



Transaction XML Reporting Guide

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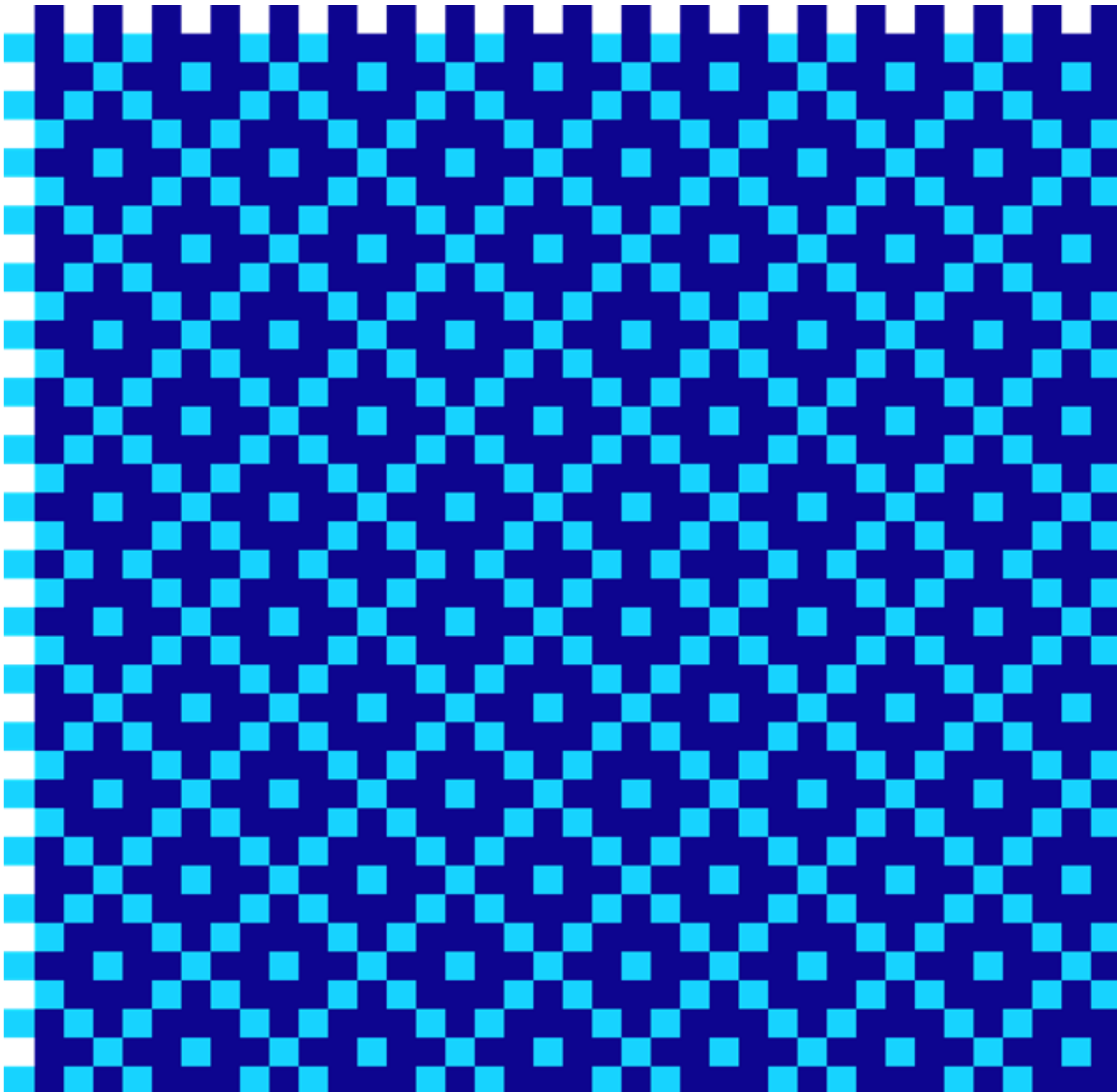
For the latest technical documentation, see the [Documentation Portal](#).

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About this Guide

This document is intended as a reference guide, to provide information on the available Thredd XML reports. It describes the Transaction XML Data Schema elements, sub-elements and attributes.

Target Audience

Technical team(s) responsible for the handling and processing of the Thredd transaction XML files. You should have reasonable knowledge of XML/XSD and of the Cards industry.

What's Changed?

If you want to find out what's changed since the previous release, see the [Document History](#) section.

How to use this Guide

If you are new to Thredd and want to understand when and how XML files are provided to you, the types of XML files available and how they can be used, see the [Introduction](#) and [Transactional Data Files](#) topics. To view an example of a Transaction XML file, see [Transaction XML Example](#). To view the current data schema, see [Transaction XML Schema](#).

Note: For upcoming/future versions of the Transaction XML schema, see the [XSD Schemas](#) section on the Documentation Portal.

For information about the record types and fields in the Transaction XML file, see [Primary Elements](#).

Related Documents

Refer to the table below for a list of other relevant documents that should be used together with this guide.

Document	Description
Balance XML Guide	Describes the structure and content of the Balance XML report.
External Host Interface (EHI) Guide	Provides details of the Thredd External Host Interface (EHI).
Web Services Guide	Describes how to use the Thredd web services API.
Thredd Portal Guide	Thredd Portal is Thredd's new user interface for managing your cards and transactions on the Thredd Platform.

Tip: For the latest technical documentation, see the [Documentation Portal](#).



SECTION 1: GETTING STARTED

You should read this section if you are new toThredd XML reports and want to understand what types of reports are available and how they are provided.

Topics covered in this section:

- [About this Guide](#)
- [Introduction](#)
- [Transactional Data Files](#)
- [Transactional Data Schema](#)

Tip: To find out what has changed, see the [Document History](#).



1.1 Introduction

Thredd provide a number of daily XML reports, containing details of transactions processed on the system during the past 24 hours.

This includes both authorisations and financial transactions.

Reports are provided by Secure File Transfer Protocol (sFTP).

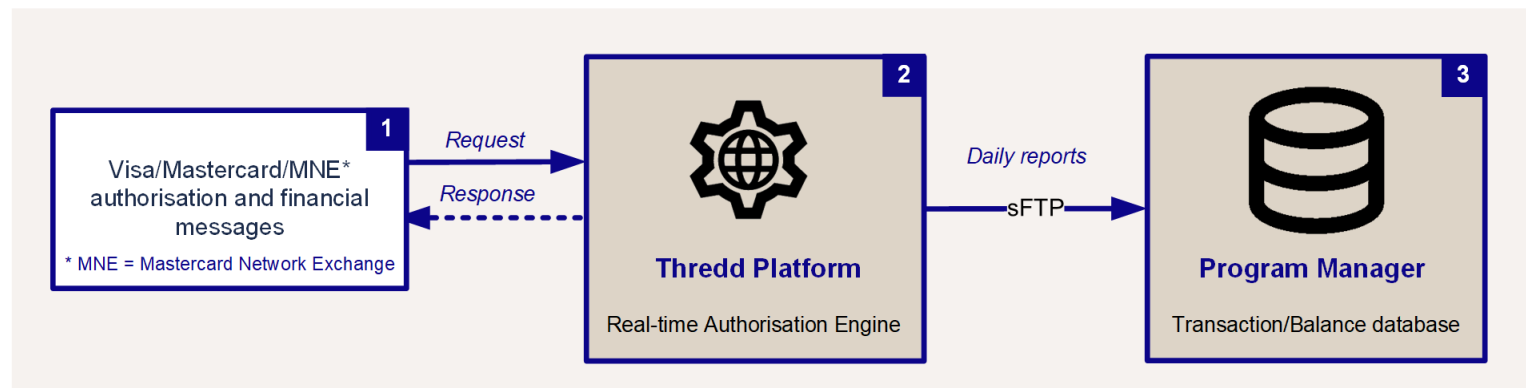


Figure 1: XML Reporting

1.1.1 Types of XML Reports

Thredd provides the following daily reports to Program Managers:

- **Transaction XML Report** - contains details of daily transactions
- **Balance XML Report** - provides details of the balance on each card

For Issuers and Self-Issuers, Thredd provides two additional reports:

- **Fee Collection Report** - daily report which gives a summary of Scheme (VISA/Mastercard) Fees by ICA and currency
- **Quarterly Management Report (QMR)** - quarterly report which contains information needed to complete your regulatory Quarterly Management Report

Transaction XML Report

The Transaction XML report provides details of authorisation and financial advices and any other non-scheme transactions that take place, such as card loads/unloads, balance adjustments (via web services), cardholder fees generated by Thredd (you have set up in your fee groups), network scheme fees.

You can use this report to reconcile against Mastercard or Visa settlement advices.

You can also use it to reconcile with data received from EHI.

The format and content of the transaction XML report is described in this guide.

Balance XML Report

Balance XML reports are relevant where Thredd maintains details of card balances, such as in EHI modes 2, 3 and 4 or where EHI is not being used.

The Balance XML report provides details of the balance on each card as at midnight UK time¹ or the time when the XML is run (configurable). You can use this report to confirm how much money is on the card according to Thredd system's (where Thredd maintain the balance). You can compare this to information you hold in your local card database. For more information, see the [Balance XML Reporting Guide](#).

Fee Collection Report

Fee Collection reports are provided to issuers and self-issuers.

The report is a daily summary of Scheme (Mastercard/Visa) fees by ICA and currency and can be used to reconcile against the Mastercard/Visa Settlement summary reports. It includes transaction categories such as Interregional non-financial ATM transaction fees, fees for ATM PIN management and ATM Balance Inquiry fees. For more information, contact your Thredd Implementation Manager or Account Manager.



Quarterly Management Report (QMR)

Quarterly Management reports (Mastercard and Quarterly Operating Certificate - Visa) are provided to issuers and self-issuers.

The report provides details needed for quarterly reporting to the Scheme, and includes details such as the number of live cards, card issued, and information on card activity and status. For more information, contact your Thredd Implementation Manager or Account Manager.

¹Local UK time, which is either Greenwich Mean Time (GMT) or British Summer Time (BST); For details, see: <https://www.gov.uk/when-do-the-clocks-change>.



1.2 Transactional Data Files

Thredd can supply you with daily Transaction XML files. Transaction XML files are delivered to you via sFTP.

Note: sFTP files are deleted from the Thredd sFTP server after two calendar days. They are stored on our archive server for a limited period.

1.2.1 Sending of Files

Transactional data files are created every day (excluding UK Public Holidays). When we have received the settlement information from the card scheme, we send this to you. For UK issuers, this is in the afternoon, between 2:30-5pm, UK time¹. For issuers in other regions, the timings may vary.

Mastercard Cycles

Mastercard has 6 cycles clearing cycles per day, seven days per week. After each clearing cycle, Mastercard sends us clearing files, which contain the settlement data.

We wait until we process all 8 cycles before generating the transaction XML report. We send you a single daily file.

Data from cycles 5-8 from the night before and 1-4 from current day form a complete settlement day picture for most regions. These contain all the information you need to reconcile your settlements with Mastercard.

Asia-Pacific

For Asia-Pacific clients we process cycles 2-8 for the previous day and cycle 1 from the current day, and include them in the daily transaction XML report.

Visa Cycles

Visa provide 2 files (Domestic and International) each day with different timings for some regions (For example, Australia and Hong Kong).

There is a maximum filesize so for the largest clients it is possible that more than one Domestic and/or International file will be received on the same day..²

After processing, we will create the transaction XML file and send to you.

Discover Cycles

Discover provide 3 sets of files from Monday to Friday between 10 am and 2 pm GMT which include:

- **Issuer Interchange** (main clearing file for presentments and disputes)
- **Issuer Detail** (settlement amounts and presentment fees)
- **Issue Disputes and Fee** (chargeback updates and fee collection records)
- There are also monthly Sysops files, that hold cycle parameters, and the daily foreign exchange files. Discover receives the SysOps files on the last Friday of each month.

1.2.2 File Contents

The daily transaction XML file contains:

- All presentments that have a settlement date of this day (D)
- Any presentments that have a settlement date of day D-1 and arrived too late for the previous day's XML generation
- All non-presentment transactions for day D-1.



1.2.3 File Format and Encryption

For an example of a transaction XML file, see [Transaction XML Example](#).

File Naming Convention

The transaction XML files use the following naming convention:

On-Premise Customers (P0)

[GPS-PPPtznexpYYYYMMDD.xml](#)

Thredd Cloud (P1 and P2)

[GPS-PPPtznexpYYYYMMDD.Pn.xml](#)

Where:

- PPP= The 3-10 letter XML file prefix set up for your programme.
- YYYY= year (4 digits)
- MM = month (2 digits)
- DD = day (2 digits)
- Pn = production environment (2 digits), such as P1 and P2. (Not applicable to customers in our UK data centre production environment)

For example:

[GPS-NWCtnexp20230130.P1.xml](#)

Note: The production environment variable is relevant to customers in one of our AWS Cloud-based production environments (P1 and P2) and does not apply to existing customers in our UK data centre production environment (P0). For details of which production environment applies to your programme, please check with your Thredd implementation manager or account manager.

Encryption

XML files are encrypted using PGP, which requires sharing of keys. For details, contact your implementation manager.

Encoding / Type

Transaction XML data files are well-formed XML (UTF-8 encoded).

Note: XML is case-sensitive, ensure you follow the correct casing for all XML elements and attribute names when processing the message.

¹Local UK time, which is either Greenwich Mean Time (GMT) or British Summer Time (BST). For details, see: <https://www.gov.uk/when-do-the-clocks-change>.

²Visa Domestic cycle at 9am and International cycle at mid-day, 7 days a week.



1.3 Transaction Matching

All transactions reported to Thredd via the card schemes (Visa and Mastercard) are included in both the EHI data feed and transaction XML reports. You can use the information in the XML reports to match and reconcile against data received via EHI, check for any duplicate records, and match authorisation records (e.g., authorisation advices and authorisation reversals) to financial records (e.g., presentments and chargebacks).

1.3.1 Matching Authorisations to Financial Records

Within the transaction data reports, you can use the following fields to match records:

Field Type	CardAuthorisation Record	CardFinancial Record
Unique identifier of an authorisation transaction	AuthId	AuthId
Approval code generated by the issuer and printed on the receipt	ApprCode	ApprCode
Unique identifier of a financial record	-	FinId
Unique identifier of a presentment record	-	PresentmentId

1.3.2 Matching Transaction XML Records to EHI Records

You can use the following fields to match Transaction XML records to EHI records:

Field Type	Transaction XML Record	EHI Record
Unique identifier of the card linked to the transaction	PAN	Token
Unique identifier of an authorisation transaction	AuthId	TXn_ID
Unique identifier of a financial record	FinId	TXn_ID

For details of EHI fields, refer to the *External Host Interface (EHI) Guide*.



1.4 Transactional Data Schema

The Transactional Data Schema (TDS) describes the structure and possible data values of the Thredd Transactional XML file.

You can validate the transaction XML files you receive against the Schema (XSD file) to check it is in the correct format.

The TDS is an evolving standard and is subject to change as the standard evolves. When we make changes to the TDS, we will implement a new version and notify you.

1.4.1 Schema Versions

The schema is not publicly available. Thredd sends schema files when a new version of the XML is published. The schema filename indicates the schema version number. The schema file contains a comments section with details of version changes.

For an example of the current Transactional Data Schema, see [Transaction XML Schema](#).

For a history of changes to the Transactional Data Schema, see [Schema Changes](#).

Note: For upcoming/future versions of the Transaction XML schema, see the [XSD Schemas](#) section on the Documentation Portal.

1.4.2 Schema Elements

An XML file conforming to the schema consists of the following elements:

- [Primary elements](#)
- [Sub-elements and attributes](#)



SECTION 2: PRIMARY ELEMENTS

This section describes the Primary Elements within a transaction XML message.

Topics covered in this section:

- [Primary Elements](#)
- [CardAuthorisation](#)
- [CardFinancial](#)
- [CardChrgBackRepRes](#)
- [CardFee](#)
- [MasterCardFee](#)
- [CardLoadUnload](#)
- [ApprovedAgencyBanking](#)
- [DeclinedAgencyBanking](#)
- [AgencyBankingFee](#)
- [CardBalAdjust](#)
- [CardEvent](#)



2.1 Primary Elements

Primary Elements are listed within a [<Transactions>](#) parent element, which defines the top-level entities of the message. See the table below for details.

