FpML which is an XML standard for representing financial products. The system currently uses FpML v5.5 (reporting view) for the valuation reporting service. Note that different from trade reporting service, FpML v5.2 and v5.7 is not currently supported in valuation reporting service.

For further information on syntactical requirements of FpML / XML (e.g. case sensitiveness requirement on element tags, etc.), please refer to the following web sites for detailed specification:

- FpML official web site: <http://www.fpml.org>
- XML official web site: <http://www.w3.org/XML>

G.1 Types of Valuation Requests

Through the use of FpML, users can make valuation requests supported by the HKTR-R system in reporting views, which includes:

- Add or modify a valuation record on a particular valuation date
- Delete a valuation record previously submitted for a particular valuation date

G.2 Types of Trade Event Responses

G.2.1 Detail Level Response

After processing all the requests in the request file, the system will collect the results of each request and format a corresponding response record.

For reporting purpose, the typical response is:

- Report acknowledgement
- Report exception

G.2.2 Document Level Exception

If a severe error occurs (e.g. the whole XML document is not well-formed) such that the system cannot correctly interpret the individual trade event requests, the request file will be rejected as a whole and the system will not process the

individual trade event requests.

G.3 Convention of XML Document Layout Description

An XML request or response document consists of XML blocks which derives from standard FpML specifications.

This document will provide detailed layout on component basis for better readability.

G.3.1 FpML diagrams

For each detailed layout of an XML component, a high-level hierarchical structure diagram will be presented first. Although there are situations where the cardinality of individual element will be restricted according to the business requirement, the cardinality of the elements shown in the diagram still follows the FpML standard instead of the custom restricted cardinality. In our system design, the restricted cardinality validation will be enforced by validation logic instead of the XSD schema validation.

In the diagrams, there are elements that are supported by FpML but are being crossed out. These are the elements that are not supported by our system, and **would be ignored if any of these elements are found in the request message.**

G.3.2 Field specifications

Following the diagram, a detailed table with the following information will be presented to the user:

- **Field reference number**

A reference number merely for easy referencing.

- **Field location**

The path of the element in the FpML document in XPath format (usually relative to a particular element in the document).

- **Field name**

The name of the element. If the field name belongs to the namespace of the HKTR-R system, the field name will be qualified with a “trdoc:” (for request / response document headers) or “tr:” (within individual trade request) prefix. If no namespace prefixing the field name, user can assume that the field belongs to the FpML name space.

If the name is prefixed with a ‘@’ character, it is (one of) the attributes of the element in the previous row.

As required by the XML (FpML) standard, the field names (i.e. element tags in XML document) are case sensitive.

- **Data Type**

Data type will be provided if the element is an elementary data item.

The data type is presented with XML data type name. For example, a decimal type elementary data field is presented with format string as “xsd:decimal”.

For string fields, if there is a restriction of length, a maximum length quoted inside a pair of parenthesis is shown. For example, a normalized string with a maximum of 255 characters is presented in the form of “xsd:normalizedString (255)”.

Note also that for string fields, empty string input (i.e. through the use of empty XML tag) is allowed. However, the system will regard the field as a null input and behave as if the field is not present in the input document.

For decimal fields, the number of digits in its integral part and its decimal part are specified inside a pair of parenthesis, separated by a comma. For example, the type “xsd:decimal (15,4)” indicates that the decimal value should have at most 15 digits in its integral part, and at most 4 digits in its decimal part.

For date fields (i.e. fields of type xsd:date / xsd:dateTime), the year value of the date should not exceed 9999. In other words, date value such as “10000-01-01” (in “year-month-day” format) is not allowed.

For enumerated types and coding scheme, please refer to Appendix F (Reporting – Ref – Enumerations and coding schemes.xlsx) for a list of eligible values of respective type.

- **Description**

A brief description about the meaning and usage of the element.

For the full details, please refer to the specification of FpML 5.5 recommendation:

<http://www.fpml.org/spec/fpml-5-5-8-rec-2/>

- **Usage Rule**

Generally speaking, the HKTR-R system interprets a field according to the FpML standard but sometimes it may impose its own processing rule or interpretation. Wherever appropriate, customized rule for a particular field will be specified in this field description.

- **Cardinality**

The number of occurrence an element is allowed in the FpML document. “a..b” indicates that the number of occurrence allowed is from “a” to “b” (e.g. “0..U” denotes that the element can occur from 0 times to unlimited times in FpML document).

For the attribute part, it will present either “Req.” for required attribute or “Opt.” for optional attribute.

Sometimes, the cardinality would be represented as “0..1 (1..1)”. This means that the FpML schema requires that the cardinality of the field should be 0..1, while our business requirement further restricts it to 1..1.

- **Colouring of table cells**

The field description tables in the following sections adopt a cell-colouring scheme, which reveals different information about the field:

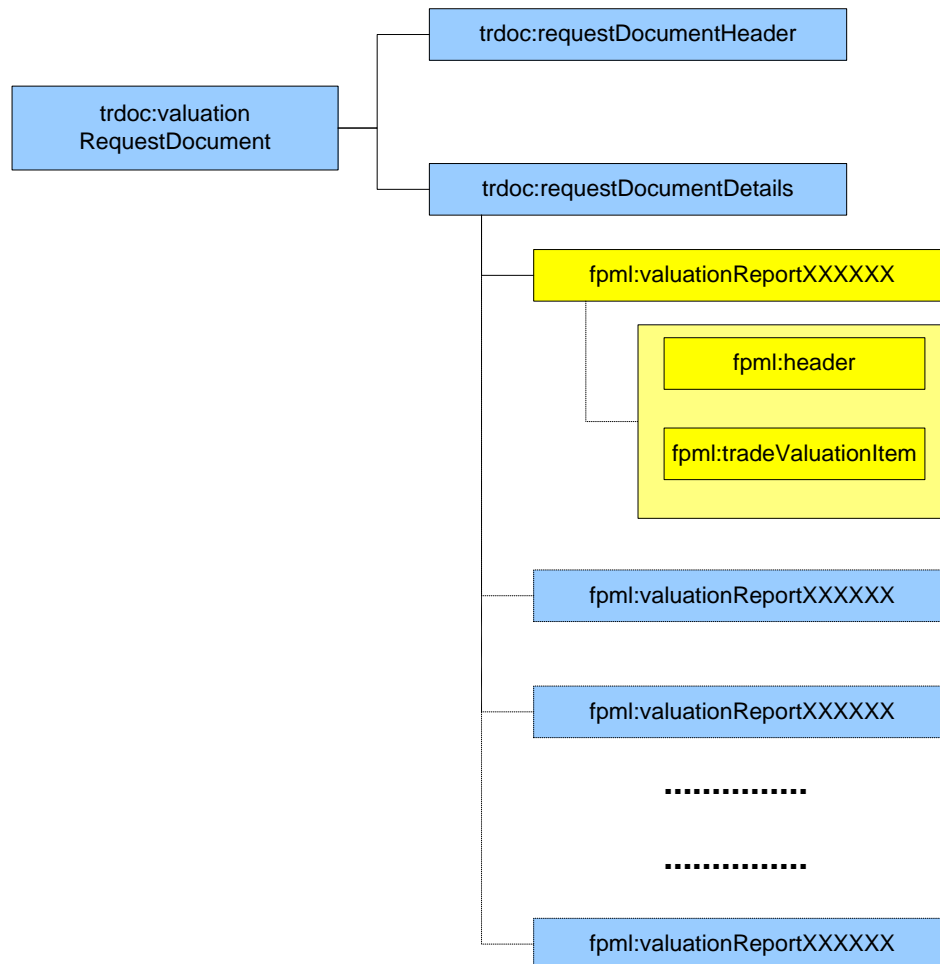
- a) A **green-coloured** cell indicates that the field is a custom field in HKTR-R, i.e. it is not found in the standard FpML schema.
- b) An **orange-coloured** cell indicates that the field can be further expanded, and that the description of fields within the expanded structure will be further elaborated in later sections.

Most of the fields are FpML standard fields. Fields that are custom-defined by HKICL, can be identified with namespace “tr”.

G.4 Valuation Request Document

G.4.1 `trdoc:valuationRequestDocument`

The general structure of the XML request document can be illustrated as follows:



The root element of a request document is “`valuationRequestDocument`”. The submitted XML document consists of two main components:

- ***trdoc:requestDocumentHeader*** (document header block)

The header contains the user’s unique identification to the request and some file level control information such as the number of detail items prepared in the request. For detailed layout, refer to G.4.2.

- ***trdoc:requestDocumentDetails*** (document detail block)

The Details block contains one or more individual valuation request

which should be encoded with FpML's ***valuationReport*** or ***valuationReportRetracted*** message. For detailed layout, please refer to appendix G.4.4 and G.4.5 respectively.

For valuationReport request, there are two major components:

- ***header*** (FpML message header)

The standard FpML message header component is fully described in appendix G.4.6.1.

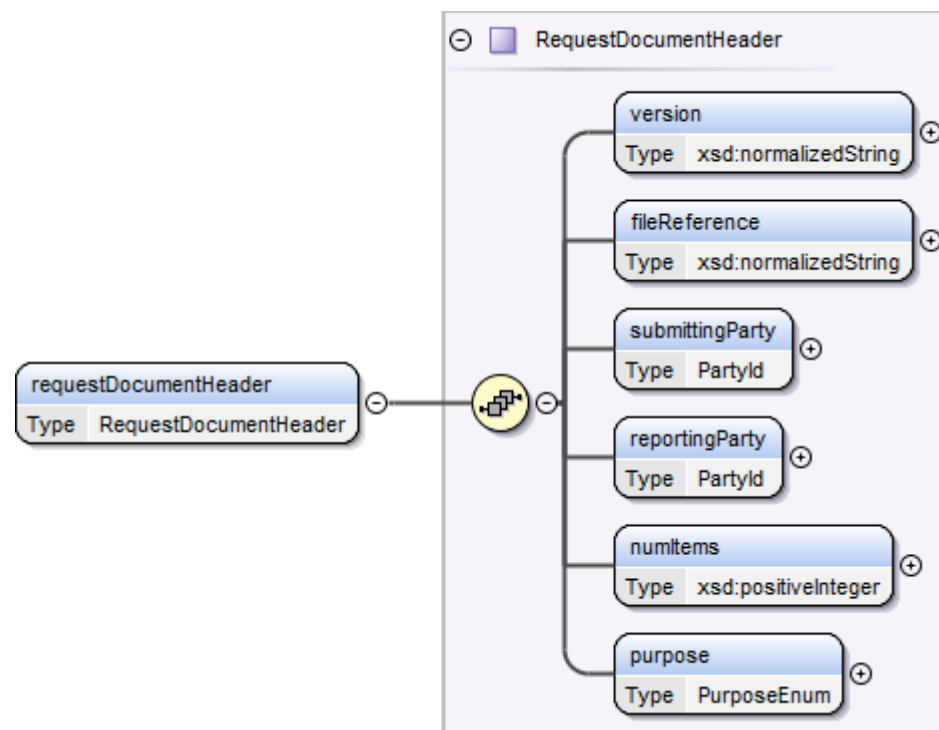
- ***TradeValuationItem*** (FpML field group for presenting Valuation information)

This is the main field group for collecting valuation data of a trade.

The mapping of message/element encoding to the HKTR-R's valuation reporting action types is as follows:

| Action Type | FpML Message Usage |
|---|--------------------------|
| Reporting of valuation data (i.e. Add a valuation record / Modify an existing valuation record) | valuationReport |
| Deletion of valuation data (i.e. Delete an existing valuation record) | valuationReportRetracted |

G.4.2 trdoc:requestDocumentHeader Component



| Field Ref. No. | Field location | Field name / @Attribute | Data Type | Description | Usage Rule | Card. |
|----------------|---|-----------------------------|--------------------------|--|---|-------|
| 1 | /trdoc:valuationRequestDocument | trdoc:requestDocumentHeader | --- | The header element for storing file-scoped information. | | 1..1 |
| 1.1 | /trdoc:valuationRequestDocument/trdoc:requestDocumentHeader | trdoc:version | xsd:normalizedString (5) | The version number that is common to all FpML messages within the file | The FpML version. For FpML 5.5, please fill in "5.5". | 1..1 |

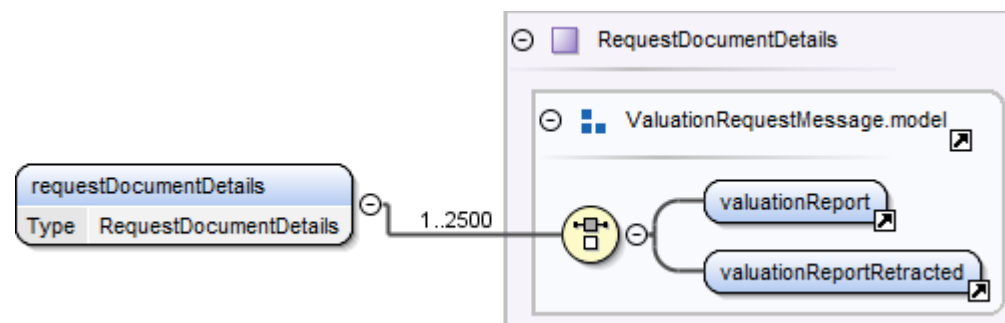
| Field Ref. No. | Field location | Field name / @Attribute | Data Type | Description | Usage Rule | Card. |
|----------------|---|-------------------------|---------------------------|--|--|-------|
| 1.2 | /trdoc:valuationRequestDocument/trdoc:requestDocumentHeader | trdoc:fileReference | xsd:normalizedString (30) | A unique file reference generated by the Submitting Party for the identification of a file which is used to contain a number of requests that are submitted to the HKTR in one go for processing. | This file reference will be carried forward to the response file for user to correlate the requests. It is a user assigned alphanumeric field with a maximum of 30 characters in length. | 1..1 |
| 1.3 | /trdoc:valuationRequestDocument/trdoc:requestDocumentHeader | trdoc:submittingParty | xsd:normalizedString (35) | <p>The identification code of the Submitting Party. It can be the HKTR Entity ID, LEI, SWIFTBIC, CICR, or BRN of the party who submits the trade event to the HKTR system.</p> <p>For Party ID SWIFT BIC and BRN, party should input the first eight digits only Example SWIFTBIC: HKMAHKHHXXX should be inputted as HKMAHKHH BRN: 12345678 – 000 – 04 – 11 – A should be inputted as 12345678</p> <p>For Party ID CICR, party should input all character(s) and digits Example For Local company (CI): Seven digits such as 9999999 For Non-local company (CR): Character(s) plus seven digits such as X9999999 or XX9999999.</p> | <p>Submitting Party is the party who submits the request to the HKTR. It can be an Agent or the Reporting Party itself. The ID should have been maintained in the HKTR.</p> <p>It must be a participant not yet closed and configured as the authorized agent for the member specified in “reportingParty” element.</p> <p><u>Further format, length and value constraints on different party IDs:</u></p> <p>LEI, HKTR Entity ID, SWIFT BIC, CICR, BRN: Please refer to the format field in “PartyIdentifierType” sheet as stipulated in the worksheet of “Reporting – Ref – Enumerations and coding schemes.xls”.</p> | 1..1 |
| | /trdoc:valuationRequestDocument/trdoc:requestDocumentHeader/trdoc:submittingParty | @partyIdScheme | xsd:anyURI | The type of identification code used to identify the Submitting Party. | <p>It must be one of the followings:</p> <ul style="list-style-type: none"> “http://www.fpml.org/coding-scheme/external/iso17442” (for party | Req. |