Element Name	Description	Data Type	Occurs
CardAuthorisation	Describes an Authorisation or Reversal.	<CardAuthorisation>	0 - n
CardFinancial	Describes a Financial Advice or Financial Reversal.	<CardFinancial>	0 - n
CardChrgBackRepRes	Describes a Chargeback, Chargeback Reversal, Representment or Representment Reversal.	<CardChrgBackRepRes>	0 - n
CardFee	Describes a fee (and commission).	<CardFee>	0 - n
MasterCardFee	Describes a MasterCard fee.	<MasterCardFee>	0 - n
CardLoadUnload	Describes a Card Load, Card Load Reversal, Card Unload and Card Unload Reversal.	<CardLoadUnload>	0 - n
ApprovedAgencyBanking	Describes an approved Agency Banking transaction (relevant only if you are using the Agency Banking service)	<ApprovedAgencyBanking>	0 - n
DeclinedAgencyBanking	Describes declined Agency Banking transaction (relevant only if you are using the Agency Banking service)	<DeclinedAgencyBanking>	0 - n
AgencyBankingFee	Describes any bank charges applied to Agency Banking transaction (relevant only if you are using the Agency Banking service).	<AgencyBankingFee>	0 - n
CardBalAdjust	Describes a card account Balance Adjustment or Reversal.	<CardBalAdjust>	0 - n
CardEvent	Describes a card status change event.	<CardEvent>	0 - n
WalletTransaction	Describes a wallet account transaction.	<WalletTransaction>	0 - n

Note: The presence of primary elements within an XML message depends on the card activity for the period being reported. For example, [<CardChrgBackRepRes>](#) elements are only present when a chargeback (or reversal) or Representment (or reversal) is reported.

Transactional XML example showing several Primary Elements

```
<?xmlversion="1.0"encoding="utf-8"?>
<Transactions>
<CardAuthorisation>...detail omitted...</CardAuthorisation>
<CardBalAdjust>...detail omitted...</CardBalAdjust>
<CardChrgBackRepRes>...detail omitted...</CardChrgBackRepres>
<CardFee>...detail omitted...</CardFee>
<CardFinancial>...detail omitted...</CardFinancial>
<CardLoadUnload>...detail omitted...</CardLoadUnload>
<MasterCardFee>...detail omitted...</MasterCardFee>
<WalletTransaction>...detail omitted...</WalletTransaction>
</Transactions>
```



2.2 CardAuthorisation

CardAuthorisation provide details of payment authorisation advices. There are two types of CardAuthorisation records:

- Authorisation Advice
- Authorisation Reversal

You can use the [RecType](#) element to determine the type of record.

You can use the [AuthId](#) element to uniquely identify the record and distinguish it from all other CardAuthorisation records.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecType	Record type, indicates <i>Advice</i> or <i>Reversal</i> .	<RecType>	Yes	See the RecType sub-element
Auth_type	Details on the type of authorisation for distinguishing between normal authorisations and pre-authorisations (or pre-auths).	xs:string	Yes	See the Auth_type sub-element
AuthId	Unique identifier for this CardAuthorisation record.	xs:unsignedLong	Yes	0 to 2^64
AuthTxnId	Alternative unique identifier of a CardAuthorisation record.	xs:unsignedInt	Yes	0 to 2^32
Traceid_Lifecycle	Lifecycle Trace ID. A transaction lifecycle identifier that allows you to track a transaction across its full lifecycle. This value is identical for all messages relating to the same transaction. For example, the following messages relating the same transaction will all have an identical Lifecycle Trace ID value: Authorisation, Second incremental authorisation, authorisation reversal, Financial Presentment, Chargeback, Second Presentment and Second Chargeback. If there is more than one authorisation for the same transaction, both authorisations will have the same value.	xs:string	Yes	See the Traceid_Lifecycle sub-element



Child Element	Description	Data Type	Required	Constraints / Permitted Values
LocalDate	The date and time the record was generated by the terminal (POS or ATM) or acquirer in the local timezone.	<LocalDate>	Yes	See the LocalDate sub-element
LocalDateUTC	The transaction date and Time in UTC as received from Mastercard, Visa, and MNE for the matching authorisation of the advice or reversal.	<LocalDateUTC>	Yes	See the LocalDateUTC sub-element
SettlementDate	The date the transaction was processed (in UK time).	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Account sub-element
TxnCode	Indicates the type of transaction.	<TxnCode>	Yes	See the TxnCode sub-element
TxnAmt	Indicates the value of the transaction requested by the cardholder.	<BasicAmount>	Yes	See the TxnAmt sub-element
CashbackAmt	Details of cashback requested by the cardholder.	<BasicAmount>	Yes	See the CashbackAmt sub-element
BillAmt	The amount posted to the cardholder account. Note that the amount does not include interchange.	<RateAmount>	Yes	See the BillAmt sub-element
ApprCode	The Approval Code generated by the issuer and printed on the receipt.	<ApprCode>	Yes	See the ApprCode sub-element
Trace	Information used to uniquely identify the transaction.	<Trace>	Yes	See the Trace sub-element
MerchCode	A unique code identifying the merchant (also known as the <i>Card Acceptor Identifier</i>).	<MerchCode>	Yes	See the MerchCode sub-element
Term	Describes the terminal used for the transaction.	<Term>	Yes	See the Term sub-element



Child Element	Description	Data Type	Required	Constraints / Permitted Values
Schema	Indicates the name of the card scheme.	<Schema>	Yes	See the Schema sub-element
NetworkTransactionId	The raw transaction ID, exactly as received from the card network without any alteration. Present only if received. This corresponds to the name in the Schema field. Thredd load this as follows: • Visa Online: 16 hexdigits of the DE62.2 Visa Transaction ID. The leading hexdigit should be a '0' padding character. • Visa Clearing: 15 characters, which should all be digits. (15 '0' characters indicates unknown. • Mastercard Online: DE63 concatenated with DE15. • Mastercard Clearing: DE63.	<NetworkTransactionId>	No	See the NetworkTransactionId sub-element
NetworkTransactionId2	This field corresponds to the NetworkTransactionId from the card scheme of the transaction, This is a unique ID for transactions in the same lifecycle (e.g. authorisation, clearing, and chargebacks).	<NetworkTransactionId2>	No	See the NetworkTransactionId2 sub-element
NetworkRelatedTransactionId	Transaction identifier that links a transaction with previous related transactions. These transactions are not in the same lifecycle (e.g. recurring transactions, refunds).	<NetworkRelatedTransactionId>	No	See the NetworkRelatedTransactionId sub-element
NetworkLinkvalidation	This field includes correction done on the NetworkTransactionId 2. If there is a problem in the NetworkTransactionId, the scheme updates to the correct one, which	<NetworkLinkvalidation>	No	See the NetworkLinkValidation sub-element



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	is the original NetworkTransactionId that the acquirer provided.			
AcquirerCountry	The acquirer's country code	<AcquirerCountry>	No	See the AcquirerCountry sub-element
Txn	Describes the validation and authentication properties used in a transaction.	<Txn>	Yes	See the Txn sub-element
MsgSource	Describes the derivative source of the record.	<MsgSource CardAuthorisation>	Yes	See the MsgSource sub-element
PaddingAmt	The amount of padding applied to the authorisation, which is the amount by which the authorisation is Greater than the corresponding financial transaction.	<BasicAmount>	Yes	See the PaddingAmt sub-element
Rate_Fee	The amount of any rate-based POS or ATM fee that was charged.	xs:decimal	Yes	
Fixed_Fee	The amount of any fixed POS or ATM fee that was charged.	xs:decimal	Yes	
CommissionAmt	The amount of commission applied to the authorisation, which is the indication of the charges applicable to the corresponding Financial Transaction.	<BasicAmount>	Yes	See the CommissionAmt sub-element
Classification	Merchant classification.	<Classification>	Yes	See the Classification sub-element
Response	Indicates transaction approval.	<Response>	Yes	See the Response sub-element
OrigTxnAmt	The value of the original transaction amount requested by the cardholder (only used in CardAuthorisation reversals).	<PartialAmount>	If Applicable	Only applicable if the RecType is "REV", See the OrigTxnAmt sub-element
ReversalReason	The reason for the reversal (only used in	<ReversalReason>	If Applicable	Only applicable if the RecType is "REV".



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	CardAuthorisation reversals).			See the ReversalReason sub-element
PaymentToken	This element is populated from Payment Token data when a Payment Token was used for the transaction. If no Payment Token was used, then the PaymentToken element is omitted. Note: Not applicable to Discover Global Network.	<PaymentToken>	If Applicable	See the PaymentToken sub-element
Sender	Provides details of the sender of the payment, where there is a money transfer. Note: Not applicable to Discover Global Network.	<Sender>	If Applicable	See the Sender sub-element
Receiver	Provides details of the receiver of the payment, where there is a money transfer. Note: Not applicable to Discover Global Network.	<Receiver>	If Applicable	See the Receiver sub-element

Example

```
<CardAuthorisation>
  <RecType>ADV</RecType>
  <Auth_type>0</Auth_type>
  <AuthId>6150002642</AuthId>
  <AuthTxnID>0</AuthTxnID>
  <LocalDate>20220910191808</LocalDate>
  <LocalDateUTC />
  <SettlementDate>20220910</SettlementDate>
  <Card PAN="999999999999995" product="MCRD" programid="ALGUKD" productid="1748" branchcode="" />
  <Account no="" type="01" />
  <TxnCode direction="debit" Type="pos" Group="pos" ProcCode="000000" Partial="NA" FeeWaivedOff="0" />
  <TxnAmt value="834.83" currency="826" />
  <CashbackAmt value="0.00" currency="826" />
  <BillAmt value="834.83" currency="826" rate="0.000000" clientfxrate="0.00000000" />
  <ApprCode />
  <Trace auditno="684023" origauditno="684023" Retrefno="" />
  <MerchCode />
  <Term code="" location="" street="" city="" country="GB" inputcapability="0" authcapability="12" />
  <Schema>MCRD</Schema>
  <Txn cardholderpresent="9" cardpresent="9" cardinputmethod="0" cardauthmethod="8" cardauthentity="8" />
  <MsgSource value="67" domesticMaestro="no" />
  <PaddingAmt value="0.00" currency="826" />
  <Rate_Fee value="5.87" />
  <Fixed_Fee value="14.27" />
</CardAuthorisation>
```



```
<CommissionAmt value="20.14" currency="826" />
<Classification MCC="" />
<Response approved="yes" actioncode="0" responsecode="" additionaldesc="Payment made" />
<OrigTxnAmt value="834.83" currency="826" />
<ReversalReason />
<PaymentToken id="5326" creator="MC-MDES" expdate="2025-12-
01" type="C" status="00" creatorstatus="A" wallet="ANDROID"
devicetype="U" lang="" activationexpiry="2011-11-11 11:11:00" activationmethod="1" />
</CardAuthorisation>
```



2.3 CardBalAdjust

CardBalAdjust records are used to indicate balance adjustments to a card’s account.
You can use the [AdjustId](#) element to uniquely identify the record and distinguish it from all other CardBalAdjust records.

Note: This element is not applicable to the Discover Global Network.

Child Element	Description	Data Type	Required	Constraints/ Permitted Values
LocalDate	The date and time the record was generated by the terminal (POS or ATM) or acquirer in the local timezone.	<LocalDate>	Yes	See the LocalDate sub-element
AdjustId	Identifier of this adjustment.	xs:unsignedLong	Yes	0 to 2^64
SettlementDate	The date the transaction has been processed.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Account sub-element
Amount	The amount, currency and direction (debit/credit) for the load and unload.	<DirectionAmount>	Yes	See the Amount sub-element
MerchCode	A unique code identifying the Merchant (also known as the Card Acceptor Identifier).	<MerchCode>	No	See the MerchCode sub-element
Desc	A text description of the unload.	<Desc>	Yes	See the Desc sub-element
AdjustType	The type of adjustment: <i>Actual</i> or <i>Block</i> .	<AdjustType>	Yes	See the AdjustType sub-element

Example

```
<CardBalAdjust>
  <LocalDate>20240213010242</LocalDate>
  <AdjustId>13961012925</AdjustId>
  <SettlementDate>20240213</SettlementDate>
  <Card PAN="5271278671128123"product="MCRD" programid="POCKIT01"
    productid="1297" branchcode="00000000" />
  <Account no="127867112" type="01" />
  <Amount value="1.99" currency="826" direction="debit" />
  <MerchCode />
  <Desc>Monthly fee for 02-2024_ReferenceToDisplay=Pockit Standard</Desc>
  <AdjustType>Actual</AdjustType>
</CardBalAdjust>
```



2.4 CardChrgBackRepRes

CardChrgBackRepRes describes the following record types:

- **Chargeback Advice** – created when the issuer raises a chargeback notification to reclaim funds from a merchant after a disputed purchase. For example, the issuer raises a notification where the cardholder claimed that the transaction was fraudulent or that they did not receive the product that was purchased. The funds that were previously debited from the card for the disputed transaction are now returned to the card.
- **Chargeback Reversal** – created when the issuer reverses a previous chargeback notification (withdraws the chargeback).
- **Representment Advice** – created when a merchant disputes a chargeback by providing evidence that the reason for the chargeback claim was invalid.
- **Representment Reversal** – created by the acquirer when they want to withdraw the representment. For example, if the merchant provided insufficient or invalid evidence or missed the representment deadline.

You can use the [AdjustId](#) element to uniquely identify the record and distinguish it from all other CardChrgBackRepRes records.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecordType	Indicates the type of CardChrgBackRepRes record.	xs:string	Yes	Valid values are: CB = Chargeback Advice CBREV = Chargeback Reversal REPRES = Representment Advice REPRESREV =Representment Reversal
ChgbackRepresId	Unique identifier for this CardChrgBackRepRes record.	xs:unsignedLong	Yes	0 to 2^64
Traceid_Lifecycle	Lifecycle Trace ID. A transaction lifecycle identifier that allows you to track a transaction across its full lifecycle. This value is identical for all messages relating to the same transaction. For example, the following messages relating the same transaction will all have an identical Lifecycle Trace ID value: Authorisation, Second incremental authorisation, authorisation reversal, Financial Presentment, Chargeback, Second Presentment and Second Chargeback. If there is more than one authorisation for the same transaction, both authorisations will have the same value.	xs:string	Yes	See the Traceid_Lifecycle sub-element
LocalDate	The date and time the record	<LocalDate>	Yes	See the LocalDate sub-



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	was generated by the terminal (POS or ATM) or acquirer in the local timezone.			element
SettlementDate	The date the transaction has been processed.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Account sub-element
TxnCode	Indicates the type of transaction.	<TxnCode>	Yes	See the TxnCode sub-element
TxnAmt	Indicates the value of the transaction requested by the cardholder.	<BasicAmount>	Yes	See the TxnAmt sub-element
CashbackAmt	Details of any cashback amount requested by cardholder. If no cashback is requested then populate with a zero value and the transaction currency code. Note: Not applicable to Discover Global Network.	<BasicAmount>	Yes	See the CashbackAmt sub-element
BillAmt	The amount posted to the cardholder account. This does not include interchange.	<RateAmount>	Yes	See the BillAmt sub-element
ApprCode	The <i>approval code</i> generated by the issuer and printed on the receipt.	<ApprCode>	Yes	See the ApprCode sub-element
Trace	Information used to uniquely identify the transaction. Note: Not applicable to Discover Global Network.	<Trace>	Yes	See the Trace sub-element
MerchCode	A unique code identifying the Merchant (also know as the <i>Card Acceptor Identifier</i>).	<Merch Code>	Yes	See the MerchCode sub-element
Term	Describes the terminal used for the transaction.	<Term>	Yes	See the Term sub-element
Schema	Indicates the name of the card scheme.	<Schema>	Yes	See the Schema sub-element
Txn	Describes the validation or authentication properties used in a transaction.	<Txn>	Yes	See the Txn sub-element
MsgSource	Describes the derivative	<MsgSource>	Yes	See the MsgSource



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	source of the record.			sub-element
Repeat	Information to show the number of the chargeback or representment.	xs:unsigned Byte	Yes	Valid values are: 1 = First chargeback / representment 2 = Second Chargeback / representment
SettlementAmt	The amount posted to the settlement account.	<SettlementAmt>	Yes	See the Settlement sub-element
Fee	Interchange or service fee amount posted to the settlement account.	<DirectionAmount>	Yes	See the Fee sub-element
ARN	Acquirer Reference Number.	<ARN>	Yes	See the ARN sub-element
FIID	Forwarding Institution Identification code. Note: Only applicable to Mastercard chargebacks.	<FIID>	No	See the FIID sub-element
RIID	Receiving Institution Identification code. Note: Only applicable to Mastercard chargebacks.	<RIID>	Yes	See the RIID sub-element
ReasonCode	Message reason code.	xs:string	Yes	See Message_Reason Codes
Classification	Merchant classification for the transaction.	<Classification>	Yes	See the Classification sub-element
OrigTxnAmt	Original transaction amount. The value of the original transaction requested by the cardholder. This is used in the case of the transaction being a partial chargeback/representment, chargeback reversals or representment reversals.	<PartialAmount>	If applicable	See the OrigTxnAmt sub-element
PartialReversal	Indicates if the amount reversed is a partial amount of the original chargeback.	Xs:boolean	If applicable	Valid values are: true = Partial Reversal; false = Full Reversal If not supplied, assumes "false".
SettlementCycle	Shows the settlement cycle for the chargeback.	<SettlementCycle>	Yes	See the SettlementCycle sub-element
ReconciliationDate	Shows the reconciliation date for the chargeback.	<ReconciliationDate>	Yes	See the ReconciliationDate sub-



Child Element	Description	Data Type	Required	Constraints / Permitted Values
				element
ReconciliationCycle	Shows the reconciliation cycle for the chargeback.	<ReconciliationCycle>	Yes	See the ReconciliationCycle sub-element
Usage	Indicates whether the chargeback is manually credited to the card.	<Usage>	Yes	See the Usage sub-element
Pending_Billing_Amount	Value of the chargeback billing amount.	< Pending_Billing_Amount>	Yes	See the Pending_Billing_Amount sub-element
SettlementIndicator	Indicator for <i>Domestic</i> or <i>International</i> settlement.	SettlementIndicator	If applicable	See the SettlementIndicator sub-element
Additional_Amt_DE54	Additional amounts field where additional fees such as card network fees are held. Note: Not applicable to Discover Global Network.	<Additional_Amt_DE54>	If applicable	See the Additional_Amt_DE54 sub-element
ChargebackRefNum	Chargeback reference number, as displayed in Smart Client. Note: Only applicable to Mastercard chargebacks. Note: Not applicable to Discover Global Network.	<ChargebackRefNum>	If applicable	See the ChargebackRefNum sub-element

Example

```
<CardChrgBackRepRes>
  <RecordType>CB</RecordType>
  <ChgbackRepresId>2300500740</ChgbackRepresId>
  <LocalDate>20210121003337</LocalDate>
  <SettlementDate>20210121</SettlementDate>
  <Card PAN="8063463816397253" product="MCRD" programid="GPS"
    productid="9015" branchcode="929" />
  <Account no="346381639" type="01" />
  <TxnCode direction="credit" Type="pos" Group="pos" />
  <TxnAmt value="0.00" currency="840" />
  <CashbackAmt value="0.00" currency="826" />
  <BillAmt value="0.00" currency="840" rate="1.000000000" />
  <ApprCode>105531</ApprCode>
  <Trace auditno="772584" origauditno="772584" Retrefno="000000772298" />
  <MerchCode>test1234AAAAAAA</MerchCode>
  <Term code="test1234" location="the local bank" street="" city="london" country="GB" inputcapability="0" authcapability="0" />
  <Schema>MCRD</Schema>
  <Txn cardholderpresent="4" cardpresent="0" cardinputmethod="F" cardauthmethod="0" cardauthentity="0" TVR="0" />
  <MsgSource value="67" domesticMaestro="no" />
  <Repeat>1</Repeat>
  <SettlementAmt value="0.00" currency="840" rate="1.000000000" date="20210121" />
  <Fee value="0.03" currency="978" direction="debit" />
  <ARN>02807199340000007725849</ARN>
  <FIID>456321</FIID>
  <RIID>000111</RIID>
```



```
<ReasonCode>4515</ReasonCode>
<Classification MCC="3000" />
<OrigTxnAmt value="1.00" currency="840" />
<PartialReversal>false</PartialReversal>
<SettlementCycle>01</SettlementCycle>
<ReconciliationDate />
<ReconciliationCycle>06</ReconciliationCycle>
<Usage>0</Usage>
<Pending_Billing_Amount>1.00</Pending_Billing_Amount>
<Additional_Amt_DE54 />
<ChargebackRefNum>5822982</ChargebackRefNum>
</CardChrgBackRepRes>
```



2.5 CardFee

The CardFee primary element describes Card Fee records. The FeeClass child element, as described below, distinguishes between the permissible types.

Note: This element is not applicable to the Discover Global Network.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
CardFeeld	Identifier for a CardFee record. Note that if there is a non-domestic fee and an FX fee on the same transaction, they share the same CardFeeld .	xs:unsignedLong	Yes	0 to 2^64
LocalDate	The date and time the terminal (POS or ATM) or acquirer generates the record in the local timezone.	<LocalDate>	Yes	See the LocalDate sub-element
SettlementDate	The date when the transaction has been processed.	<Settlement Date>	Yes	See the SettlementDate sub-element
Card	Provides details of the card related to the fee.	<Card>	Yes	See the Card sub-element
Account	Provides details of the cardholder account related to the fee.	<Account>	Yes	See the Account sub-element
Txid	If applicable, the <i>FinId</i> of the related <i>CardFinancial</i> (transaction) record for this CardFee record (foreign key). For Fee Collection rrecords, it shows the <i>AuthId</i> of the related <i>CardAuthorisation</i> record (if found) If a matching <i>CardAuthorisation</i> or <i>CardFinancial</i> record cannot be found, the Id shows as 0.	xs:unsignedLong	Yes	0 to 2^64 If not applicable, use default value 0
TxnCode	Indicates the type of transaction.	<TxnCode>	No	See the TxnCode sub-element
MerchCode	A unique code identifying the merchant (also known as the <i>Card Acceptor Identifier</i>)	<MerchCode>	No	See the MerchCode sub-element
MsgSource	Describes the derivative source of the record.	<MsgSource>	No	See the MsgSource sub-element
FeeClass	Describes the derivation and nature of the fee.	<FeeClass>	Yes	See the FeeClass sub-element
LoadUnloadId	If applicable the LoadUnloadId of the related CardLoadUnload record for this CardFee Record (foreign key).	xs:unsignedLong	No	0 to 2^64
Desc	Fee description.	<Desc>	Yes	See the Desc sub-element
FeeAmt	The FeeAmt represents the fee amount. This has the following behaviour: When FeeClass type is 1 then it is	<Direction Amount>	No	See the FeeAmt sub-element



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	the fee amount for a Card Load, Expiry, Recurring payment, FX, SMS, Domestic or non-Domestic Fee as set up by the Programme Manager. When FeeClass type is 4 or 5 then it is a Scheme fee, such as an Interchange, Chargeback or ATM Fee Collection Fee from the Scheme.			
Amt	This amount is described as follows: - For Scheme fees (see FeeClass: type = 2, 4 and 5), this is the settlement amount posted to the settlement account. - When the fee is NOT a Settlement (see FeeClass: type = 1), this is the fee billed (posted) to the cardholder's account.	<Direction Amount>	Yes	See the Amt sub-element When a fee is levied against the cardholder, the normal direction is: "debit" for FeeClass type =1,2 & 5 "credit" for FeeClass Type = 4
FIID	Forwarding Institution identification code.	<FIID>	No	See the FIID sub-element
ReasonCode	Message reason code.	xs:string	Yes	Only applicable for settlement See Message_Reason_Codes.htm For Fees, see the FeeClass sub-element
Recon	Details of the reconciliation.	<Recon>	No	See the Recon sub-element

--

Example

```
<CardFee>
  <CardFeeId>843249</CardFeeId>
  <LocalDate>20190326000000</LocalDate>
  <SettlementDate>20200103</SettlementDate>
  <Card PAN="8062328177229342" product="VISA" programid="GPS" productid="9815" branchcode="00000000" />
  <Account no="232817722" type="02" />
  <TxId>3762429334</TxId>
  <FeeClass interchangeTransaction="no" type="1" code="1000" />
  <LoadUnloadId>0</LoadUnloadId>
  <Desc>Domestic Fee</Desc>
  <FeeAmt value="5.00" currency="826" direction="debit" />
  <Amt value="5.00" currency="826" direction="debit" />
  <ReasonCode />
  <Recon date="20191205" cycle="05" />
</CardFee>
```



2.6 CardFinancial

The CardFinancial primary element is used to describe the following records:

- Financial Advice, or
- Financial Reversal

You can use the [RecordType](#) element to determine the type of record.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecordType	Record type, indicates <i>Advice</i> or <i>Reversal</i> .	xs:string	Yes	Valid values are: ADV, REV
FinId	Unique identifier for this CardFinancial record.	xs:unsignedLong	Yes	0 to 2^64
AuthId	The AuthId of the related CardAuthorisation record for this CardFinancial Record (primary key). Only present if there was a card authorisation.	xs:unsignedLong	If Applicable	0 to 2^64
PresentmentId	Alternative unique identifier for this CardFinancial Record, primary key in Thredd.	xs:unsignedLong	Yes	0 to 2^32
Traceid_Lifecycle	Lifecycle Trace ID. A transaction lifecycle identifier that allows you to track a transaction across its full lifecycle. This value is identical for all messages relating to the same transaction. For example, the following messages relating the same transaction will all have an identical Lifecycle Trace ID value: Authorisation, Second incremental authorisation, authorisation reversal, Financial Presentment, Chargeback, Second Presentment and Second Chargeback. If there is more than one authorisation for the same transaction, both authorisations will	xs:string	Yes	See the Traceid_Lifecycle sub-element



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	have the same value.			
LocalDate	The date/time in which the transaction took place in the local timezone.	<LocalDate>	Yes	See the LocalDate sub-element
LocalDateUTC	The transaction date and Time in UTC as received from Mastercard, Visa, and MNE for the matching authorisation of the financial advice or reversal. Note: Not applicable to the Discover Global Network.	LocalDateUTC	Yes	See the LocalDateUTC sub-element
SettlementDate	The settlement date for the transaction (UK date or as supplied by Mastercard).	<SettlementDate>	Yes	See the SettlementDate sub-element
SchemeSettlementDate	Settlement date value for the transaction by Mastercard, Visa or Thredd.	<SchemeSettlementDate>	Yes	See the SchemeSettlementDate sub-element
SchemeReconciliationDate	The Mastercard/Visa reconciliation date for the transaction.	<SettlementDate>	Yes	See the SettlementDate sub-element
CycleNumber	Reconciliation cycle number (relevant to Mastercard only).	<CycleNumber>	Yes	See the CycleNumber sub-element
Card	Provides details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Account	Provides details of the cardholder account.	<Account>	Yes	See the Account sub-element
TxnCode	Indicates the type of transaction.	<TxnCode>	Yes	See the TxnCode sub-element
TxnAmt	The transaction amount.	<BasicAmount>	Yes	See the TxnAmt sub-element
CashbackAmt	The Cashback amount (if applicable).	<BasicAmount>	Yes	See the CashbackAmt sub-element
BillAmt	The amount posted to the cardholder account. This does not include interchange.	<RateAmount>	Yes	See the BillAmt sub-element



Child Element	Description	Data Type	Required	Constraints / Permitted Values
VATAmt	Amount of Value Added Tax.	<VATAmt>	No	See the VATAmt sub-element
ApprCode	The <i>Approval Code</i> generated by the issuer and printed on the receipt.	<ApprCode>	Yes	See the ApprCode sub-element
Trace	Information used to uniquely identify the transaction. (Mastercard only; Visa will be empty) Note: Not applicable to the Discover Global Network.	<Trace>	Yes	See the Trace sub-element
MerchCode	A unique code identifying the merchant (also known as the <i>Card Acceptor Identifier</i>)	<MerchCode>	Yes	See the MerchCode sub-element
Term	Details of the terminal on which the transaction was actioned.	<Term>	Yes	See the Term sub-element
Schema	Indicates the name of the card scheme.	<Schema>	Yes	See the Schema sub-element
NetworkTransactionId	The raw transaction ID, exactly as received from the card network without any alteration. This corresponds to the name in the Schema field. Present only if received. Thredd load this as follows: • Visa Online: 16 hexdigits of the DE62.2 Visa Transaction ID. The leading hexdigit should be a '0' padding character. • Visa Clearing: 15 characters, which should all be digits. (15 '0' characters indicates unknown. • Mastercard Online: DE63 concatenated with DE15.	<NetworkTransactionId>	No	See the NetworkTransactionId sub-element



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	• Mastercard Clearing: DE63.			
NetworkTransactionId2	This field corresponds to the NetworkTransactionId from the card scheme of the transaction. This is a unique ID for transactions in the same lifecycle (e.g. authorisation, clearing, and chargebacks).	<NetworkTransactionId2>	No	See the NetworkTransactionId2 sub-element
NetworkRelatedTransactionId	Transaction identifier that links a transaction with previous related transactions. These transactions are not in the same lifecycle (e.g. recurring transactions, refunds).	<NetworkRelatedTransactionId>	No	See the NetworkRelatedTransactionId sub-element
NetworkLinkValidation	This field includes correction done on the NetworkTransactionId 2. If there is a problem in the NetworkTransactionId, the scheme updates to the correct one, which is the original NetworkTransactionId that the acquirer provided.	<NetworkLinkValidation>	No	See the NetworkLinkValidation sub-element
AcquirerCountry	The acquirer's country code	<AcquirerCountry>	No	See the AcquirerCountry sub-element
Txn	Describes the validation / authentication properties used in a transaction.	<Txn>	Yes	See the Txn sub-element
MsgSource	Describes the derivative source of the record.	<MsgSource>	Yes	See the MsgSource sub-element
Fee	The interchange fee.	<DirectionAmount>	Yes	See the Fee sub-element
FeeAmt	The fee amount. This is the sum total of any rate fee and fixed fee applied to the transaction (see Rate_Fee and Fixed_Fee in the CardAuthorisation record).	< DirectionAmount>	Yes	See the FeeAmt sub-element
FeeClass	Describes the	<FeeClass>	Yes	See the FeeClass sub-



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	derivation and nature of the fee.			element
SettlementAmt	The settlement amount (Mastercard only).	<SettlementAmt>	Yes	See the SettlementSub_Elements_and_Attributes.htm sub-element
ARN	The Acquirer Reference Number.	<ARN>	Yes	See the ARN sub-element
FIID	Forwarding Institution Identification code.	<FIID>	Yes	See the FIID sub-element
RIID	Receiving Institution Identification code.	<RIID>	Yes	See the RIID sub-element
ReasonCode	Message reason code.	xs:string	If Applicable	See Message Reason Codes
Classification	Merchant classification for the transaction.	<Classification>	Yes	See the Classification sub-element
Response	Indicates whether transaction was approved or not.	<Response>	Yes	See the Response sub-element
OrigTxnAmt	Original Transaction Amount. The value of the original transaction requested by the cardholder. This is used in the case of the transaction being a reversal.	<PartialAmount>	If Applicable	See the OrigTxnAmt sub-element
CCAAmount	The Currency Conversion Assessment amount (Mastercard only; Visa will always be zero). Note: Not applicable to Discover Global Network.	<CCAAmount>	Yes	See the CCAAmount sub-element
SettlementIndicator	Indicator for Domestic or International settlement.	<SettlementIndicator>	If Applicable	See the SettlementIndicator sub-element
Additional_Amt_DE54	Additional amounts field where additional fees like transport fees are held. Note: Not applicable to Discover Global Network.	<Additional_Amt_DE54>	If applicable	See the Additional_Amt_DE54 sub-element
BSA	Business Service	<BSA>	If	See the BSA sub-element



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	Arrangement type code (Mastercard only; Visa will always be empty). Note: Not applicable to Discover Global Network.		applicable	
PaymentToken	This element is populated from Payment Token data when a Payment Token was used for the transaction. If no Payment Token was used, then the <i>PaymentToken</i> element is omitted. Note: Not applicable to Discover Global Network.	<PaymentToken>	If Applicable	See the PaymentToken sub-element
UniqueTransactionReference	Unique transaction reference. Note: Not applicable to Visa.	<UniqueTransactionReference>	If applicable	See UniqueTransactionReference sub-element
SettlementRecapID	Settlement Recap ID is a Discover Global Network specific data element. Discover members send financial transaction data grouped under recaps separately for each member. Settlement Recap ID defines the recap breakdown to help members for their reconciliation with Discover.	<SettlementRecapID>	If applicable	See SettlementRecapID sub-element

Example (Advice)

```
<CardFinancial>
  <RecordType>ADV</RecordType>
  <FinId>3762915660</FinId>
  <AuthId>0</AuthId>
  <PresentmentID>707660052</PresentmentID>
  <LocalDate>20200131033444</LocalDate>
  <LocalDateUTC>0131032745</LocalDateUTC>
  <SettlementDate>20200131</SettlementDate>
  <SchemeSettlementDate>20200131</SchemeSettlementDate>
  <SchemeReconciliationDate>20200131</SchemeReconciliationDate>
  <CycleNumber>01</CycleNumber>
  <Card PAN="7481023633651502" product="MCRD" programid="GPS" productid="9007" branchcode="MAES" />
  <Account no="102363365" type="01" />
  <TxnCode direction="debit" Type="pos" Group="pos" ProcCode="000000" />
  <TxnAmt value="10.00" currency="090" />
</CardFinancial>
```



```
<CashbackAmt value="0.00" currency="826" />
<BillAmt value="10.00" currency="826" rate="1.000000000" />
<ApprCode>104934</ApprCode>
<Trace auditno="139451" origauditno="139451" Retrefno="000000941051" />
<MerchCode>424242424242424</MerchCode>
<Term code="TRM03016" location="The Local Bank London GB" street=""
city="" country="GB" inputcapability="0" authcapability="0" />
<Schema>MCRD</Schema>
<Txn cardholderpresent="" cardpresent="" cardinputmethod="" cardauthmethod="" cardauthentity="" TTI="" />
<MsgSource value="67" domesticMaestro="no" />
<Fee value="0.00" value2="0.00" currency="826" direction="credit" />
<FeeAmt value="0.00" currency="826" direction="debit" />
<FeeClass interchangeTransaction="no" type="1" code="1" />
<SettlementAmt value="10.00" currency="826" rate="1.000000000" />
<ARN />
<FIID>06111111</FIID>
<RIID>06000111</RIID>
<ReasonCode />
<Classification MCC="0000" />
<Response approved="yes" />
<OrigTxnAmt value="10.00" currency="090" />
<CCAAmount value="0.00" currency="826" included="no" />
<Additional_Amt_DE54 />
<BSA>0</BSA>
</CardFinancial>
```



2.7 CardLoadUnload

The CardLoadUnload primary element is used to describe the following records:

- Card Loads (loading funds onto a card account) and Card Load Reversals
- Card Unloads (discharging funds from a card account) and Card Unload Reversals

You can use the [RecordType](#) element to determine the type of record.