| Field Ref. No. | Field location | Field name / @Attribute | Data Type | Description | Usage Rule | Card. |
|----------------|----------------|-------------------------|-----------|-------------|--|-------|
| | ty | | | | <p>using LEI).</p> <ul style="list-style-type: none"> • “http://www.hkicl.com.hk/scheme/hktr/tr-entity-id” (for party using HKTR Entity ID). • “http://www.fpml.org/ext/iso9362” (for party using SWIFT BIC). • “http://www.hkicl.com.hk/scheme/ci-cr” (for party using CI/CR number) • “http://www.hkicl.com.hk/scheme/hkbrn” (for party using Hong Kong Business Registration Number). <p>Note that the party specified must be a HKTR participant.</p> | |

| Field Ref. No. | Field location | Field name / @Attribute | Data Type | Description | Usage Rule | Card. |
|----------------|---|-------------------------|---------------------------|---|---|-------|
| 1.4 | /trdoc:valuationRequestDocument/trdoc:requestDocumentHeader | trdoc:reportingParty | xsd:normalizedString (35) | <p>The identification code of the Reporting Party. It can be the HKTR Entity ID, LEI, SWIFTBIC, CICR, or BRN of the party who has the reporting obligation to report the transaction.</p> <p>For Party ID SWIFT BIC and BRN, party should input the first eight digits only Example SWIFTBIC: HKMAHKHHXXX should be inputted as HKMAHKHH BRN: 12345678 – 000 – 04 – 11 – A should be inputted as 12345678</p> <p>For Party ID CICR, party should input all character(s) and digits Example For Local company (CI): Seven digits such as 9999999 For Non-local company (CR): Character(s) plus seven digits such as X9999999 or XX9999999.</p> | <p>Reporting Party is the party who has the obligation to report the transaction.</p> <p>It must be an active participant in the HKTR-R system. The ID should have been maintained in the HKTR.</p> <p><u>Further format, length and value constraints on different party IDs:</u></p> <p><i>LEI, HKTR Entity ID, SWIFT BIC, CICR, BRN:</i> Please refer to the format field in “PartyIdentifierType” sheet as stipulated in the worksheet of “Reporting – Ref – Enumerations and coding schemes.xls”.</p> | 1..1 |

| Field Ref. No. | Field location | Field name / @Attribute | Data Type | Description | Usage Rule | Card. |
|----------------|--|-------------------------|--------------------------|---|--|-------|
| | /trdoc:valuationRequestDocument/trdoc:requestDocumentHeader/trdoc:reportingParty | @partyIdScheme | xsd:anyURI | The type of identification code used to identify the Reporting Party. | <p>It must be one of the followings:</p> <ul style="list-style-type: none"> • “http://www.fpml.org/coding-scheme/external/iso17442” (for party using LEI). • “http://www.hkicl.com.hk/scheme/hktr/tr-entity-id” (for party using HKTR Entity ID). • “http://www.fpml.org/ext/iso9362” (for party using SWIFT BIC). • “http://www.hkicl.com.hk/scheme/ci-crn” (for party using CI/CR number) • “http://www.hkicl.com.hk/scheme/hkbrn” (for party using Hong Kong Business Registration Number). <p>Note that the party specified must be a HKTR participant.</p> | Req. |
| 1.5 | /trdoc:valuationRequestDocument/trdoc:requestDocumentHeader | trdoc:numItems | xsd:positiveInteger (4) | The total number of Valuation requests contained in the file. | The number will be reconciled with the actual no. of valuation request records embedded in the <requestDocumentDetails> block. | 1..1 |
| 1.6 | /trdoc:valuationRequestDocument/trdoc:requestDocumentHeader | trdoc:purpose | xsd:normalizedString(15) | To indicate whether the request is used for Valuation reporting. | For valuation reporting, it must be “Valuation”. | 1..1 |

G.4.3 trdoc:requestDocumentDetails Component

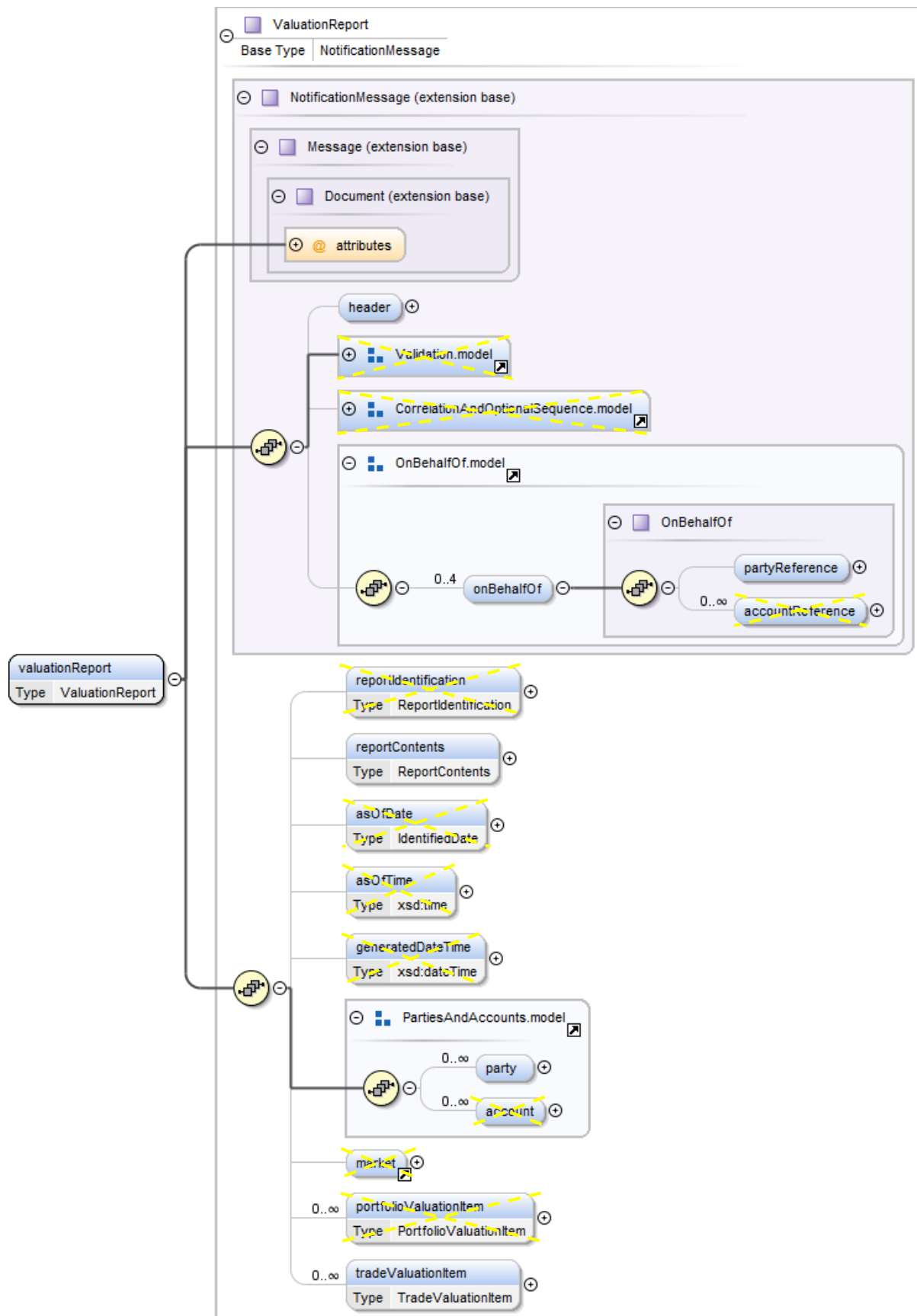


| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|--|------------------------------|-----------|---|---|---------|
| 2 | /trdoc:valuationRequestDocument | trdoc:requestDocumentDetails | --- | The detail block of one or more requests | | 1..1 |
| 2.1 | /trdoc:valuationRequestDocument/trdoc:requestDocumentDetails | valuationReport | --- | <p>Used only if the purpose of the file is "Valuation".</p> <p>Either valuationReport or valuationReportRetracted component exists.</p> <p>It is used to report the valuation request for reporting purpose.</p> <p>For layout of valuationReport, refer to appendix G.4.4.</p> | | 1..2500 |
| | /trdoc:valuationRequestDocument/trdoc:requestDocumentDetails/valuationReport | @fpmlVersion | --- | | The FpML version. For FpML 5.5, please fill in "5-5". | Req. |

| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|--|-----------------------------|-----------|--|---|---------|
| 2.2 | /trdoc:valuationRequestDocument/trdoc:requestDocumentDetails | tr:valuationReportRetracted | --- | <p>Used only if the purpose of the file is “Valuation”.</p> <p>Either valuationReport or valuationReportRetracted component exists.</p> <p>It is used to delete the valuation record on a particular valuation date for the reporting trade.</p> <p>For the layout of valuationReportRetracted, refer to appendix G.4.5.</p> | | 1..2500 |
| | /trdoc:valuationRequestDocument/trdoc:requestDocumentDetails/tr:valuationReportRetracted | @fpmlVersion | | | The FpML version. For FpML 5.5, please fill in “5-5”. | Req. |

G.4.4 valuationReport Message

The valuationReport message is used when the reporting party intends to report valuation data or to modify the reported valuation data for a particular valuation date of an existing trade. The structure of the message is illustrated in the following diagram.



| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|-----------------------------|-----------------|-----------|--|--|-------------------|
| 1 | / | valuationReport | --- | It is used to report valuation data or to modify the reported valuation data for a particular valuation date of an existing trade. | | 0..U (1..2500) |
| 1.1 | /valuationReport | header | --- | A type refining the generic message header content to make it specific to request messages. For detailed layout, refer to appendix G.4.6.1. | | 0..1 (1..1) |
| 1.2 | /valuationReport | onBehalfOf | --- | Indicates which party (and accounts) a trade is being processed for. | If the request is submitted by the agent participant, this field is used to specify the actual reporting party. If “submittingParty” is different from “reportingParty” as specified in the XML block “requestDocumentHeader” (Refer to appendix G.4.2), it must be specified with same value as the “reportingParty” field. If the party is submitting the request for itself, this block must be omitted. The HKTR-R system does not support reference to an account rather than a party. | 0..4 (0..1) |
| 1.2.1 | /valuationReport/onBehalfOf | partyReference | Reference | The party for which the message receiver should work. | Only HKTR Entity ID, LEI, SWIFTBIC, CICR, and BRN are supported. The party referenced must be a HKTR participant. | 0..1 (1..1) |

| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|--|----------------|-----------|---|--|-----------------|
| | /valuationReport/onBehalfOf/partyReference | @href | xsd:IDREF | The reference to a party. | It indicates the reference of the party block representing the actual reporting party. | Req. |
| 1.3 | /valuationReport | reportContents | --- | User can use this block to store the information of the trade correlated with the valuation information. For detailed layout, refer to appendix G.4.6.2. | | 0..1 |
| 1.4 | /valuationReport | party | --- | A legal entity or a subdivision of a legal entity. | | 0..U (1..50) |
| | /valuationReport/party | @id | xsd:ID | The id uniquely identifying the Party within the document. | | Req. |