Note: Not primary element is not applicable to the Discover Global Network.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecordType	Indicates whether this is a Card Load, Load Reversal, Unload or Unload reversal.	xs:string	Yes	Valid values are: • LOAD • LOADREV • UNLOAD • UNLOADREV
LoadUnloadId	A unique identifier for the CardLoadUnload record.	xs:unsignedLong	Yes	0 to 2^64
LocalDate	The local date and time of the Load/Unload in the local timezone.	<LocalDate>	Yes	See the LocalDate sub-element
SettlementDate	The settlement date and time for the Load/Unload.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Provides details of the card's attributes.	<Card>	Yes	See the Card sub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Account sub-element
MerchCode	A unique code identifying the merchant (also know as the Card Acceptor Identifier).	<MerchCode>	No	See the MerchCode sub-element
Amount	The value of the Load, Load Reversal, Unload or Unload Reversal.	<BasicAmount>	Yes	See the BasicAmount sub-element
Desc	Description of the card load or unload, as supplied when the card was loaded or unloaded.	<Desc>	Yes	See the Desc sub-element
Load	Describes Load/Unload source and type.	<LoadSource>	Yes	See the LoadSource sub-element

Example (Load)

```
<CardLoadUnload>
  <RecordType>LOAD</RecordType>
  <LoadUnloadId>13964492698</LoadUnloadId>
  <LocalDate>20240213172407</LocalDate>
  <SettlementDate>20240213</SettlementDate>
  <Card PAN="5792883020134123" product="MCRD" programid="GPS"
    productid="1463" branchcode="00000000" />
  <Account no="288301830" type="01" />
  <MerchCode />
  <Amount value="5.05" currency="826" direction="credit" />
  <Desc>Load from primary card: 5792883018303844</Desc>
  <Load Source="79" Type="0" FixedFee="0.00" Rate_Fee="0.00" />
</CardLoadUnload>
```



</CardLoadUnload>



2.8 MasterCardFee

MasterCardFee records are used to describe non-card Mastercard Fees. They only appear in the transaction XML if the Mastercard ICA is not shared between clients.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecordType	Record type, used to distinguish between data types.	xs:string	Yes	See the RecordType sub-element.
MastercardFeeld	Unique identifier for this fee record.	xs:unsignedLong	Yes	0 to 2^32.
MTID	Message Type Identifier. Takes values as supplied by Mastercard in the Chargeback Fee or Fee collection data	xs:unsignedint	Yes	Examples: 1442, 1644 and 1740. See Message Reason Codes
Function_Code_024	Function Code for the fee record. Note: This element is not applicable to the Discover Global Network.	<FunctionCode>	Yes	See the FunctionCode sub-element.
Conversion_Rate_Reconciliation	Factor used in converting transaction amount to a reconciliation amount. Note: This element is not applicable to the Discover Global Network.	xs:unsignedint	Yes	0 to 2^32.
Additional_Data_048	The additional data received from Mastercard. Note: Not applicable to Discover Global Network.	xs:string	Yes	String. Refer to the <i>Mastercard IPM Clearing Formats manual</i> .
LocalDate	The date and time of the transaction in the local timezone.	<LocalDate>	Yes	See the LocalDate sub-element.
SettlementDate	The settlement date and time for the transaction.	<Settlement Date>	No	See the SettlementDate sub-element.
FeeClass	Describes the derivation and nature of the fee.	<MasterCard FeeClass>	Yes	For MasterCardFee records the FeeClass type="0", code="0" and interchangeTransaction="no".
Desc	Fee description. This field may be empty.	<Desc>	No	See the Desc sub-element.
FeeAmt	The fee amount as received from Mastercard. Note: For a chargeback,	<Direction Amount>	Yes	See the FeeAmt sub-element.



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	this field provides details of any chargeback fees. For details of the chargeback amount, see <BillAmt> in the CardChrgBackRepRes record.			
Amt	The net transaction amount expressed in the original transaction currency, as advised by Mastercard.	<Direction Amount>	Yes	See the Amt sub-element.
ReasonCode	Message reason code.	xs:string	Yes	See Message Reason Codes .
Data_Record_072	Free form text for Mastercard fee messages. Note: This element is not applicable to the Discover Global Network.	xs:string	No	String, Refer to Mastercard IPM Clearing Formats Manual.
DE93_Txn_Dest_ID	Identifies the transaction destination institution.	xs:string	Yes	Length 6 - 11 digits.
DE94_Txn_Orig_ID	Identifies the transaction originator institution.	xs:string	No	Length 6 - 16 digits.
File_ID_PDS0105	Identifies the logical data file exchanged between Thredd and the clearing system.	xs:string	Yes	See the PDS0105 sub-element.
FileProcessDate	Date the Fee collection file was processed.	xs:string	Yes	In the format: YYYYMMDD HHMMSS.
Recon	Details of the reconciliation.	<Recon>	No	See the Recon sub-element.
Settlement	Details of the settlement.	<Settlement>	No	See the Settlement sub-element.
SettlementRecapID	Settlement Group identifier for Discover.	<SettlementRecapID>	If applicable	See SettlementRecapID sub-element.

Example

```
<MasterCardFee>
  <RecordType>FC</RecordType>
  <MastercardFeeId>8285</MastercardFeeId>
  <MTID>1740</MTID>
  <Function_Code_024>783</Function_Code_024>
  <Conversion_Rate_Reconciliation_009>1.000000</Conversion_Rate_Reconciliation_009>
  <Additional_Data_048>0137017667000000000000000014800497820158030MCC3050012
19011402   NNNNNN015906717053       33010001351899
1EU00000008N19011402190114010165001M01910012</Additional_Data_048>
  <LocalDate>20170319000000</LocalDate>
  <SettlementDate>20210121</SettlementDate>
```



```
<FeeClass interchangeTransaction="no" type="0" code="0" memberID="021212" />
<Desc>Clearing Issuer Master</Desc>
<FeeAmt value="4.85" currency="978" direction="debit" />
<Amt value="4.85" currency="978" direction="debit" />
<ReasonCode>7800</ReasonCode>
<Data_Record_072>MCBS - 0017053 E3 - Clearing Issuer Master 978 4.85 BILLING CYCLE DATE - JAN 13, 2019</Data_Record_072>
<DE93_Txn_Dest_ID>021212</DE93_Txn_Dest_ID>
<DE94_Txn_Orig_ID>003191</DE94_Txn_Orig_ID>
<File_ID_PDS0105>T112.0011901140000001705302201 </File_ID_PDS0105>
<FileProcessDate>20200120054648</FileProcessDate>
<Recon date="20200120" cycle="02" />
<Settlement date="20210121" cycle="01" />
</MasterCardFee>
```



2.9 CardEvent

CardEvent records indicate status changes to a given card.

Note: These element is not applicable to the Discover Global Network.

Child Element	Description	Data Type	Required	Constraints/ Permitted Values
Card	Details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
Event	Details of the event.	<Event>	Yes	See the Event sub-element

Example

```
<CardEvent>
  <Card PAN="5793048251657123" productid="1463" />
  <Event Type="Activation" Source="2" ActivationDate="20240213161108" StatCode="" OldStatCode="" Date="20240213161108" trans-
actionid="" />
</CardEvent>
```



2.10 Approved Agency Banking Transaction

Note: This element is only relevant if you are using the Agency Banking service.

Note: This sub-element is not applicable to the Discover Global Network.

The ApprovedAgencyBanking primary element is used to describe the following accepted activity:

- BACS or Faster Payment Receipt and reversal
- Outbound Faster Payment or Direct Debit Payment and reversal
- Transfers between card holder’s own accounts and reversals
- Inter-program payments between the Programme Manager’s customers and reversals

You can use the [CashType](#) element to uniquely identify the record and distinguish it from all other CardEvent records.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
CashType	Cash type, indicates type of receipt, payment or cash transfer.	xs:string	Yes	Valid values are: • RCP (Receipt) • RCPREV (Reversal) • PAY (Payment) • PAYREV (Reversal) • TFR (Transfer) • P2P (Peer-to-Peer) • P2PREV (Peer-to-Peer reversal)
BankingId	Unique identifier for this ApprovedAgencyBanking record.	xs:unsignedLong	Yes	0 to 2^64
File	Provides details of the file within which notification of the receipt was received, or the name of the file in which the outbound payment was submitted for settlement.	<File>	No	See the File sub-element
SettlementDate	The settlement date for the transaction.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Provides details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
AgencyAccount	Provides details of the cardholder account and Agency Bank account details.	<AgencyAccount>	Yes	See the AgencyAccount sub-element
External	Provides details of the external bank account on the opposite end of the transaction (source of a receipt or destination of a payment).	<External>	Yes	See the External sub-element
CashCode	Provides details of the cash transaction.	<CashCode>	Yes	See the CashCode sub-element
Desc	The reference quoted on the receipt or payment. This field may be empty.	<Desc>	Yes	See the Desc sub-element
CashAmt	The amount of the receipt or payment before deduction of any applicable bank charges.	<RateAmount>	Yes	See the CashAmt sub-element



Child Element	Description	Data Type	Required	Constraints / Permitted Values
Fee	The fee applied to the cash receipt or payment.	<Fee>	Yes	See the Fee sub-element
BillAmt	The amount posted to the cardholder account.	<RateAmount>	Yes	See the BillAmt sub-element
OrigTxnAmt	Original transaction amount. The value of the original transaction requested by the cardholder. This is used in the case of the transaction being a reversal.	<PartialAmount>	If Applicable	See the OrigTxnAmt sub-element

Example

```
<ApprovedAgencyBanking>
  <CashType>RCP</CashType>
  <BankingId>13962099212</BankingId>
  <SettlementDate>20240213</SettlementDate>
  <Card PAN="113246669224123" product="MCRD" programid="ONEUKA"
    productid="4368" branchcode="" />
  <AgencyAccount no="246666922" type="01" sortcode="040083" bankacc="02548356" name="Emilia Ionita" />
  <External sortcode="401000" bankacc="94771656" name="COICEA M" />
  <CashCode direction="credit" CashType="fpy" CashGroup="rcp" />
  <Desc> </Desc>
  <CashAmt value="60.00" currency="826" />
  <Fee value="1.25" currency="826" direction="credit" />
  <BillAmt value="60.00" currency="826" rate="0" />
</ApprovedAgencyBanking>
```



2.11 Declined Agency Banking Transaction

Note: This element is only relevant if you are using the Agency Banking service.

Note: This element is not applicable to Discover Global Network.

The DeclinedAgencyBanking primary element describes the following declined activity for which the cardholder did not receive or lose value:

- BACS or Faster Payment Receipt and reversal
- Outbound Faster Payment or Direct Debit Payment and reversal
- Transfers between card holder’s own accounts and reversals
- Inter program payments between the Programme Manager’s customers and reversals

You can use the [CashType](#) element to uniquely identify the record and distinguish it from all other DeclinedAgencyBanking records.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
CashType	Cash type, indicates the type of receipt, payment or cash transfer.	xs:string	Yes	Valid values are: • RCP (Receipt) • RCPREV (Reversal) • PAY (Payment) • PAYREV (Reversal) • TFR (Transfer)
BankingId	Unique identifier for this ApprovedAgencyBanking record.	xs:unsignedLong	Yes	0 to 2^64
File	Provides details of the file within which notification of the receipt was received, or the filename in which the outbound payment was submitted for settlement.	<File>	No	See the File sub-element
SettlementDate	The value date for the transaction.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Provides details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
AgencyAccount	Provides details of the cardholder account and Agency Bank account details	<AgencyAccount>	Yes	See the AgencyAccount sub-element
External	Details of the external bank account on the opposite end of the transaction. This is the source of a receipt or destination of a payment.	<External>	Yes	See the External sub-element
CashCode	Provides details of the cash transaction.	<CashCode>	Yes	See the CashCode sub-element
Desc	The reference quoted on the receipt or payment. This field may be empty.	<Desc>	Yes	See the Desc sub-element
CashAmt	The amount of the receipt or payment before deduction of any applicable bank charges.	<RateAmount>	Yes	See the CashAmt sub-element
DeclineReason	The reason a receipt was declined and returned to source or a payment request	<DeclineReason>	Yes	See the DeclineReason sub-



Child Element	Description	Data Type	Required	Constraints / Permitted Values
	was rejected and not processed.			element
OrigTxnAmt	Original transaction amount. The value of the original transaction requested by the cardholder. This is used where a transaction is a reversal.	<PartialAmount>	If Applicable	See the OrigTxnAmt sub-element

Example

```
<DeclinedAgencyBanking>
  <CashType>RCP</CashType>
  <BankingId>13962741416</BankingId>
  <SettlementDate>20240213</SettlementDate>
  <Card PAN="1132735542365123" product="MCRD" programid="ONEUKA"
    productid="4368" branchcode="" />
  <AgencyAccount no="273554236" type="01" sortcode="040083" bankacc="01665839" name="Daniel Velichkov" />
  <External sortcode="TRWIBE" bankacc="P1508951" name="Daniel Velichkov" />
  <CashCode direction="credit" CashType="fpy" CashGroup="rcp" />
  <Desc> </Desc>
  <CashAmt value="5.00" currency="826" />
  <DeclineReason>00</DeclineReason>
</DeclinedAgencyBanking>
```



2.12 Agency Banking Fee

Note: This element is only relevant if you are using the Agency Banking service.

Note: This element is not applicable to the Discover Global Network.

The AgencyBankingFee primary element is used to describe any bank charges applied to an Agency Banking transaction.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
BankingFeeId	Unique identifier for this ApprovedAgencyBanking record.	xs:unsignedLong	Yes	0 to 2^32
SettlementDate	The settlement date for the transaction.	<SettlementDate>	Yes	See the SettlementDate sub-element
Card	Provides details of the card used in the transaction.	<Card>	Yes	See the Card sub-element
AgencyAccount	Provides details of the cardholder account and Agency Bank account details.	<AgencyAccount>	Yes	See the AgencyAccount sub-element
AbId	The BankingId of the related ApprovedAgencyBanking or DeclinedAgencyBanking record for this Agency Banking Fee Record (foreign key).	xs:string	Yes	0 to 2^64 If not applicable, use default value 0
Desc	The reference quoted on the bank charge. This field may be empty.	<Desc>	Yes	See the Desc sub-element
Amt	The amount of the bank charge applied to the receipt or payment.	<Direction Amount>	Yes	See the Amt sub-element

Example

```
<AgencyBankingFee>
  <BankingFeeId>902400</BankingFeeId>
  <SettlementDate>20200101</SettlementDate>
  <Card PAN="8063993043846328" product="MCRD" programid="GPS"
    productid="9916" branchcode="" />
  <AgencyAccount no="399304384" type="01" sortcode="" bankacc="" name="N/A" />
  <AbId>2300456354</AbId>
  <Desc>Unloading bank transaction 109807 from suspense account. Suspense transaction ID 2300456353</Desc>
  <Amt value="1.25" currency="826" direction="debit" />
</AgencyBankingFee>
```



SECTION 3: SUB-ELEMENTS AND ATTRIBUTES

This section contains details of the transaction XML schema sub-elements and attributes



3.1 Sub-elements and Attributes

This section describes the message sub-elements and attributes.

3.1.1 Sub-elements

Sub-elements are listed below in alphabetical order.

Account	BSA	Fee	NetworkRelatedTransactionId	Response	Traceid_Lifecycle
AcquirerCountry	Card	FeeAmt	NetworkTransactionId	ReversalReason	Txn
Additional_Amt_DE54	CashAmt	FeeClass	NetworkTransactionId2	RIID	TxnAmt
AdjustType	CashbackAmt	FIID	OperationType	Schema	TxnCode
AgencyAccount	CashCode	File	OrigTxnAmt	Sender	UniqueTransactionReference
Amount	CCAAmount	FunctionCode	Other	Settlement	Usage
Amt	ChargebackRefNum	FXConv	PaddingAmt	SettlementAmt	VATAmt
ApprCode	Classification	LoadSource	Pending_Billing_Amount	SettlementCycle	
ARN	CommissionAmt	LoadType	Recon	SettlementDate	
Auth_type	CycleNumber	LocalDate	Receiver	SettlementIndicator	
BasicAmount	DeclineReason	LocalDateUTC	ReconciliationDate	SchemeSettlementDate	
BillAmt	Desc	MastercardFeeClass	ReconciliationCycle	Source	
BookingType	Destination	MerchCode	RecordType	Term	
BookingStatus	External	MsgSource	RecType	Trace	
	Event	NetworkLinkValidation			

Account

The [Account](#) element describes a card account.