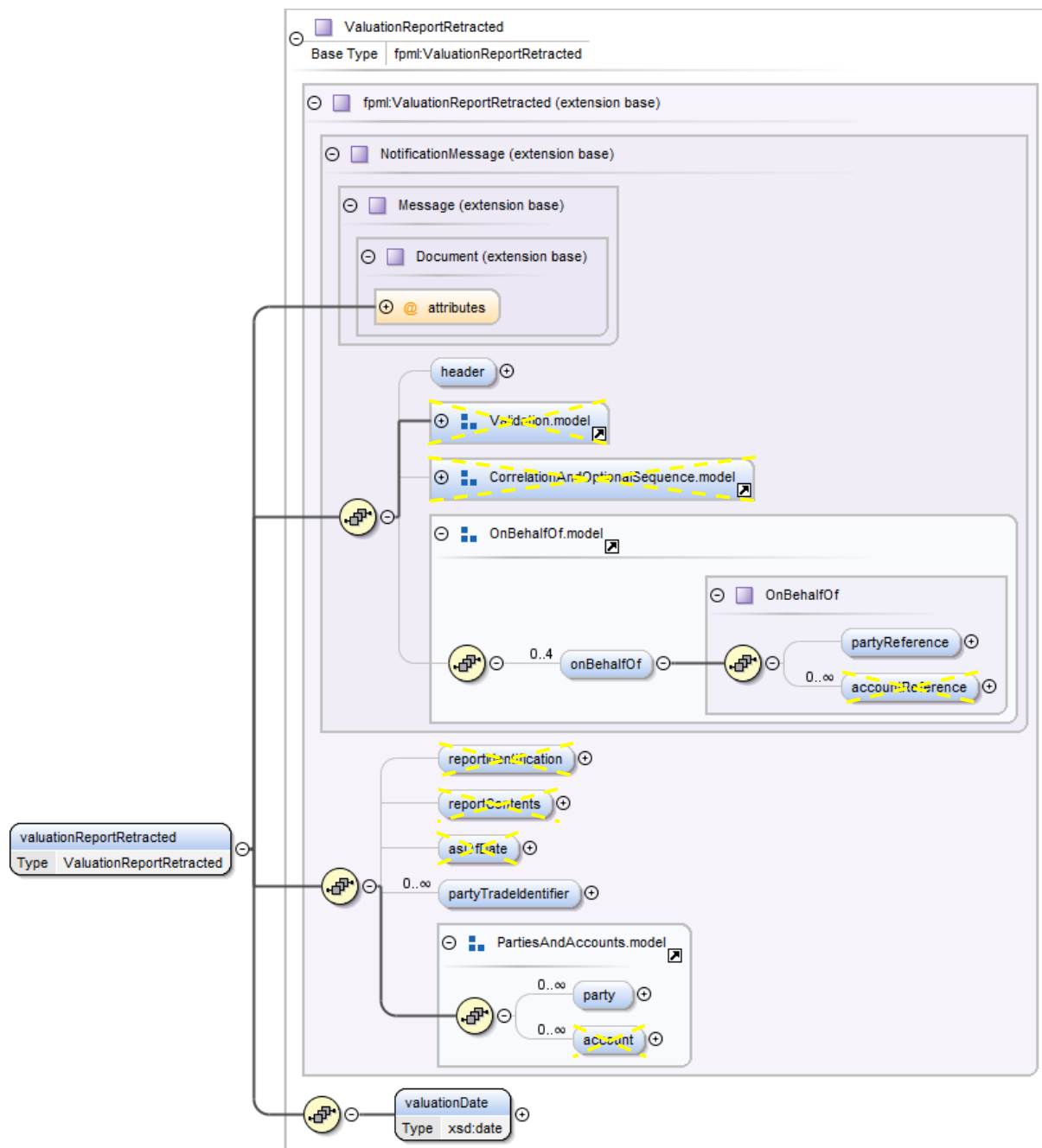
| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|------------------------|------------|----------------------------|--|---|-----------------|
| 1.4.1 | /valuationReport/party | partyId | xsd:normalizedString (255) | <p>A party identifier can be one of the either</p> <ul style="list-style-type: none"> • Legal Entity Identifier • HKTR Entity ID • SWIFT BIC • Certificate of Incorporation (CI) / Certificate of Registration (CR) Number • Hong Kong Business Registration Number (BRN) • User Defined Code • Masked Party <p>For Party ID SWIFT BIC and BRN, party should input the first eight digits only Example SWIFTBIC: HKMAHKHHXXX should be inputted as HKMAHKHH BRN: 12345678 – 000 – 04 – 11 – A should be inputted as 12345678</p> <p>For Party ID CICR, party should input all character(s) and digits Example For Local company (CI): Seven digits such as 9999999 For Non-local company (CR): Character(s) plus seven digits such as X9999999 or XX999999.</p> | <p><u>Further format, length and value constraints on different party IDs:</u></p> <p><i>LEI, HKTR Entity ID, SWIFT BIC, CICR, BRN, User Defined Code:</i> Please refer to the format field in “PartyIdentifierType” sheet as stipulated in the worksheet of “Reporting – Ref – Enumerations and coding schemes.xls”.</p> | 0..U (1..15) |

| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|------------------------------------|----------------|-----------------------------|---|---|----------------|
| | /valuationReport/ party/partyId | @partyIdScheme | xsd:anyURI | Party Id. Coding Scheme | <p>If the element is referenced by "onBehalfOf" field of "/valuationReport" or any non-payment related fields (e.g. trade counterparties), it must be one of the followings:</p> <ul style="list-style-type: none"> • "http://www.fpml.org/coding-scheme/external/iso17442" (for party using LEI). • "http://www.hkicl.com.hk/scheme/hktr/tr-entity-id" (for party using HKTR Entity ID). • "http://www.fpml.org/ext/iso9362" (for party using SWIFT BIC). • "http://www.hkicl.com.hk/scheme/cicm" (for party using CI/CR number) • "http://www.hkicl.com.hk/scheme/hkbrn" (for party using Hong Kong Business Registration Number). • "http://www.hkicl.com.hk/scheme/hktr/user-defined" (for party using user defined ID). • "http://www.hkicl.com.hk/scheme/hktr/masked-party-id" (for party using masked party ID) <p>Note that in the submitted document, exactly one of the above can be present.</p> | Opt. (Req.) |
| 1.4.2 | /valuationReport/party | partyName | xsd:normalized String (255) | The party name of the organization. A free format string. | | 0..1 |

| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|------------------|--------------------|-----------|---|------------|----------------|
| 1.5 | /valuationReport | tradeValuationItem | --- | <p>A collection of data values describing the state of the given trade. It stores the core valuation information to be reported.</p> <p>For detailed layout, refer to appendix G.4.6.3.</p> | | 0..U (1..1) |

G.4.5 valuationReportRetracted Message

The valuationReportRetracted message is used when the reporting party intends to remove the reported valuation data for a particular valuation date of an existing trade. The structure of the message is illustrated in the following diagram.



| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|---|-----------------------------|-----------|--|--|-------------------|
| 1 | / | tr:valuationReportRetracted | --- | It is used when the reporting party intends to remove the reported valuation data for a particular valuation date of an existing trade. | | 0..U (1..2500) |
| 1.1 | /tr:valuationReportRetracted | header | --- | A type refining the generic message header content to make it specific to request messages. For detailed layout, refer to appendix G.4.6.1. | | 0..1 (1..1) |
| 1.2 | /tr:valuationReportRetracted | onBehalfOf | --- | Indicates which party (and accounts) a trade is being processed for. | If the request is submitted by the agent participant, this field is used to specify the actual reporting party. If “submittingParty” is different from “reportingParty” as specified in the XML block “requestDocumentHeader” (Refer to appendix G.4.2), it must be specified with same value as the “reportingParty” field. If the party is submitting the request for itself, this block must be omitted. The HKTR-R system does not support reference to an account rather than a party. | 0..4 (0..1) |
| 1.2.1 | /tr:valuationReportRetracted /onBehalfOf | partyReference | Reference | The party for which the message receiver should work. | Only HKTR Entity ID, LEI, SWIFTBIC, CICR, and BRN are supported. The party referenced must be a HKTR participant. | 0..1 (1..1) |

| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|--|----------------------|--|---|--|--------------|
| | /tr:valuationReportRetracted/onBehalfOf/partyReference | @href | xsd:IDREF | The reference to a party. | It indicates the reference of the party block representing the actual reporting party. | Req. |
| 1.3 | /tr:valuationReportRetracted | partyTradeIdentifier | TradeIdentifier. Refer to section G.4.6.4 for details. | The trade identifier of the correlated trade related to the valuation data. | | 0..U (1..1) |
| 1.4 | /tr:valuationReportRetracted | party | --- | A legal entity or a subdivision of a legal entity. | | 0..U (1..50) |
| | /tr:valuationReportRetracted/party | @id | xsd:ID | The id uniquely identifying the Party within the document. | | Req. |

| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|-------------------------------------|------------|-----------------------------|--|---|-----------------|
| 1.4.1 | /tr:valuationReportRetracted /party | partyId | xsd:normalized String (255) | <p>A party identifier can be one of the either</p> <ul style="list-style-type: none"> • Legal Entity Identifier • HKTR Entity ID • SWIFT BIC • Certificate of Incorporation (CI) / Certificate of Registration (CR) Number • Hong Kong Business Registration Number (BRN) • User Defined Code • Masked Party <p>For Party ID SWIFT BIC and BRN, party should input the first eight digits only Example SWIFTBIC: HKMAHKHHXXX should be inputted as HKMAHKHH BRN: 12345678 – 000 – 04 – 11 – A should be inputted as 12345678</p> <p>For Party ID CICR, party should input all character(s) and digits Example For Local company (CI): Seven digits such as 9999999 For Non-local company (CR): Character(s) plus seven digits such as X9999999 or XX999999.</p> | <p><u>Further format, length and value constraints on different party IDs:</u></p> <p><i>LEI, HKTR Entity ID, SWIFT BIC, CICR, BRN, User Defined Code:</i> Please refer to the format field in “PartyIdentifierType” sheet as stipulated in the worksheet of “Reporting – Ref – Enumerations and coding schemes.xls”.</p> | 0..U (1..15) |

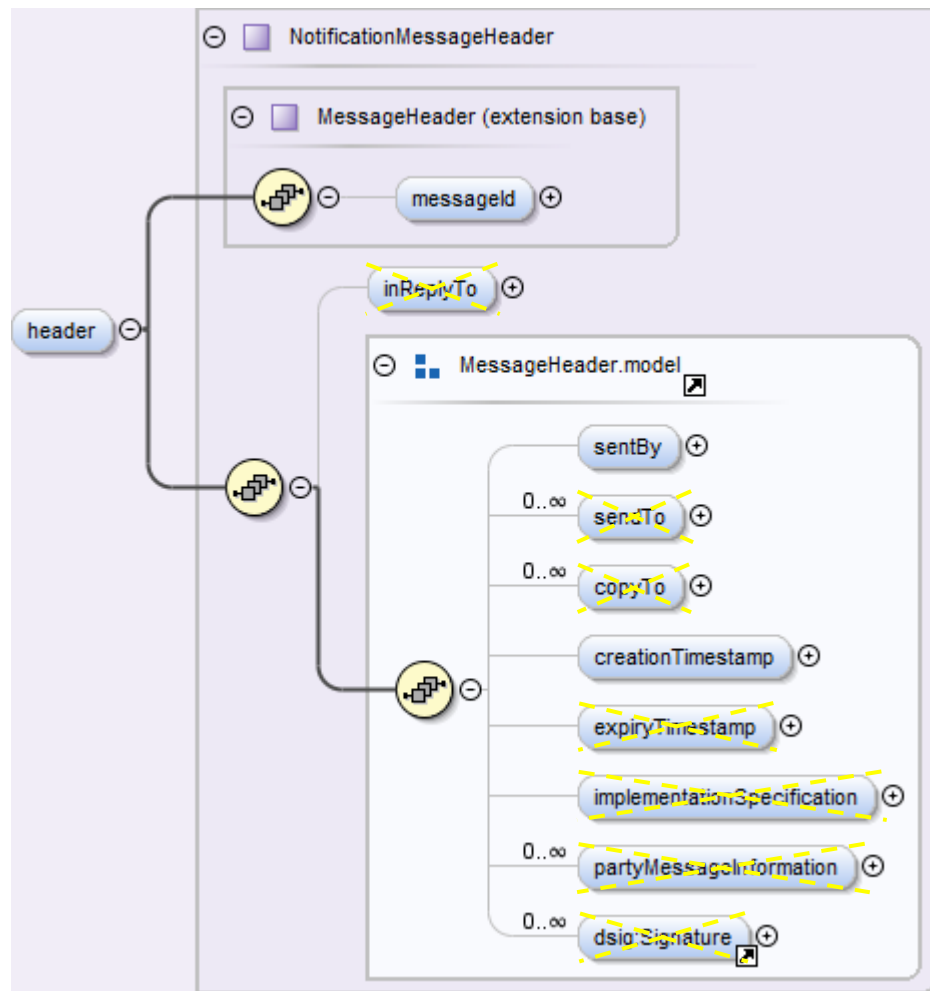
| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|--|----------------|-----------------------------|---|---|-------------|
| | /tr:valuationReportRetracted / party/partyId | @partyIdScheme | xsd:anyURI | Party Id. Coding Scheme | <p>If the element is referenced by "sentTo", "onBehalfOf" field of "../valuationReport" or any non-payment related fields (e.g. trade counterparties), it must be one of the followings:</p> <ul style="list-style-type: none"> • "http://www.fpml.org/coding-scheme/external/iso17442" (for party using LEI). • "http://www.hkicl.com.hk/scheme/hktr/tr-entity-id" (for party using HKTR Entity ID). • "http://www.fpml.org/ext/iso9362" (for party using SWIFT BIC). • "http://www.hkicl.com.hk/scheme/cicm" (for party using CI/CR number) • "http://www.hkicl.com.hk/scheme/hkbrn" (for party using Hong Kong Business Registration Number). • "http://www.hkicl.com.hk/scheme/hktr/user-defined" (for party using user defined ID). • "http://www.hkicl.com.hk/scheme/hktr/masked-party-id" (for party using masked party ID) <p>Note that in the submitted document, exactly one of the above can be present.</p> | Opt. (Req.) |
| 1.4.2 | /tr:valuationReportRetracted / party | partyName | xsd:normalized String (255) | The party name of the organization. A free format string. | | 0..1 |

| Field Ref. No. | Field location | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|------------------------------|------------------|-----------|---|------------|-------|
| 1.5 | /tr:valuationReportRetracted | tr:valuationDate | xsd:date | The valuation date of the reported valuation data to be deleted | | 1..1 |

G.4.6 Common Request Message Elements

G.4.6.1 NotificationMessageHeader Component

The valuationReport and the valuationReportRetracted message for reporting embed a header component of type NotificationMessageHeader with the following structure.



| Field Ref. No. | Field location (relative to /valuationReport or /tr:valuationReportRetracted) | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|---|------------------|---------------------------|---|---|-------------|
| 1 | / | header | --- | A type refining the generic message header content to make it specific to request messages. | | 1..1 |
| 1.1 | /header | messageId | xsd:normalizedString (40) | A unique identifier generated by the Submitting Party for each Valuation request. | This ID cannot be reused regardless of whether the Valuation request is successfully captured or rejected by the HKTR. | 0..1 (1..1) |
| | /header/messageId | @messageIdScheme | xsd:anyURI | Coding Scheme of messageIdScheme. | The HKTR-R system only supports party in coding scheme of " http://www.hkicl.com.hk/scheme/hktr/message-id ". If this attribute is not specified, the above is coding scheme is presumed. | Opt. |

| Field Ref. No. | Field location (relative to /valuationReport or /tr:valuationReportRetracted) | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|---|------------|---------------------------|---|---|----------------|
| 1.2 | /header | sentBy | xsd:normalizedString (35) | <p>The unique identifier (within its coding scheme) for the originator of a message instance.</p> <p>For Party ID SWIFT BIC and BRN, party should input the first eight digits only Example SWIFTBIC: HKMAHKHHXXX should be inputted as HKMAHKHH BRN: 12345678 – 000 – 04 – 11 – A should be inputted as 12345678</p> <p>For Party ID CICR, party should input all character(s) and digits Example For Local company (CI): Seven digits such as 9999999 For Non-local company (CR): Character(s) plus seven digits such as X9999999 or XX9999999.</p> | <p>If the element “../valuationReport/onBehalfOf” (Refer to section G.4.4) is not specified, the party is the trade reporting party. Otherwise, it is the agent party submitting the request on behalf of the party specified in the element.</p> <p><u>Further format, length and value constraints on different party IDs:</u></p> <p><i>LEI, HKTR Entity ID, SWIFT BIC, CICR, BRN:</i> Please refer to the format field in “PartyIdentifierType” sheet as stipulated in the worksheet of “Reporting – Ref – Enumerations and coding schemes.xls”.</p> | 0..1 (1..1) |

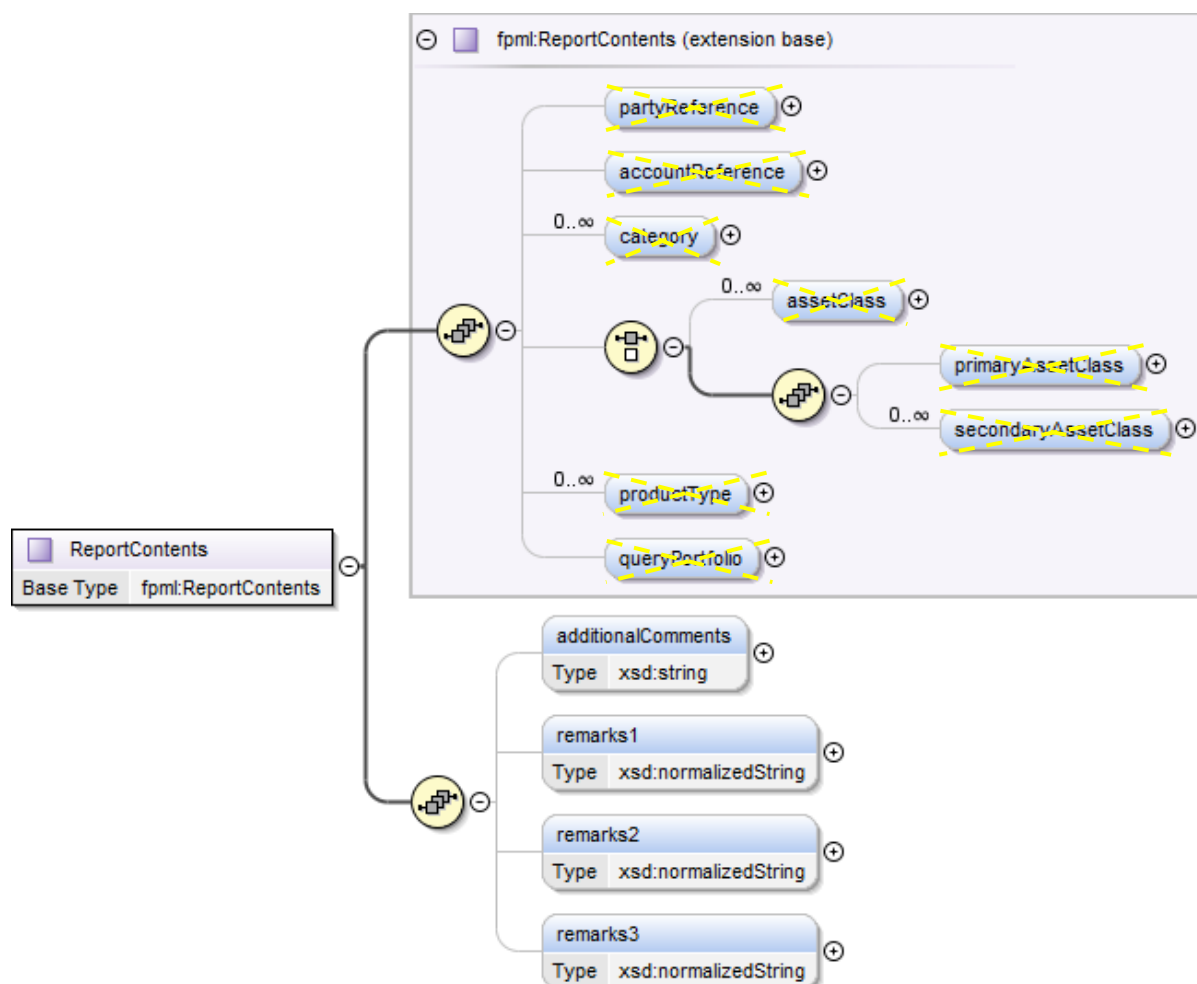
| Field Ref. No. | Field location (relative to /valuationReport or /tr:valuationReportRetracted) | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|---|-----------------------|--------------|--|--|-------------|
| | /header/sentBy | @messageAddressScheme | xsd:anyURI | Coding Scheme of sentBy. | <p>It must be one of the followings:</p> <ul style="list-style-type: none"> • "http://www.fpml.org/coding-scheme/external/iso17442" (for party using LEI). • "http://www.hkicl.com.hk/scheme/hktr/tr-entity-id" (for party using HKTR Entity ID). • "http://www.fpml.org/ext/iso9362" (for party using SWIFT BIC). • "http://www.hkicl.com.hk/scheme/cicrn" (for party using CI/CR number) • "http://www.hkicl.com.hk/scheme/hkbrn" (for party using Hong Kong Business Registration Number). <p>Note that the party specified must be a HKTR participant.</p> | Opt. (Req.) |
| 1.3 | /header | creationTimestamp | xsd:dateTime | The date and time (on the source system) when this message instance was created. | | 0..1 (1..1) |

G.4.6.2 ReportContents Component

The reportContents element stores the information of the trade correlated with the valuation information, e.g. additional comments, remarks 1, etc.

Note that there are customized elements inside this structure. To use these customized elements, user should override the default ReportContents type with “tr:ReportContents” type using the **xsi:type** declaration.

Its structure can be illustrated as follows:



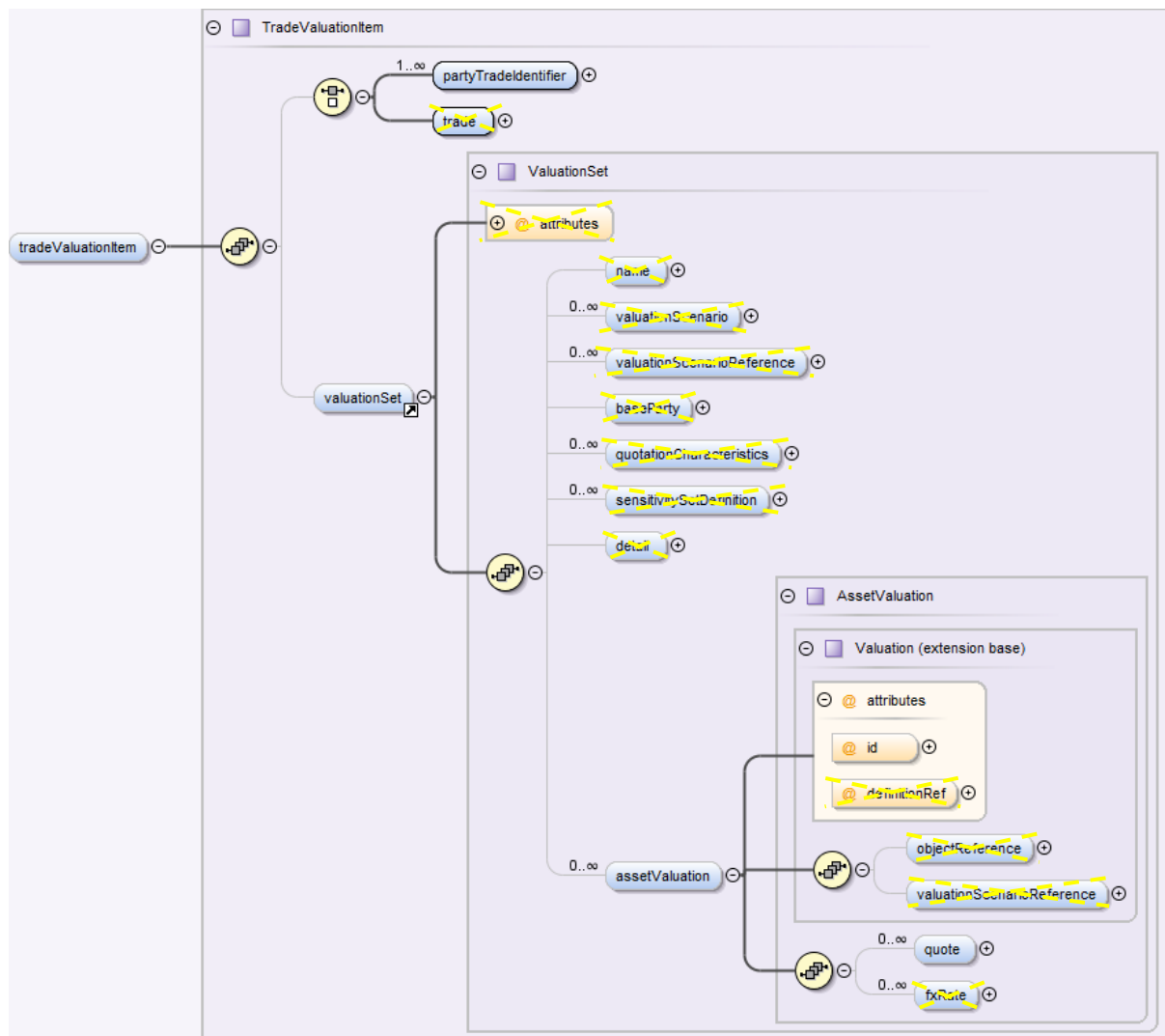
| Field Reference Number | Field location (with root being the "ReportContents"-typed element) | Field name | Data Type | Description | Card. |
|------------------------|---|-----------------------|----------------------------|----------------------|-------|
| 1 | / | tr:additionalComments | xsd:string (255) | Additional comments. | 0..1 |
| 2 | / | tr:remarks1 | xsd:normalizedString (255) | Remark 1. | 0..1 |
| 3 | / | tr:remarks2 | xsd:normalizedString (255) | Remark 2. | 0..1 |
| 4 | / | tr:remarks3 | xsd:normalizedString (63) | Remark 3. | 0..1 |

G.4.6.3 TradeValuationItem Component

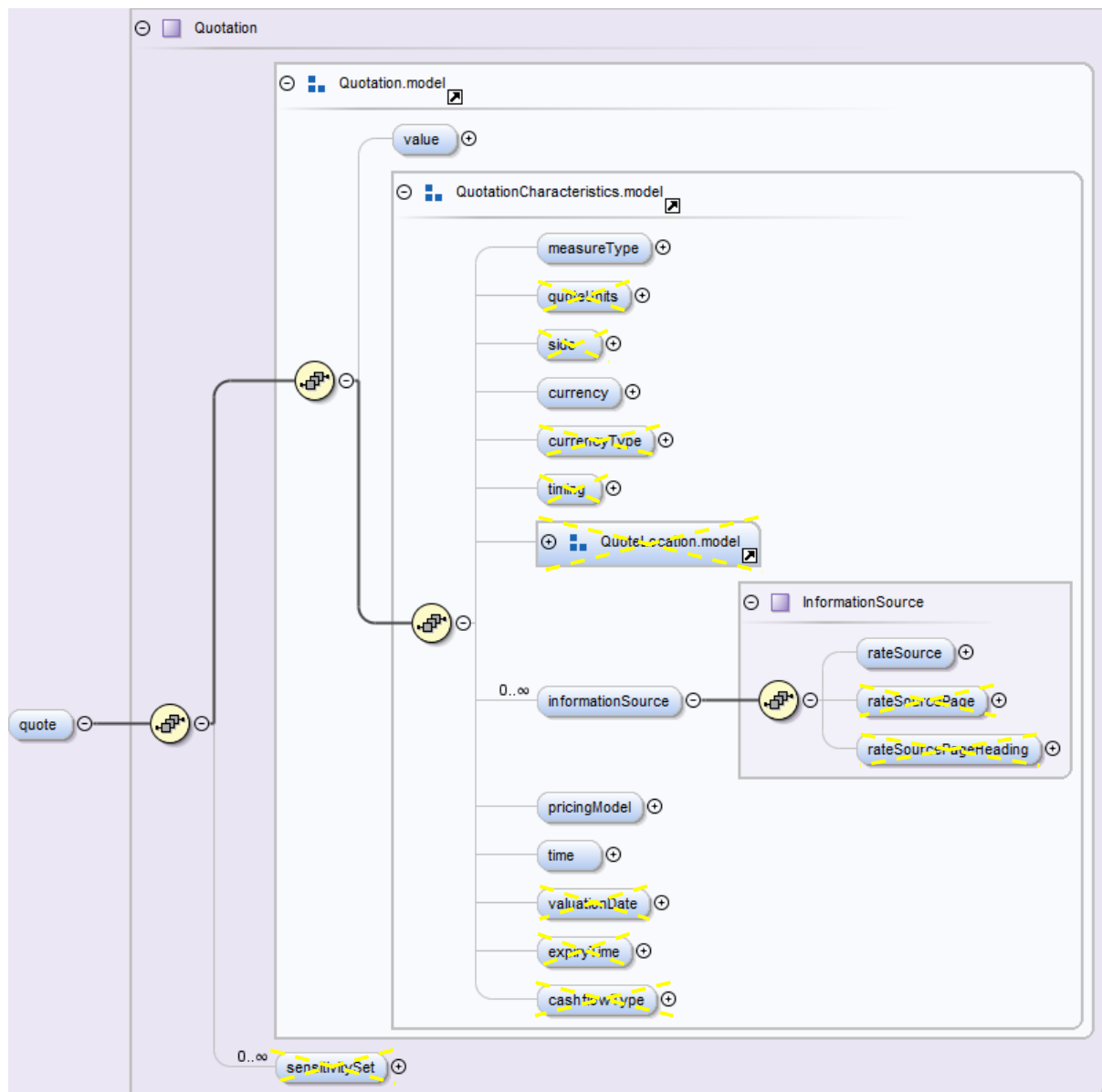
The tradeValuationItem element stores the core valuation information to be reported. Generally speaking, it contains:

- A *partyTradeIdentifier* element which refers to the trade that the valuation information is for; and,
- A *quote* element which stores the valuation details.