Attribute	Description	Data Type	Required	Constraints / Permitted Values								
no	The 9-digit Thredd public token linked to the card Primary Account Number (PAN).	xs:string	Yes	Alphanumeric, maximum 28 characters.								
type	Card type	xs:string	Yes	Numeric string, maximum 2 characters. Valid values are:<table><tr><th>Value</th><th>Description</th></tr><tr><td>00</td><td>Domestic Maestro</td></tr><tr><td>01</td><td>MasterCard</td></tr><tr><td>02</td><td>VisaCard</td></tr></table>	Value	Description	00	Domestic Maestro	01	MasterCard	02	VisaCard
Value	Description											
00	Domestic Maestro											
01	MasterCard											
02	VisaCard											

Example

```
<Account no="123456789" type="01"></Account>
```

AcquirerCountry

The [AcquirerCountry](#) element describes the country of the merchant acquirer or the acquiring bank. This may be needed for European Central Bank reporting purposes.



Description	Base Data Type	Constraints / Permitted Values
Country code of the merchant acquirer or the acquiring bank.	xs:string	Alphanumeric, maximum 3 characters.

Example

```
<AcquirerCountry>GBR</AcquirerCountry>
```

Additional_Amt_DE54

The [Additional_Amt_DE54](#) element contains additional amount information about the transaction, if relevant. For example, for purchase with cashback transactions, the additional amounts field displays the cashback amount.

Description	Base Data Type	Constraints / Permitted Values
Additional fees data	xs:string	Alphanumeric, maximum 123 characters.

Example

```
<Additional_Amt_DE54>0040985D000000020000</Additional_Amt_DE54>
```

AdjustType

The [AdjustType](#) element shows the type of balance adjustment – either *Actual* (the money was deducted) or *Blocked* (the amount on the card has been blocked).

Description	Base Data Type	Constraints / Permitted Values
Type of balance adjustment	xs:string	Maximum length 6 characters.

Example

```
<AdjustType>Actual</AdjustType>
```

AgencyAccount

The [AgencyAccount](#) element describes a card account and the related agency bank account.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
no	Cardholder Account Number	xs:string	Yes	Alphanumeric, maximum 28 characters.
type	Account type	xs:string	Yes	Numeric string, maximum 2 characters Valid values are: 00 = Domestic Maestro; 01 = MasterCard
sortcode	Agency sort code	xs:string		Alphanumeric, maximum 6 characters.
bankacc	Allocated agency bank account	xs:string		Alphanumeric, maximum 8 characters.
name	Cardholder name	xs:string		Alphanumeric, maximum 28 characters.



Example

```
<AgencyAccount no="123456789" type="01" sortcode="123456" bankacc="12345678" name="John Smith"></AgencyAccount>
```

Amount

The [Amount](#) element describes a monetary amount.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
direction	The direction of the cash movement.	<Direction>	Yes	See direction .
value	The monetary amount.	xs:decimal	Yes	Decimal value.
currency	The 3 digit ISO currency code.	xs:unsigned Short	Yes	3 digits

Example

```
<Amount direction="debit" value="0.95" currency="826"></Amount>
```

Amt

The [Amt](#) element describes the net transaction amount of the original transaction, as reported by Mastercard.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
direction	The direction of the cash movement.	<Direction>	Yes	See direction .
value	The net transaction value.	xs:decimal	Yes	Decimal value.
currency	The 3-digit ISO currency code.	xs:unsigned short	Yes	3 digits.

Example

```
<Amt direction="debit" value="0.95" currency="826"></Amt>
```

ApprCode

The [ApprCode](#) element describes the approval or authorisation code from the Issuer. This is the 6 digit number printed on the customer's receipt to indicate a successful payment.

Description	Base Data Type	Constraints / Permitted Values
Approval Code	xs:string	Alphanumeric, maximum 6 characters.

Example

```
<ApprCode>123456</ApprCode>
```

ARN

The [ARN](#) element indicates the Acquirer Reference Number as generated by the acquirer.



Description	Base Data Type	Constraints / Permitted Values
Acquirer Reference Number	xs:string	Alphanumeric, maximum 23 characters.

Example

```
<ARN>12345678901234567890123</ARN>
```

Auth_type

Details on the type of authorisation for distinguishing between normal authorisations and pre-authorisations (or pre-auths).

Description	Base Data Type	Required	Constraints / Permitted Values										
Authorisation type	xs:string	Yes	Alphanumeric string, maximum 1 character. Valid values are: <table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Normal/undefined</td></tr><tr><td>P</td><td>Preauth where the amount is an estimate.</td></tr><tr><td>F</td><td>Final authorisation where the amount is correct and for the full amount.</td></tr><tr><td>V</td><td>Account Verification. This is blank where it is not applicable. It is only applicable for non-authorisation message types.</td></tr></table>	Value	Description	0	Normal/undefined	P	Preauth where the amount is an estimate.	F	Final authorisation where the amount is correct and for the full amount.	V	Account Verification. This is blank where it is not applicable. It is only applicable for non-authorisation message types.
Value	Description												
0	Normal/undefined												
P	Preauth where the amount is an estimate.												
F	Final authorisation where the amount is correct and for the full amount.												
V	Account Verification. This is blank where it is not applicable. It is only applicable for non-authorisation message types.												

Example

```
<Auth_type>P</Auth_type>
```

BasicAmount

The [BasicAmount](#) data type describes a monetary amount loaded or unloaded from a card.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The monetary value.	xs:decimal	Yes	Decimal value (6 decimal places).
value2	The 4-decimal place version of the value. (No)	xs:decimal	Yes	Decimal value (4 decimal places)
currency	The ISO 3-character currency code.	xs:unsigned Short	Yes	3 digits.

Example

```
<BasicAmount value="0.95"currency="826"></BasicAmount>
```

BillAmt

The [BillAmt](#) element describes the amount billed. Not that the [BillAmt](#) element does not include interchange.



Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the billing amount.	xs:decimal	Yes	Decimal value.
currency	The currency of the transaction (3 digit ISO currency code).	xs:unsigned Short	Yes	3 digits.
rate	The conversion rate used to calculate the billing amount value.	<RateAmount>	Yes	Decimal value, maximum 9 decimal places, using conventional rounding down (1-4) and up (5-9).

Example

The [BillAmt](#) shown below represents 10 GBP at an exchange rate of 1:1.

```
<BillAmt value="10.00"currency="826"rate="1.000000000"></BillAmt>
```

BookingType

The [BookingType](#) element shows the transaction type that triggered the FX conversion, such as an authorisation or presentment.

Code	Description
A	A normal Authorisation has triggered this
C	Credit to cardholder (refund or Payment Out)
E	Auth Expiry Reversal
M	Manual, back office foreign exchange (for future use)
P	Unauthorised Presentment
R	Triggered by an Auth Reversal
Q	Presentment Reversal
S	Surplus, returned funds after a presentment
T	Topup, additional funds required after a presentment
U	Partial Authorisation Reversal
W	Inter-Wallet transfer

Example

The [BookingType](#) shown below represents a normal authorisation.

```
<BookingType>A</BookingType>
```

BookingStatus

The [BookingStatus](#) element shows the status of the booking.



Code	Description
B	Booked
R	Reversed
X	Retries exceeded
E	Error other than a timeout

Example

The [BookingStatus](#) shown below represents a booked transaction.

```
<BookingStatus>B</BookingStatus>
```

BSA

The [BSA](#) element describes the Business Service Arrangement (BSA) type code, which is provided by Mastercard. This field can have values of:

- 1 = Inter-regional
- 2 = Intra-regional
- 3 = Inter-country* (also called subregional)
- 4 = Intra-country (also called domestic)
- 8 = Member-to-member (also called bilateral)

Description	Base Data Type	Constraints / Permitted Values
Business Service Arrangement type code.	xs:string	Numeric, maximum 1 character.

Example

```
<BSA>4</BSA>
```

Card

The [Card](#) element describes the key attributes of a payment card.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
PAN	Primary Account Number if PCI DSS Compliant. Alternatively, this number is the Thredd 16-digit public token.	<PAN>	Yes	See PAN .
productID	The Thredd product ID associated with the card.	numeric	No	Numeric, maximum 5 characters.

Example

```
<Card PAN="1234567812345678" product="MCRD" programid="GPS" productID=""></Card>
```

CashAmt

The [CashAmt](#) element describes the cash amount of the receipt or payment before any bank charges are deducted.



Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the cash amount.	xs:decimal	Yes	Decimal value.
currency	The currency of the transaction (3 digit ISO currency code).	xs:unsigned Short	Yes	3 digits.

Example

```
<CashAmt value="10.00" currency="826"></CashAmt>
```

CashbackAmt

The [CashbackAmt](#) element describes the cashback amount requested by the cardholder. If no cashback has been requested, then the element is presented with the *value* attribute set at zero and the *currency* attribute value defaulted to the transaction currency.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The transaction value.	xs:decimal	Yes	Decimal value.
currency	The currency of the transaction (3 digit ISO currency code).	xs:unsigned Short	Yes	See 3 digits.

Example

```
<CashbackAmt value="10.00"currency="826"></CashbackAmt>
```

CashCode

The [CashCode](#) element describes transaction type and direction.

Attribute	Description	Data Type	Required	Constraints / Permitted Values														
direction	The direction of the transaction.	<Direction>	Yes	See direction .														
CashType	The type of transaction.	xs:string	Yes	Accepts one of the following values: <table><tr><th>CashType</th><th>Description</th></tr><tr><td>bac</td><td>BACS</td></tr><tr><td>CHAPS</td><td>CHAPS</td></tr><tr><td>fpv</td><td>Faster Payment (Receipt or payment)</td></tr><tr><td>ddp</td><td>Direct Debit Payment setup, authorisation and initiation</td></tr><tr><td>cbt</td><td>Cardholder initiated balance transfer between own accounts</td></tr><tr><td>ipp</td><td>Inter program payment between two customers within same agency sort</td></tr></table>	CashType	Description	bac	BACS	CHAPS	CHAPS	fpv	Faster Payment (Receipt or payment)	ddp	Direct Debit Payment setup, authorisation and initiation	cbt	Cardholder initiated balance transfer between own accounts	ipp	Inter program payment between two customers within same agency sort
CashType	Description																	
bac	BACS																	
CHAPS	CHAPS																	
fpv	Faster Payment (Receipt or payment)																	
ddp	Direct Debit Payment setup, authorisation and initiation																	
cbt	Cardholder initiated balance transfer between own accounts																	
ipp	Inter program payment between two customers within same agency sort																	



Attribute	Description	Data Type	Required	Constraints / Permitted Values																				
				<table><tr><th>CashType</th><th>Description</th></tr><tr><td></td><td>code</td></tr><tr><td>p2p</td><td>Peer-to-peer payment between two cardholders</td></tr><tr><td>FasterPaymentReject</td><td>Faster Payment which is rejected by the Card Scheme. (In this case, an inbound payment will be created to move money from the customer's account to holding account.)</td></tr><tr><td>ModulrReturn</td><td>An outbound return received from Modulr which is processed as inbound payment.</td></tr><tr><td>SEPAIn</td><td>Inbound SEPA (Single European Payment Area) payment</td></tr><tr><td>SEPAPaymentReturn</td><td>SEPA payment which is rejected by the Card Scheme.</td></tr><tr><td>DirectDebitOut Notification</td><td>Direct Debit payment notification, indicating that a direct debit transaction has been initiated.</td></tr><tr><td>DirectDebitOut Payout</td><td>Direct debit payout, indicating that the actual transfer of funds to the payee's account has occurred.</td></tr><tr><td></td><td>Space or an empty value</td></tr></table>	CashType	Description		code	p2p	Peer-to-peer payment between two cardholders	FasterPaymentReject	Faster Payment which is rejected by the Card Scheme. (In this case, an inbound payment will be created to move money from the customer's account to holding account.)	ModulrReturn	An outbound return received from Modulr which is processed as inbound payment.	SEPAIn	Inbound SEPA (Single European Payment Area) payment	SEPAPaymentReturn	SEPA payment which is rejected by the Card Scheme.	DirectDebitOut Notification	Direct Debit payment notification, indicating that a direct debit transaction has been initiated.	DirectDebitOut Payout	Direct debit payout, indicating that the actual transfer of funds to the payee's account has occurred.		Space or an empty value
CashType	Description																							
	code																							
p2p	Peer-to-peer payment between two cardholders																							
FasterPaymentReject	Faster Payment which is rejected by the Card Scheme. (In this case, an inbound payment will be created to move money from the customer's account to holding account.)																							
ModulrReturn	An outbound return received from Modulr which is processed as inbound payment.																							
SEPAIn	Inbound SEPA (Single European Payment Area) payment																							
SEPAPaymentReturn	SEPA payment which is rejected by the Card Scheme.																							
DirectDebitOut Notification	Direct Debit payment notification, indicating that a direct debit transaction has been initiated.																							
DirectDebitOut Payout	Direct debit payout, indicating that the actual transfer of funds to the payee's account has occurred.																							
	Space or an empty value																							
CashGroup	The summary group type of the transaction.	xs:string	Yes	Takes one of the following values: <table><tr><th>CashType</th><th>Description</th></tr><tr><td>rcp</td><td>Receipt</td></tr><tr><td>pay</td><td>Payment</td></tr></table>	CashType	Description	rcp	Receipt	pay	Payment														
CashType	Description																							
rcp	Receipt																							
pay	Payment																							

Example

```
<CashCode direction="debit" CashType="fpy" CashGroup="pay"></CashCode>
```

CCAAmount (Mastercard only)

The [CCAAmount](#) element describes the Currency Conversion Assessment (CCA) amount as calculated by the network (Mastercard only). The [currency](#) attribute value defaults to the CardFinancial (Presentment) billing currency.



Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The Currency Conversion Assessment value.	xs:decimal	Yes	Decimal value.
currency	The Currency transaction described in ISO Standard Currency code.	xs:unsigned Short	Yes	3 digits.
included	Clarifies whether the CCA amount has been included in the FX fee, which is a product-level configuration option.	<YesNoString>	Yes	Valid values are: • yes • no

Example

```
<CCAAmount value="0.01"currency="826" included="no"></CCAAmount>
```

ChargebackRefNum

The [ChargebackRefNum](#) element holds the chargeback CycleID value and is shown as *Chargeback Ref Num* in Smart Client.

Description	Base Data Type	Constraints / Permitted Values
Unique for a Chargeback record. Normally 10 characters long.	xs:string	Numeric. Maximum 50 characters.

Example

```
<ChargebackRefNum>9034102149</ChargebackRefNum>
```

Classification

The [Classification](#) element describes the Merchant Category Code (MCC), which is used to classify the type of business service provided by the merchant.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
MCC	Merchant Category Code	<MCC>	Yes	See MCC .

Example

```
<Classification MCC="5659"></Classification>
```

CommissionAmt

The [CommissionAmt](#) element describes the value of the commission applied to a Card Authorisation only. The *commission* is the fees that Thredd applies to the card, based on the Fee configuration for the card (combination of the rate fee and fixed fee). For more information, see the [Thredd Fees Guide](#).

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the commission amount.	xs:decimal	Yes	Decimal value.
currency	The three-digit ISO currency code.	xs:unsigned Short	Yes	3 digits.



Example

```
<CommissionAmt value="0.95"currency="826"></CommissionAmt>
```

CycleNumber

The [CycleNumber](#) element describes the Mastercard clearing cycle number and applies to a card financial transaction only.

Note: The CycleNumber is not applicable to Visa transactions, as Visa do not have the concept of settlement or reconciliation cycles.

Permitted Value	Description	Data Type
01	Cycle number 01	xs:string
02	Cycle number 02	xs:string
03	Cycle number 03	xs:string
04	Cycle number 04	xs:string
05	Cycle number 05	xs:string
06	Cycle number 06	xs:string

Example

```
<CycleNumber>03</CycleNumber>
```

DeclineReason

The [DeclineReason](#) element describes the reason a receipt was rejected and returned to source, or a payment request was declined and not processed.

Description	Data Type	Constraints / Permitted Values
The reason a receipt or payment was declined.	xs:string	Maximum length two characters:



Example

```
<DeclineReason>01</DeclineReason>
```

Desc

The [Desc](#) element provides descriptive text to provide a comment on a transaction. You can supply this value when initiating a card load or unload via web services. Alternatively, Thredd provides the description when the load occurs as a result of a balance transfer between primary and secondary cards.

Note: For Agency banking transactions, this element can be empty.

Description	Base Data Type	Constraints / Permitted Values
Descriptive text or reference	xs:string	Maximum length 500 characters.