Its structure can be illustrated as follows:



The *quote* element can be further expanded as follows:



| Field Ref. No. | Field location (with root being the "TradeValuationItem"-typed element) | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|---|----------------------|--|--|---|-------------|
| 1 | / | partyTradeIdentifier | TradeIdentifier. Refer to section G.4.6.4 for details. | The trade identifier of the correlated trade related to the valuation data. | | 0..U (1..1) |
| 2 | / | valuationSet | --- | The trade valuation. | | 0..1 (1..1) |
| 2.1 | /valuationSet | assetValuation | --- | Valuations reported in this valuation set. These values can be values (NPVs, prices, etc.) or risks (DAR, etc.). | <p>One can specify at most three sets of valuation data:</p> <ul style="list-style-type: none"> Trade valuation data valued from the point of view of reporting party; Trade valuation data valued from the point of view of counterparty; Trade valuation data valued from the point of view of central counterparty (CCP). <p>Note that it is mandatory to report the trade valuation data valued from the point of view of reporting party.</p> | 0..U (1..3) |

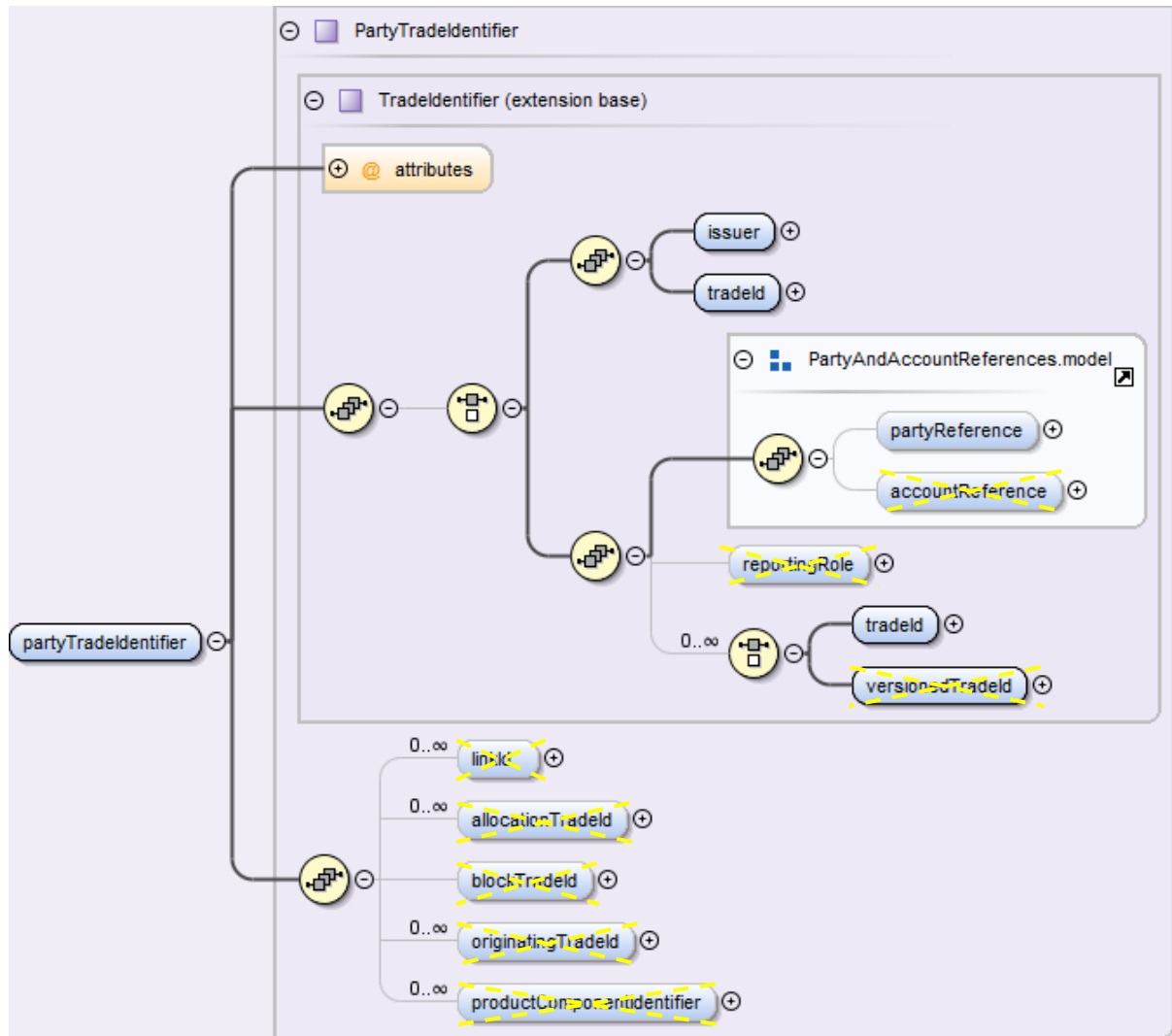
| Field Ref. No. | Field location (with root being the "TradeValuationItem"-typed element) | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|---|-------------|--|--|---|-------------|
| | /valuationSet/assetValuation | @id | xsd:ID | <p>The id attribute can only be populated with one of the following three possible values (case sensitive):</p> <ul style="list-style-type: none"> “reportingForParty”: The assetValuation block contains the trade valuation data valued from the point of view of reporting-for party; “counterparty”: The assetValuation block contains the trade valuation data valued from the point of view of counterparty; “ccp”: The assetValuation block contains the trade valuation data valued from the point of view of central counterparty (CCP). | <p>There cannot be two assetValuation blocks with the same id attribute values on the left.</p> <p>Also, if the id value is not one of the three values listed on the left, the whole message will be rejected.</p> | Opt. (Req.) |
| 2.1.1 | /valuationSet/assetValuation | quote | --- | The numerical measure relating to the asset. | | 0..U (1..1) |
| 2.1.1.1 | /valuationSet/assetValuation/quote | value | xsd:decimal (20,10) | The calculated Valuation Value. | It is required when this element is specified within assetValuation block with “id” equal to “reportingForParty”. Optional otherwise. | 0..1 |
| 2.1.1.2 | /valuationSet/assetValuation/quote | measureType | Scheme: ValuationType (xsd:normalized String (63)) | The reference model used to calculate the daily Valuation Value. | It is required when this element is specified within assetValuation block with “id” equal to “reportingForParty”. Optional otherwise. | 0..1 |

| Field Ref. No. | Field location (with root being the "TradeValuationItem"-typed element) | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|---|----------------------------|---|--|---|-------------|
| | /valuationSet/assetValuation/quote/measureType | @assetMeasureScheme | xsd:anyURI | | Simply ignored by HKTR-R system. Always use the default value: http://www.hkicl.com.hk/scheme/hktr/valuation-type | Opt. |
| 2.1.1.3 | /valuationSet/assetValuation/quote | currency | Scheme: Currency (xsd:normalizedString (3)) | The native currency of the calculated Valuation Value. | It is required when this element is specified within assetValuation block with "id" equal to "reportingForParty". Optional otherwise. | 0..1 |
| | /valuationSet/assetValuation/quote/currency | @currencyScheme | xsd:anyURI | The code representation of a currency or fund. By default it is a valid currency code as defined by the ISO standard 4217 - Codes for representation of currencies and funds. Please refer to Appendix F Enumeration Spreadsheet - Currency Tab for the currency code list supported by HKTR-R. | Simply ignored by HKTR-R system. Always use the default value: http://www.fpml.org/ext/iso4217-2001-08-15 | Opt. |
| 2.1.1.4 | /valuationSet/assetValuation/quote | informationSource | --- | The information source where a published or displayed market rate will be obtained. | | 0..U (0..1) |
| 2.1.1.4.1 | /valuationSet/assetValuation/quote/informationSource | rateSource | xsd:normalizedString (40) | Source of Valuation. | | 0..1 (1..1) |
| | /valuationSet/assetValuation/quote/informationSource/rateSource | @informationProviderScheme | xsd:anyURI | | Simply ignored by HKTR-R system. Always use the default value: http://www.hkicl.com.hk/scheme/hktr/valuation-source | Opt. |

| Field Ref. No. | Field location (with root being the "TradeValuationItem"-typed element) | Field name | Data Type | Description | Usage Rule | Card. |
|----------------|---|---------------------|---------------------------|--|---|-------|
| 2.1.1.5 | /valuationSet/assetValuation/quote | pricingModel | xsd:normalizedString (40) | Reference model used to calculate daily mark. | | 0..1 |
| | /valuationSet/assetValuation/quote/pricingModel | @pricingModelScheme | xsd:anyURI | | Simply ignored by HKTR-R system. Always use the default value: http://www.hkicl.com.hk/scheme/hktr/valuation-reference-model | Opt. |
| 2.1.1.6 | /valuationSet/assetValuation/quote | time | xsd:dateTime | The business date and time of the valuation, expressed in Coordinated Universal Time (UTC) of Hong Kong zone (UTC+8:00). | It is required when this element is specified within assetValuation block with "id" equal to "reportingForParty". Optional otherwise. | 0..1 |

G.4.6.4 PartyTradeIdentifier Component

The partyTradeIdentifier component mainly stores the details about a trade identifier. In terms of valuation request submission, it is mainly used to specify the trade reference of the correlated trade.



| Field Reference Number | Field location (with root being the “PartyTradeIdentifier”-typed element) | Field name | Data Type | Description | Card. |
|------------------------|---|--------------------------|---------------------------|--|----------------|
| | / | (branching) ¹ | | <p>The choose-1-out-of-2 branching between the field group [“issuer” + “tradeId”] and the field group [“partyReference” and “tradeId”].</p> <p>The first field group ([“issuer” + “tradeId”]) is mainly used to represent UTI.</p> <p>The second field group ([“partyReference” and “tradeId”]) is mainly used to represent HKTR trade reference, user trade reference, agent trade reference and UTI-TID.</p> | 0..1 (1..1) |
| 1.1 | / | issuer | xsd:normalizedString(40) | <p>Either ((/issuer and /tradeId (1.2)) or (/partyReference and /tradeId (1.4)).</p> <p>The issuer ID of the issuer. This field is applicable only for UTI for trade correlation purpose.</p> | 1..1 |
| | /issuer | @issuerIdScheme | xsd:anyURI | <p>Simply ignored by HKTR-R system. Always use the default value: http://www.fpml.org/coding-scheme/external/cftc/issuer-identifier</p> | Opt. |
| 1.2 | / | tradeId | xsd:normalizedString(200) | <p>Either ((/issuer and /tradeId (1.2)) or (/partyReference and /tradeId (1.4)).</p> <p>A trade reference identifier. This field is applicable only for UTI for trade correlation purpose.</p> <p><u>UTI</u> UTI specified by the HKTR only includes the value of the USI if it exists for the trade. It should be presented in conformity with the format and structure applicable to it.</p> | 1..1 |

¹ This is not a real XML element. It is specified here to show the whole choose-1-out-of-2 branching.

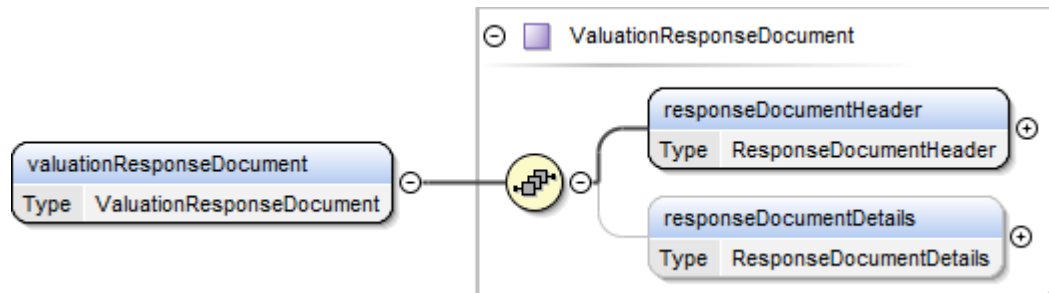
| Field Reference Number | Field location (with root being the "PartyTradeIdentifier"-typed element) | Field name | Data Type | Description | Card. |
|------------------------|---|----------------|---|---|----------------|
| | /tradeId | @tradeIdScheme | xsd:anyURI | Please use the following URIs for the corresponding types of trade identifiers for trade correlation purpose . UTI: http://www.fpml.org/coding-scheme/external/unique-transaction-identifier | Opt. (Req.) |
| 1.3 | / | partyReference | Reference | Either ((/issuer and /tradeId (1.2)) or (/partyReference and /tradeId (1.4)). Reference to a reporting party. | 0..1 (1..1) |
| | /partyReference | @href | xsd:IDREF | Reference to a reporting party. | Req. |
| 1.4 | / | tradeId | xsd:normalizedString (255) <u>Further length constraints on different trade IDs:</u> UTI-TID: xsd:normalizedString(241) HKTR trade reference: xsd:normalizedString(15) Agent trade reference: xsd:normalizedString(40) User trade reference: xsd:normalizedString(241) | Either ((/issuer and /tradeId (1.2)) or (/partyReference and /tradeId (1.4)). A trade reference identifier allocated by a party, if applicable. <u>UTI-TID</u> UTI-TID is the value of the Trade ID (UTI-TID) if a unique Trade ID (UTI-TID) reportable under the mandatory reporting requirements in the European Union exists for the trade. It should be presented in conformity with the format and structure applicable to it. <u>HKTR trade reference</u> A Trade Reference generated by the HKTR. This reference is applicable to reporting party and agent and is used to correlate the request to the designated trade for valuation requests. <u>Agent trade reference</u> A unique trade reference generated by the Agent for the trade. <u>User trade reference</u> | 0..U (1..1) |

| Field Reference Number | Field location (with root being the "PartyTradeIdentifier"-typed element) | Field name | Data Type | Description | Card. |
|------------------------|---|----------------|------------|--|----------------|
| | | | | <p>A unique user trade reference generated by the Reporting Party for the trade.</p> <p><u>Field usage</u> For trade correlation purpose, there should be at most one of the following trade identifiers for correlation purpose:</p> <ul style="list-style-type: none"> - The existing user trade reference; - Or the existing agent trade reference (only applicable to agent); - Or the existing HKTR trade reference; - Or the existing UTI-TID. | |
| | /tradeId | @tradeIdScheme | xsd:anyURI | <p>Please use the following URIs for the corresponding types of trade identifiers for trade correlation purpose.</p> <p>HKTR trade reference: http://www.hkicl.com.hk/scheme/hktr/trade-ref</p> <p>Agent trade reference: http://www.hkicl.com.hk/scheme/hktr/agent-trade-ref</p> <p>User trade reference: http://www.hkicl.com.hk/scheme/hktr/user-trade-ref</p> <p>UTI-TID: http://www.hkicl.com.hk/scheme/unique-transaction-identifier-unique-trade-id</p> | Opt. (Req.) |

G.5 Valuation Response Document

G.5.1 `trdoc:valuationResponseDocument`

The general structure of the XML request document can be illustrated as follows:



The root element of a response document is “`valuationResponseDocument`”. The submitted XML document is consisted of two main components:

- ***trdoc:responseDocumentHeader*** (document header block)

The header returns the user’s unique identification carried on the original request document header. It also carries a system-assigned unique reference to the document and a file-level error code, if any. For the detailed layout, please refer to G.4.2.