Example

```
<Desc>Some Descriptive Text</Desc>
```

Destination

The [Destination](#) element provides details of the destination wallet account to which funds are transferred in a Multi-FX wallet transaction.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
walletid	ID of the destination wallet account.	bigint	Yes	0 to 2^64
balancechange	Change in destination wallet account balance amount.	decimal (19,4)	Yes	Precision = 19 digits, scale = 4 digits.
blockchange	Change in destination wallet account blocked amount.	decimal (19,4)	Yes	Precision = 19 digits, scale = 4 digits.
newbalance	New destination wallet account balance.	decimal (19,4)	Yes	Precision = 19 digits, scale = 4 digits.
newblock	New destination wallet account blocked amount.	decimal (19,4)	Yes	Precision = 19 digits, scale = 4 digits.

Example

```
<Destination walletid="1253" balancechange="15.5000" blockchange="5.5000" newbalance="10.0000" newblock="20.0000"/>
```

External

The [External](#) element describes the other bank account in a payment transfer transaction.

Attribute	Description	Data Type	Constraints / Permitted Values
sortcode	Source or destination sort code.	xs:string	Numeric 6 characters.



Attribute	Description	Data Type	Constraints / Permitted Values
bankacc	Source or destination bank account.	xs:string	Numeric 8 characters.
name	Sender or recipient's name.	xs:string	Alphanumeric, maximum 28 characters.

Example

```
<External sortcode="123456" bankacc="12345678" name="John Bloggs"></External>
```

Event

The [Event](#) element describes an event that has changed a card's status.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
Type	The type of event.	xs:string	Yes	Valid values are: • Upgraded • Renewed • Lost • Stolen • Cancelled • PINAttemptsExceeded • Voided • Expired, • Activation • UnBlocked • StatusChange • ReportedToSAFE
Source	The item source (ItemSrc) of a card activation. Only applies to card activations.	xs:unsignedbyte	If applicable	See ItemSrc in the <i>Web Services Guide</i> . Defaults to 0.
ActivationDate	The Date of activation. Only applies to card activations.	xs:string	If applicable	
ConvertedDate	The date of conversion from a virtual to a physical card.	xs:string	If applicable	
StatCode	Status code of the card after the event.	xs:string	Yes	See <i>Status Codes</i> in the <i>Web Services Guide</i> .
OldStatCode	Status code of the card before the event.	xs:string	Yes	See <i>Status Codes</i> in the <i>Web Services Guide</i> .
Date	Date and time of the event (UK daylight savings time).	xs:string	Yes	Format: YYYYMMDDHHMMSS
transactionid	The unique transaction ID for a <i>ReportedToSafe</i> event. This event can be used to track Mastercard SAFE reporting transactions.	xs:string	If applicable	Numeric. Only applicable if the event Type is <i>ReportedToSAFE</i> .



Example - StatusChange

```
<Event Type="StatusChange" Source="0" StatCode="62" OldStatCode="00" Date="20210307153523" transactionid="" ></Event>
```

Example - ReportedToSafe

```
<Event Type="ReportedToSAFE" Source="0" StatCode="" OldStatCode="" Date="20210307153523" transactionid="1234567890" ></Event>
```

Fee

The [Fee](#) element describes a fee amount.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
direction	The direction of the fee.	<Direction>	Yes	See direction .
value	The value of the fee amount(PDS0147).	xs:decimal	Yes	Decimal value.
currency	The 3 digit ISO standard currency code.	xs:unsigned short	Yes	3 digits.
value2	The value of the fee amount(PDS0146). Only for Mastercard records.	xs:decimal	No	

Example

```
<Fee direction="debit" value="3.330000" currency="826" value2="3.3300" ></Fee>
```

FeeAmt

The [FeeAmt](#) element describes the fee amount as received from Mastercard.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
direction	The direction of the fee.	<Direction>	Yes	See direction .
value	The value of the fee. For Programme Manager fees, this is the sum total of any rate fee, fixed fee or other fee applied to the transaction (see Rate_Fee and Fixed_Fee in the CardAuthorisation record). For Scheme fees, it is the fee amount as received from the Scheme.	xs:decimal	Yes	Decimal value.
currency	The 3-digit ISO standard currency code.	xs:unsigned short	Yes	3 digits.

Example

```
<FeeAmt direction="debit" value="0.95" currency="826"></FeeAmt>
```



FeeClass

The [FeeClass](#) element describes the nature of a fee.

Attribute	Description	Data Type	Required	Constraints / Permitted Values															
interchangeTransaction	Valid values are <i>yes</i> and <i>no</i> Note: The value is yes when the FeeClass type is 4 or 5	<YesNoString>	Yes	Valid values are: • yes • no															
type	Describes the type of the fee.	xs:string	Yes	Valid values are: <table><tr><th>Value</th><th>Description</th><th>Fee Type</th></tr><tr><td>1</td><td>Cardholder fee: In this case the account number in the fee message refers to the cardholder's account.</td><td>Cardholder Fee</td></tr><tr><td>2</td><td>MasterCard funds transfer settlement fee</td><td>Settlement Fee</td></tr><tr><td>4</td><td>MasterCard interchange received fee</td><td>Settlement Fee</td></tr><tr><td>5</td><td>MasterCard interchange fee to be paid</td><td>Settlement Fee</td></tr></table> For a CardFinancial, FeeClass element record, the type attribute always has a value of 1.	Value	Description	Fee Type	1	Cardholder fee: In this case the account number in the fee message refers to the cardholder's account.	Cardholder Fee	2	MasterCard funds transfer settlement fee	Settlement Fee	4	MasterCard interchange received fee	Settlement Fee	5	MasterCard interchange fee to be paid	Settlement Fee
Value	Description	Fee Type																	
1	Cardholder fee: In this case the account number in the fee message refers to the cardholder's account.	Cardholder Fee																	
2	MasterCard funds transfer settlement fee	Settlement Fee																	
4	MasterCard interchange received fee	Settlement Fee																	
5	MasterCard interchange fee to be paid	Settlement Fee																	
code	Specifies the type of cardholder fee.	xs:string	Yes	The value specified below depends upon the message code (fee identifier), see Fee Class Element Code Attribute Values Where the FeeClass type attribute is 0,2,4 or 5, then the code attribute is 0. For a card Financial, FeeClass element record, the codeattribute always has a value of 1.															
memberID	Specifies the ICA	xs:string	No	Only applicable to MastercardFee .															

Example

```
<FeeClass interchangeTransaction="no"type="1"code="1"></FeeClass>
```

FIID

The [FIID](#) element describes the Forwarding Institution Identification Code (FIID).



Description	Base Data Type	Constraints / Permitted Values
A code identifying the forwarding institution	xs:string	Alphanumeric, maximum 11 characters.

Example

```
<FIID>0123456</FIID>
```

File

The [File](#) element describes the file in which the receipt was notified or the outbound payment was submitted for processing. This element is used for outbound file-based processing with Agency banking.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
filedate	Date and time of file containing receipt or date the payment file is generated.	xs:string	Yes	Maximum 14 characters, date and time in the format: YYYYMMDDHHMMSS
filename	Name of file containing receipt or payment.	xs:string	Yes	Alphanumeric, maximum 100 characters.

Example

```
<File filedate="20100824155111" filename="ABC123xyz"></File>
```

FunctionCode

The [FunctionCode](#) element is used by Mastercard to describe the transaction functions the clearing system performs.

Permitted Value	Description	Data Type
400	Denotes 'Full'. Used for Mastercom Chargebacks.	integer
451	Denotes 'Partial'. Used for Mastercom Chargebacks.	integer
603	Retrieval Request.	integer
605	Retrieval Request Acknowledgement.	integer
685	Financial Position Detail (Chargeback -Mastercom).	integer
700	Fee Collection (Member-generated) / For Mastercom pre-arbitration or arbitration case filing.	integer
780	Fee Collection Return (Member-generated).	integer
781	Fee Collection Resubmission (Member-generated).	integer
782	Fee Collection Arbitration Return (Member-generated).	integer
783	Fee Collection (Clearing System-generated).	integer
790	Fee Collection (Funds Transfer) – applies only in the IPM Pre-edit system to UK Domestic Maestro transactions.	integer



LoadSource

The [LoadSource](#) element describes the source of the Card Load or Unload.

Attribute	Description	Data Type	Constraints / Permitted Values
Source	The source of the Load / Unload request.	xs:string	Maximum length 3 characters. For more information, see Load Sources .
Type	The type of the Load/Unload request. Payment method of funds for the load.	xs:string	0 = Unknown 1 = Cash 2 = Debit card 3 = Credit card 4 = e-Wallet 5 = Bank account
FixedFee	The amount of any Fixed Fee that was applied.	xs:decimal	
Rate_Fee	The amount of any Rate Fee that was applied.	xs:decimal	

Example

```
<LoadSource source="9"Type="1"FixedFee="0.00"Rate_Fee="0.00"/></LoadSource>
```

LoadType

The [LoadType](#) element describes the type of funds used in a Card Load or Unload transaction.

Description	Data Type	Constraints / Permitted Values
The type of fund used in the Card Load or Unload.	xs:string	Maximum length 2 characters.



Example

```
<LoadType>6</LoadType>
```

LocalDate

The [LocalDate](#) element describes the date and time of the transaction in the local timezone.

Description	BaseType	Constraints / Permitted Values
Date and time.	xs:string	Maximum 14 characters, date and time in the format: YYYYMMDDHHMMSS

Example

The example below shows a date/time of 2:20.33pm on 25th Jan 2025.

```
<LocalDate>20250125142033</LocalDate>
```

LocalDateUTC

The transaction date and Time in UTC as received from Mastercard, Visa, and MNE for the matching authorisation. In CardFinancial, this includes the matching authorisation of a financial advice or reversal. In CardAuthorisation, this includes the matching authorisation of an auth advice or reversal.

[LocalDateUTC](#) takes values from transmission_DateTime_07(DE007) of its matching authorisation.

Description		Constraints / Permitted Values
The transaction date and Time in UTC as received from Mastercard, Visa, and MNE.	xs:string	Maximum 10 characters, date and time in the format: MMDDHHMMSS

Example

An authorisation reversal with the AuthId of 3000000057994 taking place on 23rd January 2025 at 04:11. with the matching authorisation of 3000000049064528 occurring on the 23rd January 2025 at 04:10..

```
<LocalDate>20250123041102</LocalDate>
<LocalDateUTC>0123041019</LocalDateUTC>
```

A financial advice with a FinId of 3000000006201596 taking place on 11th of January 2025 at 00:00 with a matching authorisation of 3000000006139981 occurring on the 10th of January 2025 at 23:59.

```
<LocalDate>20250111000000</LocalDate>
<LocalDateUTC>0110235901</LocalDateUTC>
```

MastercardFeeClass

The [MastercardFeeClass](#) data type describes the type of Mastercard fee.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
interchangeTransaction	Valid values are <i>yes</i> and <i>no</i> Note: The value is yes when the FeeClass type is 4 or 5	<YesNoString>	Yes	Valid values are: • yes • no
type	Describes the type of the fee.	xs:string	Yes	Valid values are:



Attribute	Description	Data Type	Required	Constraints / Permitted Values																	
				<table><tr><th>Value</th><th>Description</th><th>Fee Type</th></tr><tr><td>0</td><td>Network fee: These are fees generated by Thredd or MasterCard clearing. In this case the account number in the fee message refers to the fee account for Thredd.</td><td>Settlement Fee</td></tr><tr><td>2</td><td>MasterCard funds transfer settlement fee</td><td>Settlement Fee</td></tr><tr><td>4</td><td>MasterCard interchange received fee</td><td>Settlement Fee</td></tr><tr><td>5</td><td>MasterCard interchange fee to be paid</td><td>Settlement Fee</td></tr></table>			Value	Description	Fee Type	0	Network fee: These are fees generated by Thredd or MasterCard clearing. In this case the account number in the fee message refers to the fee account for Thredd.	Settlement Fee	2	MasterCard funds transfer settlement fee	Settlement Fee	4	MasterCard interchange received fee	Settlement Fee	5	MasterCard interchange fee to be paid	Settlement Fee
				Value	Description	Fee Type															
				0	Network fee: These are fees generated by Thredd or MasterCard clearing. In this case the account number in the fee message refers to the fee account for Thredd.	Settlement Fee															
				2	MasterCard funds transfer settlement fee	Settlement Fee															
				4	MasterCard interchange received fee	Settlement Fee															
5	MasterCard interchange fee to be paid	Settlement Fee																			
code	Specifies the type of cardholder fee.	xs:string	Yes	0																	
memberid	Specifies the Mastercard Member ID (i.e. ICA)	xs:string	Yes	Maximum 6 characters. Note: This element is only present when the container element of FeeClass is “MastercardFee”.																	

Example

```
<MastercardFeeClass interchangeTransaction="no" type="0" code="0" memberid="012345"></MastercardFeeClass>
```

MerchCode

The [MerchCode](#) element is the Card Acceptor Merchant Identifier supplied by the acquirer. This a unique number that is used to identify the merchant or originator of the transaction.

Expected Value	BaseType	Constraints / Permitted Values
Merchant Code / Card Acceptor Identifier.	xs:string	Alphanumeric, maximum 15 characters.

Example

```
<MerchCode>ABCD12345678</MerchCode>
```

MsgSource

The [MsgSource](#) element describes the source from which the message is derived.



Attribute	Description	Data Type	Required	Constraints / Permitted Values																
value	The source from which this message is derived.	xs:decimal	Yes	Maximum length two; must be one of the following values: <table><tr><th>Value</th><th>Description</th></tr><tr><td>12</td><td>Outgoing fees to Visa.</td></tr><tr><td>17</td><td>Outgoing fees to Mastercard. This must be applied to all outgoing settlement fees.</td></tr><tr><td>62</td><td>This value is applicable on CardAuthorisation records only.</td></tr><tr><td>66</td><td>ECCEDD or GCMS using the ECCF file format (Mastercard International).</td></tr><tr><td>67</td><td>GCMS using IPM file format (Mastercard International).</td></tr><tr><td>74</td><td>UK Domestic Maestro using the IPM file format.</td></tr><tr><td>54</td><td>Visa International.</td></tr></table>	Value	Description	12	Outgoing fees to Visa.	17	Outgoing fees to Mastercard. This must be applied to all outgoing settlement fees.	62	This value is applicable on CardAuthorisation records only.	66	ECCEDD or GCMS using the ECCF file format (Mastercard International).	67	GCMS using IPM file format (Mastercard International).	74	UK Domestic Maestro using the IPM file format.	54	Visa International.
Value	Description																			
12	Outgoing fees to Visa.																			
17	Outgoing fees to Mastercard. This must be applied to all outgoing settlement fees.																			
62	This value is applicable on CardAuthorisation records only.																			
66	ECCEDD or GCMS using the ECCF file format (Mastercard International).																			
67	GCMS using IPM file format (Mastercard International).																			
74	UK Domestic Maestro using the IPM file format.																			
54	Visa International.																			
domesticMaestro	Indicates Domestic Maestro.	<domestic Maestro>	Yes	See domesticMaestro .																

Example

```
<MsgSource value="67"domesticMaestro="no"></MsgSource>
```

NetworkLinkValidation

This field includes the correction done on the NetworkTransactionId2. If there is a problem in this ID, the card scheme updates the NetworkTransactionId to the correct one, which is the original NetworkTransactionId that the acquirer provided.

Description	BaseType	Constraints / Permitted Values
Network LinkValidation.	xs:string	Alphanumeric, maximum 30 characters.

Example

```
<NetworkLinkValidation>2hJCj0ybkSPSpw7WRvtcu8A</NetworkLinkValidation>
```

NetworkRelatedTransactionId

Transaction identifier from the card scheme that links a transaction with previous related transactions. These transactions are not in the same lifecycle (e.g. recurring transactions, refunds).

Description	BaseType	Constraints / Permitted Values
Network RelatedTransactionId	xs:string	Alphanumeric, maximum 30 characters.

Example

```
<NetworkRelatedTransactionId>1wjBgXWtSxGd85kz_s9WJQ<</NetworkRelatedTransactionId>
```



NetworkTransactionId

The raw transaction ID, exactly as received from the card network without any alteration. This corresponds to the name in the Schema field. Present only if received. Thredd load this as follows:

- Visa Online: 16 hexdigits of the DE62.2 Visa Transaction ID. The leading hexdigit should be a '0' padding character.
- Visa Clearing: 15 characters, which should all be digits. (15 '0' characters indicates unknown.
- Mastercard Online: DE63 concatenated with DE15.
- Mastercard Clearing: DE63.

Description	BaseType	Constraints / Permitted Values
Network Transaction Id.	xs:string	Alphanumeric, maximum 30 characters.

Example

```
<NetworkTransactionId>SUR9876UX1231</NetworkTransactionId>
```

NetworkTransactionId2

This field corresponds to the NetworkTransactionId from the card scheme of the transaction. This is a unique ID for transactions in the same lifecycle (e.g. authorisation, clearing, and chargebacks).

Description	BaseType	Constraints / Permitted Values
Network Transaction Id2.	xs:string	Alphanumeric, maximum 30 characters.

Example

```
<NetworkTransactionId2>rU69Pt0US6iC9rvVXAwhAQ</NetworkTransactionId2>
```

OperationType

The [OperationType](#) sub-element describes the type of wallet transaction.

ID	Name	Description
1	Authorisation	Authorisation transaction (Point of Sale, e-commerce or ATM).
2	Financial	Financial transaction type (e.g., presentment).
3	Fees	All kinds of non-transaction based fees, such as recurring fees and card usage fees.
4	Loads	Funds loaded to the wallet account using a Thredd web service.
5	Unloads	Funds unloaded from the wallet account using a Thredd web service.
6	Wallet Transfer	Funds transferred between wallet accounts.
7	Balance Recalculation	Balance recalculation. Certain operations will cause the balance to be recalculated without otherwise affecting the balance.
8	Closure Requested	Request to close the wallet account.
9	Closure Complete	The wallet account is closed after all pending authorisations have been dealt with.



ID	Name	Description
10	Wallet Opening	Used to record the (re-)opening of a wallet account.
11	Authorisation Expiry	Indicates either a forced or automatic authorisation expiry.

Example

```
<OperationType>1</OperationType>
```

OrigTxnAmt

This [OrigTxnAmt](#) element describes the original transaction amount requested by the cardholder.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the original transaction.	xs:decimal	Yes	Decimal value.
currency	The currency code of the original transaction.	xs:unsignedShort	Yes	3 digits.
partial	Indicates a partial amount.	<YesNoString>	If applicable	Valid values are: • yes • no If not supplied, assumes “no”.
origItemId	The system trace audit number of the original authorisation, as assigned by the message originator. This can be used to link an authorisation reversal to the original authorisation.	xs:unsignedInt	If applicable	0 to 4,294,967,295

Example

```
<OrigTxnAmt value="0.95"currency="826" partial="yes"origItemId="123456"></OrigTxnAmt>
```

Other

The [Other](#) element describes the Non-wallet amount and currency (e.g., for loads and unloads)..

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the amount.	decimal (19,8)	Yes	Decimal value: Precision = 19 digits, scale = 8 digits.
currency	The 3 digit ISO standard currency code.	xs:unsignedShort	Yes	Currency in ISO 3-digit number format.

Example

```
<Other amount="15.5000" currency="AUD"/>
```



PaddingAmt

The [PaddingAmt](#) element describes the value of any padding amount applied to an authorisation. This is typically used to mitigate against FX rate fluctuations between the authorisation and the settlement.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the padding amount.	xs:decimal	Yes	Decimal value.
currency	The 3 digit ISO standard currency code.	xs:unsignedShort	Yes	Short value.

Example

```
<PaddingAmt value="0.95"currency="826"></PaddingAmt>
```

PaymentToken

The [PaymentToken](#) element is populated from payment token data when a payment token was used for the transaction. If no payment token was used, then the [PaymentToken](#) element is omitted.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
id	Unique Thredd ID of the payment token. Only present if transaction relates to a payment token (for example, Apple Pay).	xs:string	Yes	
creator	Identifies which system created the payment token. Only present if the transaction relates to a payment token (for example, Apple Pay).	xs:string	Yes	MDES or VDEP
expdate	Expiry date of the payment token. Only present if the transaction relates to a payment token (for example, Apple Pay).	xs:string	Yes	Format YYYY-MM-DD
type	The type of system the payment token is encoded onto (defines how the payment token PAN is held). Only present if the transaction relates to a payment token (for example, Apple Pay).	xs:string	Yes	See type .
status	Current status of the payment token as set by Thredd. Only present if transaction relates to a payment token (for example, Apple Pay). Please note this can differ from the status of the PAN.	xs:string	Yes	00 = authorised.
creatorstatus	Current status of the payment token as set by the creator of the payment token. Only present if the transaction relates to a payment token (for example, Apple Pay).	xs:string	Yes	See creatorstatus .
wallet	Wallet that the payment token belongs to. Only present if the transaction relates to a payment	xs:string	Yes	See wallet .



Attribute	Description	Data Type	Required	Constraints / Permitted Values
	token (for example, Apple Pay).			
devicetype	Indicates the type of the device in which the payment token is held. Only present if the transaction relates to a payment token (for example, Apple Pay).	xs:string	Yes	See devicetype .
lang	The ISO 639-1 2 character alpha language code reported by the payment token device at digitisation time. Only present if the transaction relates to a payment token (for example, Apple Pay). For a list of ISO 639-1 language codes, see http://www.iso.org Note: The code may not be known, in which case the field will be empty.	xs:string	Yes	
activationexpiry	The Date and Time in UTC (GMT) when the activation code in the field PaymentToken activationCode expires. Only present if the first two characters of ProcCode="34" (payment token activation notification). Note: Milliseconds are present, but will always be zero. For Mastercard, seconds will always be zero.	xs:string	Yes	
activationmethod	The method by which the cardholder should obtain the Activation Code (in the field PaymentToken_activationCode) They must enter the activation code into the device holding the payment token in order to activate it. Only present if first two characters of ProcCode="34" (payment token activation notification).	xs:string	Yes	See activationmethod

Example

```
<PaymentToken id="26025313" creator="MC-MDES" expdate="2024-04-30" type="SE" status="00" creatorstatus="A" wallet="APPLE" device-type="M" lang="" activationexpiry="2021-03-02 11:52:00" activationmethod="1" />
```

Pending_Billing_Amount

The [Pending_Billing_Amount](#) element shows the value of the pending Chargeback amount.

Description	Data Type	Constraints / Permitted Values
Chargeback amount.	xs:decimal	Decimal value.



Example

```
<Pending_Billing_Amount>10.25</Pending_Billing_Amount>
```

Recon

The [Recon](#) element provides details of the reconciliation date and clearing cycle.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
date	Date the original transaction was reconciled.	xs:string	No	Maximum 8 characters. Date in the format: YYYYMMDD
cycle	Indicates which of the Mastercard clearing cycles the transaction was processed in.	xs:string	No	Values 01 - 06.

Example

An example of a settlement which occurred in cycle 1 on 11th September 2021 is shown below.

```
<Recon date="20210911" cycle="01"/></recon>
```

Receiver

The [Receiver](#) element provides details of the receiver of the payment where there is a money transfer. See also [Sender](#).

Attribute	Description	Data Type	Required	Constraints / Permitted Values	
firstname	FirstName	xs:string	No	Alphanumeric, maximum 99 characters.	
middlename	Middle Name	xs:string	No	Alphanumeric, maximum 99 characters.	
lastname	Last Name	xs:string	No	Alphanumeric, maximum 99 characters.	
streetaddress	Street Address	xs:string	No	Alphanumeric, maximum 99 characters.	
city	City	xs:string	No	Alphanumeric, maximum 99 characters.	
provincecode	Province code	xs:string	No	Alphanumeric, maximum 99 characters.	
country	Country	xs:string	No	Normally 3-character alpha ISO code	
postcode	Postcode	xs:string	No	Alphanumeric, maximum 99 characters.	
dateofbirth	Date of birth	xs:string	No	Format: MMDDYYYY	
accountnumber	Account Number	xs:string	No	Alphanumeric, maximum 99 characters.	
idtype	Id type	xs:string	No		
				Value	Description
				00	Passport
				01	National Identification Card
				02	Driver’s License
				03	Government Issued
				04	Other



Attribute	Description	Data Type	Required	Constraints / Permitted Values																					
				<table><tr><th>Value</th><th>Description</th></tr><tr><td>05-10</td><td>Reserved</td></tr></table>		Value	Description	05-10	Reserved																
Value	Description																								
05-10	Reserved																								
idnbr	Id number	xs:string	No	Alphanumeric, maximum 99 characters.																					
idctrycode	ID Country Code	xs:string	No	Normally 3-character alpha ISO code																					
nationality	Nationality	xs:string	No	Normally 3-character alpha ISO code																					
phonenumber	Phone Number	xs:string	No	Alphanumeric, maximum 99 characters.																					
idexpdate	ID expiry Date	xs:string	No	Format: MMDDYYYY																					
acctnbrtype	Account Number Type	xs:string	No	<table><tr><th>Values</th><th>Description</th></tr><tr><td>00</td><td>Other</td></tr><tr><td>01</td><td>RTN + Bank Account</td></tr><tr><td>02</td><td>IBAN</td></tr><tr><td>03</td><td>Card Account</td></tr><tr><td>04</td><td>Email</td></tr><tr><td>05</td><td>Phone Number</td></tr><tr><td>06</td><td>Bank account number (BAN) + Bank Identification Code (BIC)</td></tr><tr><td>07</td><td>Wallet ID</td></tr><tr><td>08</td><td>Social Network ID</td></tr></table>		Values	Description	00	Other	01	RTN + Bank Account	02	IBAN	03	Card Account	04	Email	05	Phone Number	06	Bank account number (BAN) + Bank Identification Code (BIC)	07	Wallet ID	08	Social Network ID
Values	Description																								
00	Other																								
01	RTN + Bank Account																								
02	IBAN																								
03	Card Account																								
04	Email																								
05	Phone Number																								
06	Bank account number (BAN) + Bank Identification Code (BIC)																								
07	Wallet ID																								
08	Social Network ID																								
birthctry	Birth Country	xs:string	No	Normally 3-character alpha ISO code																					
fundssource	Fund Source	xs:string	No	<table><tr><th>Code</th><th>Meaning</th></tr><tr><td>01</td><td>Visa credit</td></tr><tr><td>02</td><td>Visa debit</td></tr><tr><td>03</td><td>Visa prepaid</td></tr><tr><td>04</td><td>Cash</td></tr><tr><td>05</td><td>Debit/deposit access accounts other than those linked to a Visacard (includes checking/savings accounts and proprietary debit/ATM cards)</td></tr><tr><td>06</td><td>Credit accounts other than those linked to a Visa card (includes credit cards and proprietary credit lines)</td></tr></table>		Code	Meaning	01	Visa credit	02	Visa debit	03	Visa prepaid	04	Cash	05	Debit/deposit access accounts other than those linked to a Visacard (includes checking/savings accounts and proprietary debit/ATM cards)	06	Credit accounts other than those linked to a Visa card (includes credit cards and proprietary credit lines)						
Code	Meaning																								
01	Visa credit																								
02	Visa debit																								
03	Visa prepaid																								
04	Cash																								
05	Debit/deposit access accounts other than those linked to a Visacard (includes checking/savings accounts and proprietary debit/ATM cards)																								
06	Credit accounts other than those linked to a Visa card (includes credit cards and proprietary credit lines)																								
claimcode	Claim Code	xs:string	No	Alphanumeric, maximum 99 characters.																					



Example

```
<Receiver firstname="FRST" middlename="M" lastname="LST NME"
  streetaddress="RM R STREET S STREETI" city="MAIN" provincecode="MD" country="MDA"
  postcode="00000" dateofbirth="07051999" accountnumber="4779300008363000" idtype="04"
  idnbr="2014011000399" idctrycode="MDA" nationality="MDA"
  phonenumber="2811131" idexpdate="102020" acctnbrtype="08"
  birthctry="MDA" fundssource="04" claimcode="TST"></Receiver>
```

ReconciliationDate

The [ReconciliationDate](#) element shows the reconciliation date of a Chargeback record.

Description	Data Type	Constraints / Per
Reconciliation date of Chargeback record.	xs:string	Maximum 8 characters, Date in the format: YYYYMMDD

Example

```
<ReconciliationDate>20200325</ReconciliationDate>
```

ReconciliationCycle

The [ReconciliationCycle](#) element shows the reconciliation cycle of the Chargeback record.

Description	Data Type	Constraints / Permitted Values
Reconciliation cycle of Chargeback record.	xs:string	Maximum 2 characters, Possible values are 01,02,03,04,05 and 06.

Example

```
<ReconciliationCycle>03</ReconciliationCycle>
```

RecordType

The [RecordType](#) element is used to distinguish between different fee types. (Relevant to Mastercard only)

Description	Base Data Type	Constraints / Permitted Values										
This can have different values depending on the primary element. For example: For a chargeback, where the value of RecordType is <i>MCB</i>. To find out the chargeback fee amount, refer to the fee amount (<FeeAmt>) of the MasterCardFee record. To view the original chargeback amount, refer to the <BillAmt> in the CardChrgBackRepRes record. For case filing where the value of RecordType is <i>MCF</i>, refer to the MasterCardFee record for details of pre-aribtration and arbitration case filing fees.	xs:string	Maximum length 3. <table><tr><th>Value</th><th>Description</th></tr><tr><td>FC</td><td>From FeeCollection.</td></tr><tr><td>MCB</td><td>Mastercom Chargebacks. Raised either via Mastercom UI or Mastercom SmartClient API.</td></tr><tr><td>MCF</td><td>Mastercom pre-arbitration or arbitration case filing. Raised either via Mastercom UI or Mastercom Smartclient API.</td></tr><tr><td>VFC</td><td>Visa Fee Collection.</td></tr></table>	Value	Description	FC	From FeeCollection.	MCB	Mastercom Chargebacks. Raised either via Mastercom UI or Mastercom SmartClient API.	MCF	Mastercom pre-arbitration or arbitration case filing. Raised either via Mastercom UI or Mastercom Smartclient API.	VFC	Visa Fee Collection.
Value	Description											
FC	From FeeCollection.											
MCB	Mastercom Chargebacks. Raised either via Mastercom UI or Mastercom SmartClient API.											
MCF	Mastercom pre-arbitration or arbitration case filing. Raised either via Mastercom UI or Mastercom Smartclient API.											
VFC	Visa Fee Collection.											



Example

```
<RecordType>MCF</RecordType >
```

RecType

The [RecType](#) element describes whether this record is an advice or a reversal.

Permitted Value	Description	DataType
ADV	Advice Record	xs:string
REV	Reversal Record	xs:string

Example

```
<RecType>ADV</RecType>
```

Response

The [Response](#) element describes the approval status of a transaction request.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
approved	Approval component.	<approved>	Yes	See approved .
actioncode	Describes the transaction status, which can be either 4 or 0: 4 = indicates a decline or where the transaction type is an authorisation advice 0 = indicates a transaction status that is not a decline or an authorisation advice For a CardFinancial, ActionCode is always zero.	xs:string	If applicable	Applies to CardAuthorisation and CardFinancial only.
responsecode	Holds the <i>ResponseStatus</i> field from the authorisation record in the Thredd database (as sent to Visa or Mastercard). This is a 2 digit Response Code which is based on the ISO 8583:1987 standard. It corresponds to the DE39 response code field that Thredd sent in the response message. In most cases, the responsecode field should match the authorisation <i>ResponseStatus</i> you provided in your EHI response. The exception is for EHI modes where: - Thredd did not receive your EHI response and made a Stand-In Processing (STIP) decision - Thredd received your EHI response, but determined the <i>ResponseStatus</i> was not valid	xs:string	If applicable	Applies to CardAuthorisation and CardFinancial only.



Attribute	Description	Data Type	Required	Constraints / Permitted Values
	The EHI response you sent was an internal Thredd response code (such as 'C0' or 'C1'). In this case the responsecode field will reflect the response actually sent to Visa/Mastercard (after mapping from an internal Thredd EHI ResponseStatus value)			
additionaldesc	Extra information.	xs:string	If applicable	Maximum 500 characters. Applies to CardAuthorisation only.

Example

```
<Response approved="yes"actioncode="0"responsecode="00"></Response>
```

ReversalReason

The [ReversalReason](#) element describes the reason for a reversal.

Permitted Value	Description	Data Type
0	Original authorisation was matched. This is where the original Authorisation value from the BLKAMT field was cancelled. This increases the AMTAVL balance because a settlement transaction has been matched and processed. This code would be used if the CardAuthorisation's AuthId is populated in the matching CardFinancial's Child Element AuthId.	xs:string
1	Original authorisation has expired. This is where the original Authorisation value from the BLKAMT field was cancelled.This increases the AMTAVL balance even though a settlement transaction has not been identified before the expiry of the Authorisation time limit. This code would be used if the CardAuthorisation's AuthId is not present in any CardFinancial's Child Element AuthId.	xs:string
2	Manually deleted, where the erroneously processed authorisation and reversal for a merchant is processed directly into the processor's system.	xs:string
3	Online reversal, where the erroneously processed authorisation and reversal for a merchant is entered via the processor's online portal.	xs:string

Example

```
<ReversalReason>0</ReversalReason>
```

RIID

The [RIID](#) element describes the Receiving Institution Identification Code (RIID). This is the Program Manager's ICA as provided by Mastercard or the equivalent account code from Visa.

Description	Base Data Type	Constraints / Permitted Values
Receiving Institution Identification Code.	xs:string	Alphanumeric, maximum 11 characters.

Example

```
<RIID>00000000123</RIID>
```



Alphan

The [Schema](#) element describes the name of the card scheme processing the transaction. For example: Visa (VISA), Mastercard (MCRD).