- ***trdoc:responseDocumentDetails*** (document detail block)

The Details block contains one or more event request which should be encoded with FpML’s ***valuationReportAcknowledgement*** or ***valuationReportException*** message. For the detailed layout, refer to appendix G.5.4 (`valuationReportAcknowledgement`) and G.5.5 (`valuationReportException`) respectively.

Note that in case of malformed request file name or malformed request file, an empty *responseDocumentDetails* block will be returned.

For each response, there exists:

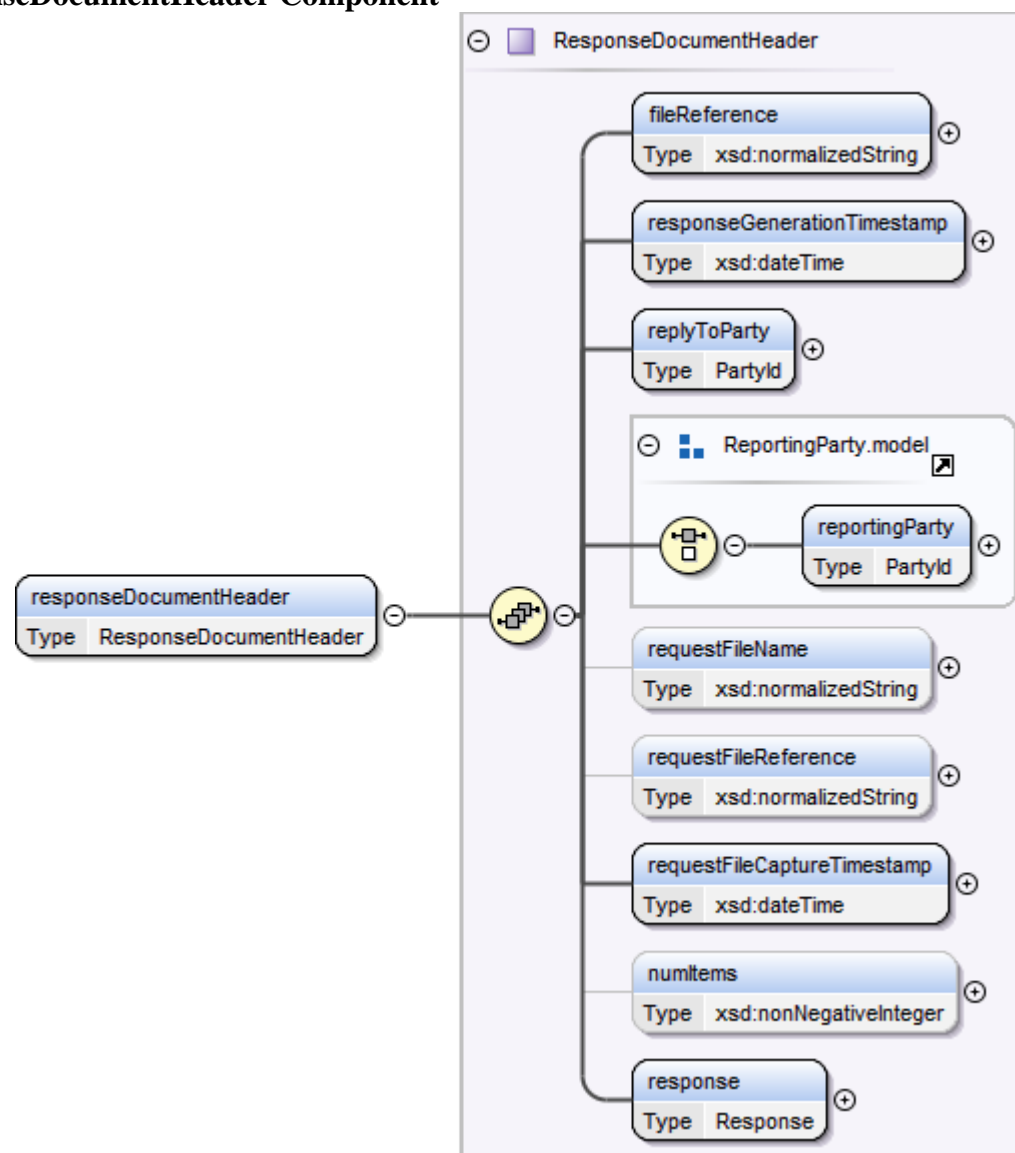
- ***header*** (FpML response message header)

The standard FpML message header component is fully described in appendix G.5.6.1.

The mapping of message/element encoding to the HKTR-R's reporting response types is as follows:

| Response Type | FpML Message Usage |
|---------------------------|--------------------------------|
| Successful Data Capturing | valuationReportAcknowledgement |
| Rejection Response | valuationReportException |

G.5.2 trdoc:responseDocumentHeader Component

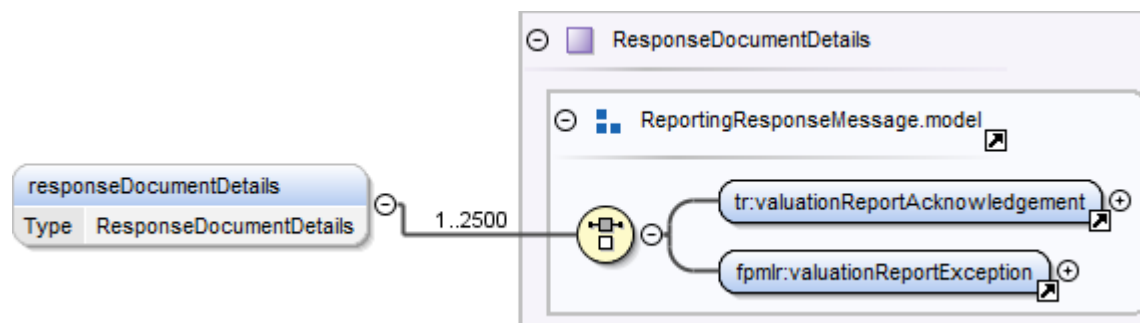


| Field Ref. No. | Field location | Field name | Data Type | Description / Usage Rule | Card. |
|----------------|--|-----------------------------------|---------------------------|--|-------|
| 1 | /trdoc:valuationResponseDocument | trdoc:responseDocumentHeader | --- | The header element for storing file-scoped information | 1..1 |
| 1.1 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader | trdoc:fileReference | xsd:normalizedString (30) | A unique document identifier generated by the HKTR-R system to requesting party for reference. | 1..1 |
| 1.2 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader | trdoc:responseGenerationTimestamp | xsd:dateTime | The time at which the response file is generated | 1..1 |
| 1.3 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader | trdoc:replyToParty | xsd:normalizedString (35) | The TR participant who receives the response. Generally speaking, it should be identical to the submittingParty specified in the request document. | 1..1 |
| | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader/trdoc:replyToParty | @partyIdScheme | xsd:anyURI | <p>It must be one of the followings:</p> <ul style="list-style-type: none"> • "http://www.fpml.org/coding-scheme/external/iso17442" (for party using LEI). • "http://www.hkicl.com.hk/scheme/hktr/tr-entity-id" (for party using HKTR Entity ID). • "http://www.fpml.org/ext/iso9362" (for party using SWIFT BIC). • "http://www.hkicl.com.hk/scheme/cicrn" (for party using CI/CR number) • "http://www.hkicl.com.hk/scheme/hkbrn" (for party using Hong Kong Business Registration Number). <p>Note that the party specified must be a HKTR participant.</p> | Req. |
| 1.4 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader | trdoc:reportingParty | xsd:normalizedString (35) | <p>The HKTR Entity ID, LEI, SWIFTBIC, CICR, or BRN of the reporting party.</p> <p>The reporting party must be a HKTR participant.</p> | 0..1 |

| Field Ref. No. | Field location | Field name | Data Type | Description / Usage Rule | Card. |
|----------------|--|-----------------------------------|----------------------------|--|-------|
| | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader/trdoc:reportingParty | @partyIdScheme | xsd:anyURI | <p>It must be one of the followings:</p> <ul style="list-style-type: none"> • “http://www.fpml.org/coding-scheme/external/iso17442” (for party using LEI). • “http://www.hkicl.com.hk/scheme/hktr/tr-entity-id” (for party using HKTR Entity ID). • “http://www.fpml.org/ext/iso9362” (for party using SWIFT BIC). • “http://www.hkicl.com.hk/scheme/cicrn” (for party using CI/CR number) • “http://www.hkicl.com.hk/scheme/hkbrn” (for party using Hong Kong Business Registration Number). <p>Note that the party specified must be a HKTR participant.</p> | Req. |
| 1.5 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader | trdoc:requestFileName | xsd:normalizedString (255) | The original request file name submitted by the submitting party. | 0..1 |
| 1.6 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader | trdoc:requestFileReference | xsd:normalizedString (30) | The file reference of the original request document. | 0..1 |
| 1.7 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader | trdoc:requestFileCaptureTimestamp | xsd:dateTime | The timestamp at which the request file is captured. | 1..1 |
| 1.8 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader | trdoc:numItems | xsd:nonNegativeInteger (4) | <p>It returns the number of response record to be returned to the user.</p> <p>If there is no document level exception, the number should be the same as the number of requests contained in the request document.</p> <p>If document level exception occurs and the system does not process detail request, the field will be blank and document level exception information can be acquired in “reason” block in the same header.</p> | 0..1 |

| Field Ref. No. | Field location | Field name | Data Type | Description / Usage Rule | Card. |
|----------------|--|--------------------|-----------------------------|--|-------|
| 1.9 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader | trdoc:response | --- | The block that is used for holding the result of executing the request and their corresponding reasons for the response. | 1..1 |
| 1.9.1 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader/trdoc:response | trdoc:responseCode | xsd:normalizedString (6) | <p>It carries a success return code if there is no document level exception. If a document-level exception occurs, it carries an error code with a reason description.</p> <p>User should not mix up this response code with the code returned for individual trade event detail response. There may be a situation in which all trade event requests are processed but rejected by the system and this field will still carry a success return code since no document level exception occurs.</p> | 1..1 |
| 1.9.2 | /trdoc:valuationResponseDocument/trdoc:responseDocumentHeader/trdoc:response | trdoc:responseDesc | xsd:normalizedString (1024) | <p>Reason description corresponding to the reasonCode.</p> <p>The field is not present if the reasonCode is success return code.</p> | 0..1 |

G.5.3 trdoc:responseDocumentDetails Component

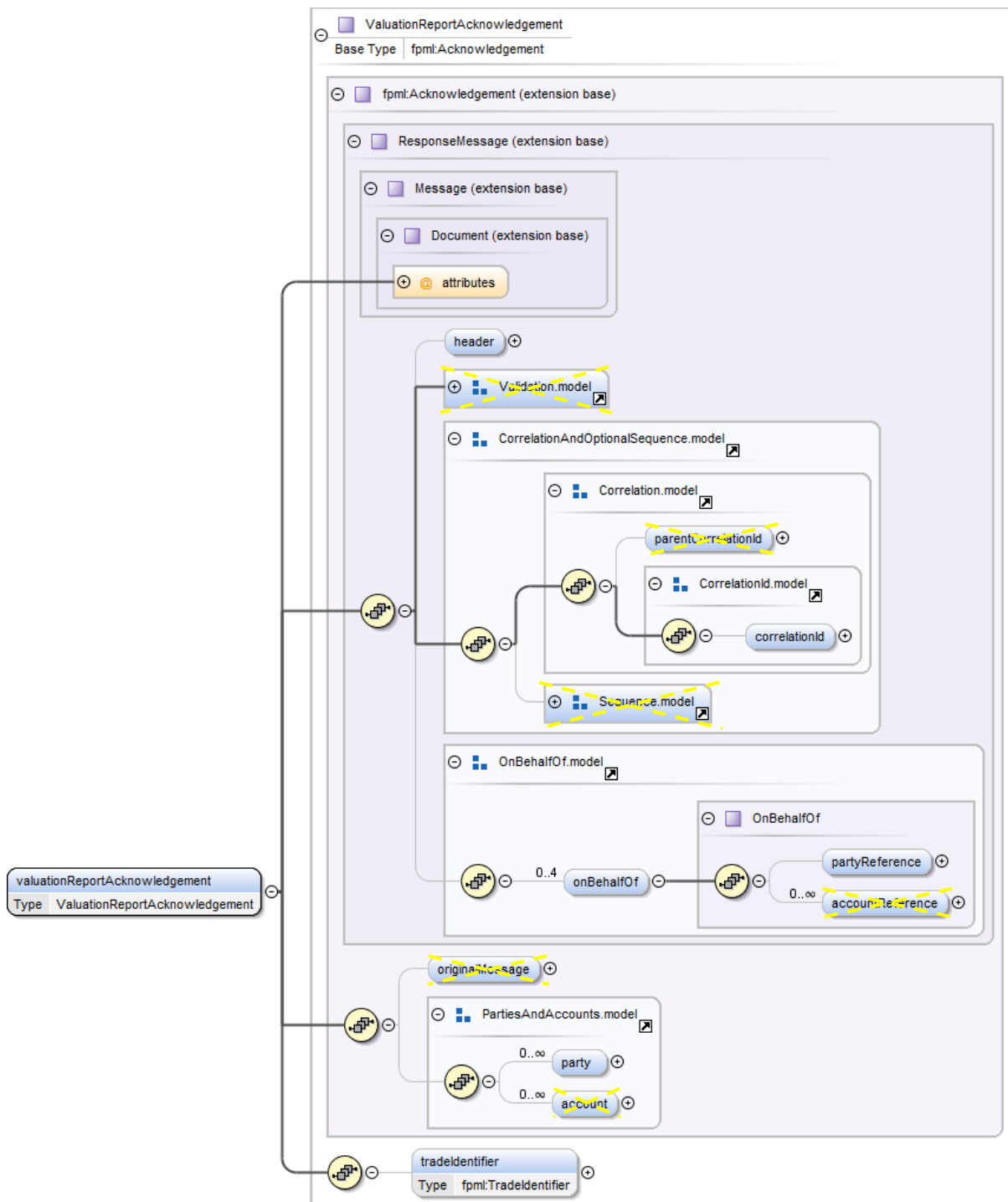


| Field Reference Number | Field location | Field name | Data Type | Description / Usage Rule | Card. |
|------------------------|--|-----------------------------------|-----------|---|---------|
| 2 | /trdoc:valuationResponseDocument | trdoc:responseDocumentDetails | --- | <p>The document detail block embeds detail response message of either type valuationReportAcknowledgement or valuationReportException.</p> <p>The whole block will be absent if document level exception occurs since the system cannot proceed to process individual requests in the request document.</p> | 0..1 |
| 2.1 | /trdoc:valuationResponseDocument/trdoc:responseDocumentDetails | tr:valuationReportAcknowledgement | --- | <p>Used only if the purpose of the file is "Valuation".</p> <p>Either the custom valuationReportAcknowledgement or the FpML standard valuationReportException message block will be returned.</p> <p>If the original request is processed successfully, the custom FpML valuationReportAcknowledgement message block will be returned.</p> <p>For detailed format description, refer to appendix G.5.4.</p> | 1..2500 |

| Field Reference Number | Field location | Field name | Data Type | Description / Usage Rule | Card. |
|------------------------|---|--------------------------|-----------|---|---------|
| | /trdoc:valuationResponseDocument/trdoc:responseDocumentDetails/valuationReportAcknowledgement | @fpmlVersion | --- | The FpML version. For FpML 5.5, the string “5-5” will be returned. | Req. |
| 2.2 | /trdoc:valuationResponseDocument/trdoc:responseDocumentDetails | valuationReportException | --- | Used only if the purpose of the file is “Valuation”. Either the standard FpML valuationReportAcknowledgement or valuationReportException message block will be returned. If the original request cannot be processed successfully, an FpML valuationReportException message block will be returned For detailed format description, refer to appendix G.5.5. | 1..2500 |
| | /trdoc:valuationResponseDocument/trdoc:responseDocumentDetails/valuationReportException | @fpmlVersion | --- | The FpML version. For FpML 5.5, the string “5-5” will be returned. | Req. |

G.5.4 valuationReportAcknowledgement Component

The structure of `valuationReportAcknowledgement` block is illustrated in the following diagram:

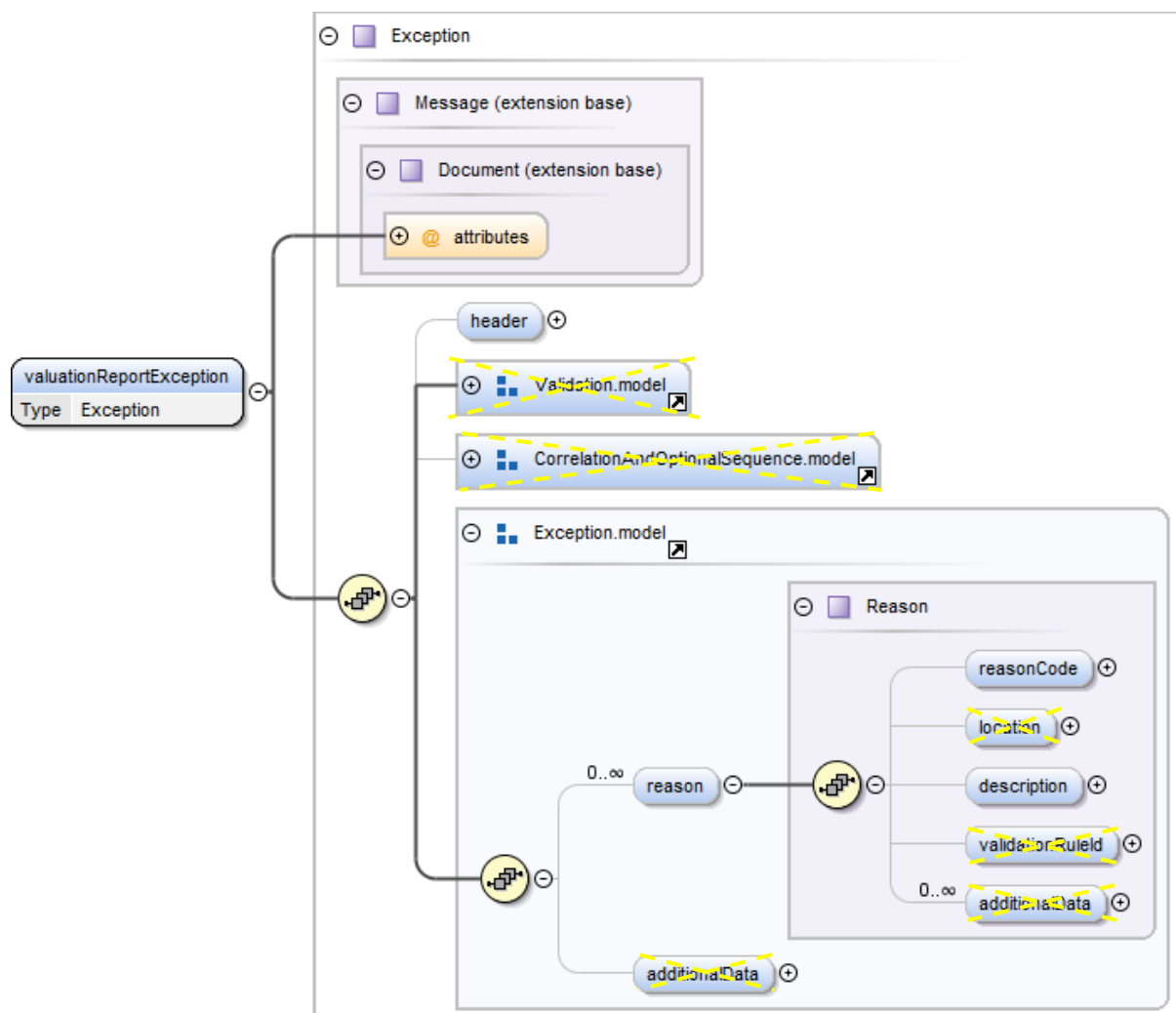


| Field Reference Number | Field location | Field name | Data Type | Description / Usage Rule | Card. |
|------------------------|--|-----------------------------------|---------------------------|--|----------------|
| 1 | / | tr:valuationReportAcknowledgement | --- | | 0..U (1..2500) |
| 1.1 | /tr:valuationReportAcknowledgement | header | --- | A type refining the generic message header content to make it specific to response messages. For detailed layout, refer to appendix G.5.6.1. | 0..1 (1..1) |
| 1.2 | /tr:valuationReportAcknowledgement | correlationId | xsd:normalizedString (40) | A qualified identifier used to correlate between messages. The HKTR-R system will return the assigned valuation request reference. | 0..1 (1..1) |
| | /tr:valuationReportAcknowledgement /correlationId | @correlationIdScheme | xsd:anyURI | Always returns the HKTR-R system assigned valuation request reference under the URI: "http://www.hkicl.com.hk/scheme/hktr/valuation-request-ref" | Req. |
| 1.3 | /tr:valuationReportAcknowledgement | onBehalfOf | --- | Indicates which party (and accounts) a trade is being processed for. If the original request is submitted by an agent on behalf of reporting party, the field points to the reporting party. | 0..4 (0..1) |
| 1.3.1 | /tr:valuationReportAcknowledgement/onBehalfOf | partyReference | Reference | The party for which the message receiver should work. The party block should contain the HKTR Entity ID. | 0..1 (1..1) |
| | /tr:valuationReportAcknowledgement/onBehalfOf/partyReference | @href | xsd:IDREF | A reference to a party | Req. |
| 1.4 | /tr:valuationReportAcknowledgement | party | --- | A legal entity or a subdivision of a legal entity. Parties can perform multiple roles in a trade lifecycle. For example, the principal parties obligated to make payments from time to time during the term of the trade, but may include other parties involved in, or incidental to, the trade, such as parties acting in the role of broker, calculation agent, etc. In FpML roles | 0..U (0..50) |

| Field Reference Number | Field location | Field name | Data Type | Description / Usage Rule | Card. |
|------------------------|--|--------------------|---|---|-----------------|
| | | | | are defined in multiple places within a document. | |
| 1.4.1 | /tr:valuationReportAcknowledgement/party | partyId | xsd:normalizedString (40) | A party identifier, e.g. a S.W.I.F.T. bank identifier code (BIC). The HKTR-R system returns the HKTR-R system's participant Id. when referring to the submitting party or the reporting parties of the original request. | 0..U (1..15) |
| | /tr:valuationReportAcknowledgement/party/partyId | @partyIdScheme | xsd:anyURI | Party Id. Coding Scheme. | Opt. (Req.) |
| 1.5 | /tr:valuationReportAcknowledgement | tr:tradeIdentifier | TradeIdentifier. Refer to section G.4.6.4 for details. | The HKTR-R system will return the TR Trade Reference if the valuation response status is "Completed". | 0..1 |

G.5.5 valuationReportException Component

The structure of `valuationReportException` block is illustrated in the following diagram:

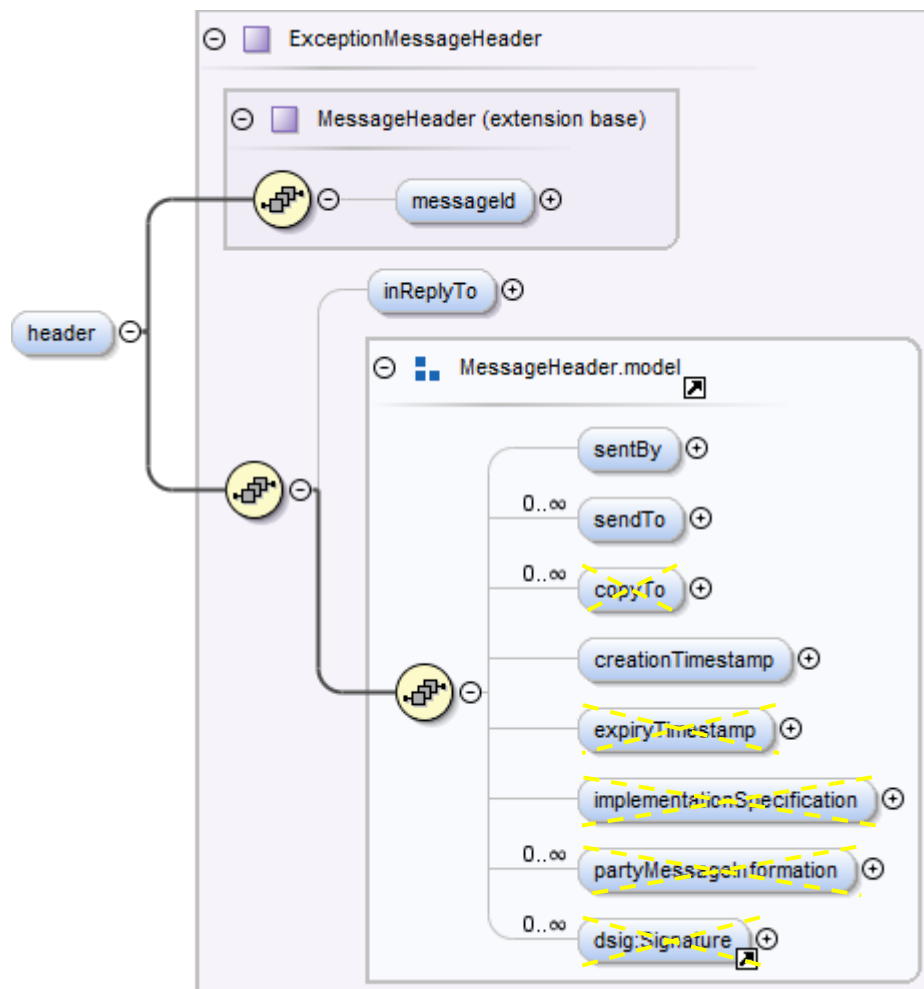


| Field Reference Number | Field location | Field name | Data Type | Description / Usage Rule | Card. |
|------------------------|---|--------------------------|--------------------------|---|-------------------|
| 2 | / | valuationReportException | --- | | 0..U (1..2500) |
| 2.1 | /valuationReportException | header | --- | A type refining the generic message header content to make it specific to response messages. For detailed layout, refer to appendix G.5.6.1. | 0..1 (1..1) |
| 2.2 | /valuationReportException | reason | --- | An instance of the Reason type used to record the nature of any errors associated with a message. | 0..U (1..20) |
| 2.2.1 | /valuationReportException/reason | reasonCode | xsd:normalizedString (6) | A machine interpretable error code. Note that the HKTR-R system will return HKTR-R-specific error code, instead of the FpML standard codes | 0..1 (1..1) |
| | /valuationReportException/reason/reasonCode | @reasonCodeScheme | xsd:anyURI | Always returns the HKTR-R coding scheme URI for reason code: " http://www.hkicl.com.hk/scheme/hktr/reporting/reason-code ". | Opt. |
| 2.2.2 | /valuationReportException/reason | description | xsd:string (1024) | Plain English text describing the associated error condition | 0..1 |

G.5.6 Common Response Message Elements

G.5.6.1 NotificationMessageHeader / ExceptionMessageHeader Component

valuationReportAcknowledgement message embeds a header component with type NotificationMessageHeader, while valuationReportException message embeds a header component with type ExceptionMessageHeader. These two types share the same structure, as illustrated as follows:



| Field Reference Number | Field location (relative to /valuationReportAcknowledgement or /valuationReportException) | Field name | Data Type | Description / Usage Rule | Card. |
|------------------------|---|-----------------------|---------------------------|--|-------------|
| 1 | / | header | --- | A type refining the generic message header content to make it specific to request messages. | 1..1 |
| 1.1 | /header | messageId | xsd:normalizedString (40) | A unique identifier (within its coding scheme) assigned to the message. It is the unique response ID generated by HKTR-R system. | 0..1 (1..1) |
| | /header/messageId | @messageIdScheme | xsd:anyURI | The HKTR-R system only supports party in coding scheme of " http://www.hkicl.com.hk/scheme/hktr/message-id ". | Req. |
| 1.2 | /header | inReplyTo | xsd:normalizedString (40) | A copy of the unique message identifier (within its own coding scheme) to which this message is responding. It is the message ID specified by user on the request message corresponding to this response. In case of the request message is not well-formed, an empty tag of inReplyTo would be presented. | 0..1 (1..1) |
| | /header/inReplyTo | @messageIdScheme | xsd:anyURI | The HKTR-R system only supports party in coding scheme of " http://www.hkicl.com.hk/scheme/hktr/message-id ". | Req. |
| 1.3 | /header | sentBy | xsd:normalizedString (35) | The unique identifier (within its coding scheme) for the originator of a message instance. In HKTR-R, it must be "HKTR". | 0..1 (1..1) |
| | /header/sentBy | @messageAddressScheme | xsd:anyURI | As the message must be from HKTR, the URL must be: • " http://www.hkicl.com.hk/scheme/hktr/hktr " | Opt. (Req.) |
| 1.4 | /header | sendTo | xsd:normalizedString (35) | A unique identifier (within its coding scheme) indicating an intended recipient of a message. In HKTR-R, it must be the submitting party of the request. | 0..U (1..1) |

| Field Reference Number | Field location (relative to /valuationReportAcknowledgement or /valuationReportException) | Field name | Data Type | Description / Usage Rule | Card. |
|------------------------|---|-----------------------|--------------|--|----------------|
| | /header/sendTo | @messageAddressScheme | xsd:anyURI | It must be one of the followings: <ul style="list-style-type: none"> • "http://www.fpml.org/coding-scheme/external/iso17442" (for HKTR entity using LEI). • "http://www.hkicl.com.hk/scheme/hktr/tr-entity-id" (for HKTR entity using HKTR Entity ID). • "http://www.fpml.org/ext/iso9362" (for HKTR entity using SWIFT BIC) • "http://www.hkicl.com.hk/scheme/cicrn" (for HKTR entity using "Certificate of Incorporation" (CI) or "Certificate of Registration" (CR) Number) • "http://www.hkicl.com.hk/scheme/hkbrn" (for HKTR entity using Hong Kong Business Registration Number) | Opt. (Req.) |
| 1.5 | /header | creationTimestamp | xsd:dateTime | The date and time (on the source system) when this message instance was created. | 0..1 (1..1) |

G.6 Fields that are subjected to mandatory reporting

For phase 2 reporting, the "Reporting Requirement" column in the tables described in the following sub-sections:

- “R” – Field that is presented under the gazette (Government Notice 3912) published on 15 July 2016, with effective as of 1 July 2017.)

The symbol “*” refers to the reporting requirement of party related fields where the party is an individual with the following reporting guidelines.

Note: The field “partyIdScheme” should be with the field value of “UserDefinedCode”.

The field “partyId” should be with internal code reference assigned by the reporting party.

The field “partyName” should be left blank.

- “O” – Field that is not presented under the gazette published on 15 July 2016.

| Field Name | FpML path relative to the root element (if not otherwise specified) | Phase 2 Reporting Requirement "R" - Fields that are presented under the gazette (Government Notice 3912 published on 15 July 2016, with effective as of 1 July 2017.) "O" - Fields that are not presented under the gazette published on 15 July 2016. |
|---|---|--|
| Action | <u>For AddOrModify action</u> /valuationReport <u>For Delete action</u> /tr:valuationReportRetracted | R |
| Valuation Request ID | <u>For AddOrModify action</u> /valuationReport/header/messageId <u>For Delete action</u> /tr:valuationReportRetracted/header/messageId | R |
| Trade Reference (for trade correlation) | <u>For AddOrModify action</u> /valuationReport/tradeValuationItem/partyTradeIdentifier/tradeId/@tradeIdScheme=" htt | R |

| Field Name | FpML path relative to the root element (if not otherwise specified) | Phase 2 Reporting Requirement "R" - Fields that are presented under the gazette (Government Notice 3912 published on 15 July 2016, with effective as of 1 July 2017.) "O" - Fields that are not presented under the gazette published on 15 July 2016. |
|---|--|--|
| | p://www.hkicl.com.hk/scheme/hktr/trade-ref For Delete action /tr:valuationReportRetracted/partyTradeIdentifier/tradeId/@tradeIdScheme="http://www.hkicl.com.hk/scheme/hktr/trade-ref" | |
| Agent Trade Reference (for trade correlation) | For AddOrModify action /valuationReport/tradeValuationItem/partyTradeIdentifier/tradeId/@tradeIdScheme="http://www.hkicl.com.hk/scheme/hktr/agent-trade-ref" For Delete action /tr:valuationReportRetracted/partyTradeIdentifier/tradeId/@tradeIdScheme="http://www.hkicl.com.hk/scheme/hktr/agent-trade-ref" | R |
| User Trade Reference (for trade correlation) | For AddOrModify action /valuationReport/tradeValuationItem/partyTradeIdentifier/tradeId/@tradeIdScheme="http://www.hkicl.com.hk/scheme/hktr/user-trade-ref" For Delete action /tr:valuationReportRetracted/partyTradeIdentifier/tradeId/@tradeIdScheme="http://www.hkicl.com.hk/scheme/hktr/user-trade-ref" | R |
| UTI - Issuer ID (for trade correlation) | For AddOrModify action /valuationReport/tradeValuationItem/partyTradeIdentifier/issuer/@issuerIdScheme="http://www.fpml.org/coding-scheme/external/cftc/issuer-identifier" For Delete action /tr:valuationReportRetracted/partyTradeIdentifier/issuer/@issuerIdScheme="http://www.fpml.org/coding-scheme/external/cftc/issuer-identifier" | R |
| UTI - UTI value (for trade correlation) | For AddOrModify action /valuationReport/tradeValuationItem/partyTradeIdentifier/tradeId/@tradeIdScheme="http://www.fpml.org/coding-scheme/external/unique-transaction-identifier" | R |

| Field Name | FpML path relative to the root element (if not otherwise specified) | Phase 2 Reporting Requirement "R" - Fields that are presented under the gazette (Government Notice 3912 published on 15 July 2016, with effective as of 1 July 2017.) "O" - Fields that are not presented under the gazette published on 15 July 2016. |
|----------------------------------|--|--|
| | <u>For Delete action</u> /tr:valuationReportRetracted/partyTradeIdentifier/tradeId/@tradeIdScheme=" http://www.fpml.org/coding-scheme/external/unique-transaction-identifier " | |
| UTI-TIID (for trade correlation) | <u>For AddOrModify action</u> /valuationReport/tradeValuationItem/partyTradeIdentifier/tradeId/@tradeIdScheme=" http://www.hkicl.com.hk/scheme/unique-transaction-identifier-unique-trade-id " <u>For Delete action</u> /tr:valuationReportRetracted/partyTradeIdentifier/tradeId/@tradeIdScheme=" http://www.hkicl.com.hk/scheme/unique-transaction-identifier-unique-trade-id " | R |
| Valuation Date Time | /valuationReport/tradeValuationItem/valuationSet/assetValuation/quote/time where /valuationSet/assetValuation/@id equals "reportingForParty" | R |
| Valuation Value - Currency | /valuationReport/tradeValuationItem/valuationSet/assetValuation/quote/currency where /valuationSet/assetValuation/@id equals "reportingForParty" | R |
| Valuation Value - Amount | /valuationReport/tradeValuationItem/valuationSet/assetValuation/quote/value where /valuationSet/assetValuation/@id equals "reportingForParty" | R |
| Valuation Type | /valuationReport/tradeValuationItem/valuationSet/assetValuation/quote/measureType where /valuationSet/assetValuation/@id equals "reportingForParty" | R |

G.7 Summary of Coding Schemes

Below is a summary of coding schemes that can be used within the HKTR-R system for valuation purpose. If the value in the “Default” column is “Y”, it means that the corresponding coding scheme is the default value, and will simply be ignored by the HKTR-R system.

| Attribute name | Relevant Elements | Coding scheme URI | Usage | Default |
|----------------------|---|---|--|---------|
| messageIdScheme | <ul style="list-style-type: none"> /valuationReport/header/messageId /tr:valuationReportRetracted/header/messageId /tr-ext:valuationReportAcknowledgement/header/messageId /valuationReportException/header/messageId | http://www.hkicl.com.hk/scheme/hktr/message-id | For specifying the request /response message ID. | Y |
| messageAddressScheme | <ul style="list-style-type: none"> /valuationReport/header/sentBy /tr:valuationReportRetracted/header/sentBy | http://www.fpml.org/coding-scheme/external/iso17442 | For specifying LEI of the HKTR entity | |
| | | http://www.hkicl.com.hk/scheme/hktr/tr-entity-id | For specifying HKTR Entity ID. | |
| | | http://www.fpml.org/ext/iso9362 | For specifying SWIFT BIC of the HKTR entity. | |
| | | http://www.hkicl.com.hk/scheme/cicrn | For specifying “Certificate of Incorporation” (CI) or “Certificate of Registration” (CR) Number of the HKTR entity. | |
| | | http://www.hkicl.com.hk/scheme/hkbrn | For specifying Hong Kong Business Registration Number of the HKTR entity. | |
| | | http://www.hkicl.com.hk/scheme/hktr/hktr | Specifically used to specify the HKTR party. Example use: For specifying the sent-by party in response message. | |
| correlationIdScheme | <ul style="list-style-type: none"> /tr:valuationReportAcknowledgement/correlationId | http://www.hkicl.com.hk/scheme/hktr/valuation-request-ref | For specifying the HKTR-R system assigned valuation request reference. | |

| Attribute name | Relevant Elements | Coding scheme URI | Usage | Default |
|--------------------|---|---|--|---------|
| | | | Used in acknowledgement response message only. | |
| partyIdScheme | <ul style="list-style-type: none"> /valuationReport/party/partyId | http://www.fpml.org/coding-scheme/external/iso17442 | For specifying Legal Entity Identifier. | |
| | | http://www.hkicl.com.hk/scheme/hktr/tr-entity-id | For specifying HKTR Entity ID. | |
| | | http://www.fpml.org/ext/iso9362 | For specifying SWIFT BIC | |
| | | http://www.hkicl.com.hk/scheme/cicrn | For specifying “Certificate of Incorporation” (CI) or “Certificate of Registration” (CR) Number | |
| | | http://www.hkicl.com.hk/scheme/hkbrn | For specifying Hong Kong Business Registration Number | |
| | | http://www.hkicl.com.hk/scheme/hktr/user-defined | For specifying user defined identifier | |
| | | http://www.hkicl.com.hk/scheme/hktr/masked-party-id | For specifying a masked party ID, for use when the counterparty’s identity is not to be disclosed. | |
| reasonCodeScheme | <ul style="list-style-type: none"> /valuationReportException/reason/reasonCode | http://www.hkicl.com.hk/scheme/hktr/reporting/reason-code | For specifying the response code of the individual request. These are the HKTR-R-specific reason codes. | Y |
| assetMeasureScheme | <ul style="list-style-type: none"> /valuationReport/tradeValuationItem/valuationSet/assetValuation/quote/measureType | http://www.hkicl.com.hk/scheme/hktr/valuation-type | <p>For specifying the type of valuation.</p> <p>For a list of its eligible values, please refer to the “Valuation Type” worksheet in the excel document “Reporting - Ref - Enumerations and coding schemes.xls”.</p> | Y |
| currencyScheme | <ul style="list-style-type: none"> /valuationReport/tradeValuationItem/valuationSet/assetValuation/currency | http://www.fpml.org/ext/iso4217-2001-08-15 | The ISO standard 4217 for currency. | Y |

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| Attribute name | Relevant Elements | Coding scheme URI | Usage | Default |
|---------------------------|--|---|---|---------|
| | ation/quote/currency | | For a list of its eligible values, please refer to the "Currency" worksheet in the excel document: "Reporting - Ref - Enumerations and coding schemes.xls". | |
| informationProviderScheme | <ul style="list-style-type: none"> /valuationReport/tradeValuationItem/valuationSet/assetValuation/quote/informationSource/rateSource | http://www.hkicl.com.hk/scheme/hktr/valuation-source | For specifying the information for obtaining a market rate. | Y |
| pricingModelScheme | <ul style="list-style-type: none"> /valuationReport/tradeValuationItem/valuationSet/assetValuation/quote/pricingModel | http://www.hkicl.com.hk/scheme/hktr/valuation-reference-model | For specifying the reference model used to calculate daily mark. | Y |
| issuerIdScheme | <ul style="list-style-type: none"> [PartyTradeIdentifier]/issuerId | http://www.fpml.org/coding-scheme/external/cftc/issuer-identifier | For specifying the issuer ID of the issuer of UTI. | Y |
| tradeIdScheme | <ul style="list-style-type: none"> [PartyTradeIdentifier]/tradeId | http://www.hkicl.com.hk/scheme/hktr/trade-ref | For specifying the HKTR-R system assigned trade identifier. | |
| | | http://www.fpml.org/coding-scheme/external/unique-transaction-identifier | For specifying the Unique Trade Identifier (UTI). UTI specified by the HKTR only includes the value of the USI if it exists for the trade. It should be presented in conformity with the format and structure applicable to it. | |
| | | http://www.hkicl.com.hk/scheme/hktr/agent-trade-ref | For specifying the Agent Trade Reference. | |
| | | http://www.hkicl.com.hk/scheme/hktr/user-trade-ref | For specifying the User Trade Reference. | |
| | | http://www.hkicl.com.hk/scheme/unique-transaction-identifier-unique-trade-id | For specifying the UTI-TID, which is the value of the Trade ID (UTI-TID) if a unique Trade ID (UTI-TID) reportable under the mandatory reporting requirements in the European Union exists for the trade. It should be presented in conformity with | |

| Attribute name | Relevant Elements | Coding scheme URI | Usage | Default |
|----------------|-------------------|-------------------|--|---------|
| | | | the format and structure applicable to it. | |

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