Permitted Value	Description	Data Type
CIRR	Euro Cirrus	xs:string
ECRD	EuroCard	xs:string
MAES	Maestro	xs:string
CIMA	Cirrus Maestro	xs:string
MCRD	Mastercard	xs:string
VISA	Visa	xs:string
PLUS	PLUS Card	xs:string
DGN	Discover Network	xs:string

Example

```
<Schema>MCRD</Schema>
```

Sender

The [Sender](#) element provides details of the sender of the payment, where there is a money transfer. See also [Receiver](#).

Attribute	Description	Data Type	Required	Constraints / Permitted Values
firstname	FirstName	xs:string	No	Alphanumeric, maximum 99 characters.
middlename	Middle Name	xs:string	No	Alphanumeric, maximum 99 characters.
lastname	Last Name	xs:string	No	Alphanumeric, maximum 99 characters.
streetaddress	Street Address	xs:string	No	Alphanumeric, maximum 99 characters.
city	City	xs:string	No	Alphanumeric, maximum 99 characters.
provincecode	Province code	xs:string	No	Alphanumeric, maximum 99 characters.
country	Country	xs:string	No	Normally 3-character alpha ISO code.
postcode	Postcode	xs:string	No	Alphanumeric, maximum 99 characters..
dateofbirth	Date of birth	xs:string	No	Format: MMDDYYYY
accountnumber	Account Number	xs:string	No	Alphanumeric, maximum 99 characters.
idtype	The type of identification provided by the user.	xs:string	No	Values are:



Attribute	Description	Data Type	Required	Constraints / Permitted Values																				
				<table><tr><th>Value</th><th>Description</th></tr><tr><td>00</td><td>Passport</td></tr><tr><td>01</td><td>National Identification Card</td></tr><tr><td>02</td><td>Driver's License</td></tr><tr><td>03</td><td>Government Issued</td></tr><tr><td>04</td><td>Other</td></tr><tr><td>05-10</td><td>Reserved</td></tr></table>	Value	Description	00	Passport	01	National Identification Card	02	Driver's License	03	Government Issued	04	Other	05-10	Reserved						
Value	Description																							
00	Passport																							
01	National Identification Card																							
02	Driver's License																							
03	Government Issued																							
04	Other																							
05-10	Reserved																							
idnbr	Identification number (e.g. passport or driver license number)	xs:string	No	Alphanumeric, maximum 99 characters.																				
idctrycode	ID country code (e.g. 826)	xs:string	No	Normally 3-character alpha ISO code.																				
nationality	Nationality	xs:string	No	Normally 3-character alpha ISO code.																				
phonenumber	Phone number	xs:string	No	Alphanumeric, maximum 99 characters.																				
idexpdate	Identification expiry date	xs:string	No	Format: MMDDYYYY																				
acctnbrtype	The type of account number	xs:string	No	<table><tr><th>Values</th><th>Description</th></tr><tr><td>00</td><td>Other</td></tr><tr><td>01</td><td>RTN + Bank Account</td></tr><tr><td>02</td><td>IBAN</td></tr><tr><td>03</td><td>Card Account</td></tr><tr><td>04</td><td>Email</td></tr><tr><td>05</td><td>Phone Number</td></tr><tr><td>06</td><td>Bank account number (BAN) + Bank Identification Code (BIC)</td></tr><tr><td>07</td><td>Wallet ID</td></tr><tr><td>08</td><td>Social Network ID</td></tr></table>	Values	Description	00	Other	01	RTN + Bank Account	02	IBAN	03	Card Account	04	Email	05	Phone Number	06	Bank account number (BAN) + Bank Identification Code (BIC)	07	Wallet ID	08	Social Network ID
Values	Description																							
00	Other																							
01	RTN + Bank Account																							
02	IBAN																							
03	Card Account																							
04	Email																							
05	Phone Number																							
06	Bank account number (BAN) + Bank Identification Code (BIC)																							
07	Wallet ID																							
08	Social Network ID																							
birthctry	Country of birth	xs:string	No	Normally 3-character alpha ISO code.																				
fundssource	Source of funds	xs:string	No	<table><tr><th>Code</th><th>Meaning</th></tr><tr><td>01</td><td>Visa credit</td></tr><tr><td>02</td><td>Visa debit</td></tr><tr><td>03</td><td>Visa prepaid</td></tr><tr><td>04</td><td>Cash</td></tr><tr><td>05</td><td>Debit/deposit access accounts other than those linked to a Visacard (includes checking/savings accounts and proprietary debit/ATM cards)</td></tr></table>	Code	Meaning	01	Visa credit	02	Visa debit	03	Visa prepaid	04	Cash	05	Debit/deposit access accounts other than those linked to a Visacard (includes checking/savings accounts and proprietary debit/ATM cards)								
Code	Meaning																							
01	Visa credit																							
02	Visa debit																							
03	Visa prepaid																							
04	Cash																							
05	Debit/deposit access accounts other than those linked to a Visacard (includes checking/savings accounts and proprietary debit/ATM cards)																							



Attribute	Description	Data Type	Required	Constraints / Permitted Values					
				<table><tr><th>Code</th><th>Meaning</th></tr><tr><td>06</td><td>Credit accounts other than those linked to a Visa card (includes credit cards and proprietary credit lines)</td></tr></table>		Code	Meaning	06	Credit accounts other than those linked to a Visa card (includes credit cards and proprietary credit lines)
Code	Meaning								
06	Credit accounts other than those linked to a Visa card (includes credit cards and proprietary credit lines)								
claimcode	Claim code	xs:string	No	Alphanumeric, maximum 99 characters.					

Example

```
<Sender firstname="FRST" middlename="M" lastname="LST NME" streetaddress="RM R STREET S
STREETI" city="MAIN" provincecode="MD" country="MDA"
    postcode="00000" dateofbirth="07051999" accountnumber="4779300008363000" idtype="04"
    idnbr="2014011000399" idctrycode="MDA" nationality="MDA"
    phonenumber="2811131" idexpdate="102020" acctnbrtype="08" birthctry="MDA" fundssource="04" claimcode="TST"></Sender>
```

Settlement

The [Settlement](#) element describes the Settlement details.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
date	Date the original transaction was settled.	xs:string	No	Maximum 8 characters, Date in the format: YYYYMMDD
cycle	Indicates which of the Mastercard clearing cycles the transaction was processed in.	xs:string	No	Values 01 - 06.

Example

An example of a Settlement which occurred in cycle 1 on 9th September 2017 is shown below.

```
<Settlement date="20170911" cycle="01"/></Settlement>
```

SettlementAmt

The [SettlementAmt](#) element describes the settlement amount.

Note: Only Mastercard send a Settlement Amount to Thredd.

Note: For Visa, the [SettlementAmt](#) is the same as the Cardholder Billing amount ([BillAmt](#)).

Note: If you have a Visa multi-currency settlement BIN and Thredd's Visa Multi-currency settlement solution is enabled for your card programme, then this field is populated with a Thredd-calculated Settlement Amount and Currency, based on the relevant settlement currency plus the rates obtained from the Visa International TC56 Currency Conversion Rate file.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the settlement amount.	xs:decimal	Yes	Decimal value.
currency	The 3 digit ISO code of currency that the transaction will be settled in.	xs:unsigned Short	Yes	3 digits.
rate	The conversion rate used to	<Rate>	Yes	Decimal value, maximum 9 decimal



Attribute	Description	Data Type	Required	Constraints / Permitted Values
	calculate the settlement amount value.			places, using conventional rounding down (1-4) and up (5-9).
date	Date the original transaction was settled.	xs:string	If applicable	Maximum 8 characters, Date in the format: YYYYMMDD Only required for chargebacks and representments.

Example

The example below represents 10 GBP at an exchange rate of 1:1.

```
<SettlementAmt value="10.00" currency="826" rate="1.000000000"
  date="20100825"></SettlementAmt>
```

SettlementCycle

The [SettlementCycle](#) element describes the settlement cycle of the Chargeback record.

Description	Data Type	Constraints / Permitted Values
Settlement cycle of a Chargeback record.	xs:string	Maximum length 2 characters. Possible value: 01.

Example

```
<SettlementCycle>01</SettlementCycle>
```

SettlementDate

The [SettlementDate](#) element describes the date when the transaction is settled.

Note: In the [CardAuthorisation](#) element, this field only provides the Thredd transaction date.

Description	BaseType	Constraints / Permitted Values
Date (UTC)	xs:string	Maximum 8 characters, date in the format: YYYYMMDD

Example

```
<SettlementDate>20210125</SettlementDate>
```

SettlementIndicator

The [SettlementIndicator](#) element describes the type of settlement service, for example whether this is International or clearing-only.

Description	Base Data Type	Constraints / Permitted Values
The type of settlement service.	xs:string	Maximum length 1. Values are:



Description	Base Data Type	Constraints / Permitted Values												
		<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>International settlement service.</td></tr><tr><td>3</td><td>Clearing-only (valid only for countries with defined service).</td></tr><tr><td>4</td><td>Bilateral settlement. (Mastercard Only)</td></tr><tr><td>8</td><td>National Net settlement service (valid only for countries with defined service).</td></tr><tr><td>9</td><td>BASEII selects the appropriate settlement service based on routing and country-defined default. (Visa Only)</td></tr></table>	Value	Description	0	International settlement service.	3	Clearing-only (valid only for countries with defined service).	4	Bilateral settlement. (Mastercard Only)	8	National Net settlement service (valid only for countries with defined service).	9	BASEII selects the appropriate settlement service based on routing and country-defined default. (Visa Only)
Value	Description													
0	International settlement service.													
3	Clearing-only (valid only for countries with defined service).													
4	Bilateral settlement. (Mastercard Only)													
8	National Net settlement service (valid only for countries with defined service).													
9	BASEII selects the appropriate settlement service based on routing and country-defined default. (Visa Only)													

Example

```
<SettlementIndicator>0</SettlementIndicator>
```

SettlementRecapID

Note: This sub-element only applies to Discover.

Example

```
<SettlementRecapID  
RecapDate="20240531" RecapNumber="092" SendingIIC="00000361641" ReceivingIIC="00000361603" CurrencyCode="GBP"/>SettlementRecapID
```

SchemeSettlementDate

The [SchemeSettlementDate](#) element describes the scheme first presentment settlement date in a financial advice or reversal. The data contained in this element is taken from the following data sources received from Mastercard and Visa:

- Mastercard - DE48 PDS0159 subfield 8
- Visa - TC90 header date

Description	BaseType	Constraints / Permitted Values
Date (UTC)	xs:string	Maximum 8 characters, date in the format: YYYYMMDD.

Example

```
<SchemeSettlementDate>20210125</SchemeSettlementDate>
```

Source

The [Source](#) element provides details of the source wallet account from which funds are taken.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
walletid	ID of the source wallet account.	bigint	Yes	0 to 2^64
basecurrency	Base currency of the source wallet account.	int	Yes	Currency in ISO 3-



Attribute	Description	Data Type	Required	Constraints / Permitted Values
				digit number format.
balancechange	Change in source wallet account balance amount.	decimal (19,4)	Yes	Precision = 19 digits, scale = 4 digits.
blockchange	Change in source wallet account blocked amount.	decimal (19,4)	Yes	Precision = 19 digits, scale = 4 digits.
newbalance	New source wallet account balance.	decimal (19,4)	Yes	Precision = 19 digits, scale = 4 digits.
newblock	New source wallet account blocked amount.	decimal (19,4)	Yes	Precision = 19 digits, scale = 4 digits.

Example

```
<Source walletid="879" basecurrency="978" balancechange="10.5000" blockchange="5.5000" newbalance="5.0000" newblock="10.0000"/>
```

Term

The [Term](#) element provides details of the terminal used in a POS card transaction.

Attribute	Description	Data Type	Required	Constraints/Permitted Values.
code	Card acceptor terminal ID (Mastercard DE 41 field). This is a unique code identifying a terminal at the card acceptor location.	<code>	Yes	See code
location	Defines the site where the terminal is located, either a branch code or a store name.	xs:string	Yes	Maximum 128 characters
street	Description of the terminal street location.	xs:string	Yes	Maximum 64 characters
city	City	xs:string	Yes	Maximum 64 characters
country	Country code - ISO code.	xs:string	Yes	Must be 2 Characters.
inputcapability	The primary capability of the terminal for entering card information.	<inputcapability>	No	See PDS0105
authcapability	This is the method available to verify the cardholder at this terminal.	<authcapability>	No	See authcapability

Example

```
<Term code="N376131"location="A BANK"street="A STREET"city="A CITY"
country="GB"inputcapability="5"authcapability="1"></Term>
```

Trace

The [Trace](#) element provides an audit number that can be used in combination with other elements to identify a transaction.



Attribute	Description	Data Type	Required	Constraints / Permitted Values
auditno	Card scheme System Trace Audit Number (STAN). The STAN is a 6 digit acquirer reference number between 000001 and 999999, generated sequentially by each acquirer. After reaching 999999 the acquirer repeats the STAN from 000001. The audit number remains unchanged for all messages within the life of the transaction (i.e. original and reversal). For partial reversals, a new Audit Number is required. Note: The STAN is typically only unique per Card Scheme network, per Acquirer, per day. Acquirers who process more than 1000000 transactions per day will repeat the STAN. Therefore, <code>auditno</code> cannot be used to provide a unique reference. Tip: You can use the <code>AuthId</code> element to uniquely identify a transaction.	xs:string	No	Alphanumeric, maximum 6 characters
origauditno	This is only populated if the containing record is a reversal, and represents information regarding the original transaction.	xs:string	No	Alphanumeric, maximum 6 characters
Retrefno	Retrieval Reference Number. Contains a document reference supplied by the system retaining the original source information (ATM acquirer) and is used to assist in locating that information or its copy	xs:string	Yes	Alphanumeric, maximum 12 characters

Example

```
<Trace auditno="1234"origauditno="345"Retrefno="AN1234"></Trace>
```

Txn

The `Txn` element describes how a transaction was validated and authenticated.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
cardholderpresent	Indicates whether the cardholder was present during the transaction.	<cardholderpresent>	No	See <code>cardholderpresent</code> .
cardpresent	Indicates whether the card was present during the transaction.	<cardpresent>	No	See <code>cardpresent</code> .
cardinputmethod	The method used to input the information from the card to the terminal.	<cardinputmethod>	No	See <code>cardinputmethod</code> .
cardauthmethod	The cardholder authentication	<cardauthmethod>	No	See <code>cardauthmethod</code> .



Attribute	Description	Data Type	Required	Constraints / Permitted Values
	method used in a card transaction.			
cardauthenticity	The component or person who verified the cardholder identity as reported in the cardauthmethod field.	<cardauthenticity>	No	See cardauthenticity .
TVR	Terminal Verification Results. This is the 10 hexadecimal characters representing the TVR 5 binary bytes. This field should only be interpreted for EMV transactions (Cardauthenticity and Cardinputmethod).	xs:unsigned Long	If applicable	This field is only present in financial advices if the Acquirer systems provide Chip data Default value is zero.
TTI	Three-digit Transaction Type Identifier (Mastercard DE 048, PDS 0043 field). This is populated whenever it is found in the source presentment data for a CardFinancial record. Not applicable to other record types.	<TTI>	No	This field can be used to support Mastercard QMR Reporting. For details of possible values, see the Mastercard IPM Clearing Formats manual,

Example

```
<Txn cardholderpresent="0"cardpresent="1"cardinputmethod="2"
cardauthmethod="3"cardauthenticity="3"TVR="0"TTI="C07"></Txn>
```

TxnAmt

The [TxnAmt](#) element describes a transaction amount (value and currency).

Attribute	Description	Data Type	Required	Constraints / Permitted Values
value	The value of the transaction amount.	xs:decimal	Yes	Decimal value.
currency	The transacted currency code.	xs:unsignedShort	Yes	3 digits.

Example

```
<TxnAmt value="10.00"currency="826"></TxnAmt>
```

TxnCode

The [TxnCode](#) element describes the transaction type and direction.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
direction	The direction of the transaction.	<Direction>	Yes	See direction
Type	Details of the type of transaction.	xs:string	Yes	Must be one of the following values



Attribute	Description	Data Type	Required	Constraints / Permitted Values															
				<table><tr><th>Value</th><th>Description</th></tr><tr><td>pos</td><td>Point of Sale transaction.</td></tr><tr><td>atm</td><td>Automated Teller Machine transaction (Cash Withdrawal/Advance)</td></tr><tr><td>pos_cb</td><td>Point of Sale transaction with cashback.</td></tr><tr><td>pos_re</td><td>Purchase refund.</td></tr><tr><td>fee</td><td>Fee collection. If direction is a debit the fee is a credit to the transaction originator. If the direction is a credit then the fee is a debit to the transaction originator.</td></tr><tr><td>tfr</td><td>Cardholder funds transfer.</td></tr></table>	Value	Description	pos	Point of Sale transaction.	atm	Automated Teller Machine transaction (Cash Withdrawal/Advance)	pos_cb	Point of Sale transaction with cashback.	pos_re	Purchase refund.	fee	Fee collection. If direction is a debit the fee is a credit to the transaction originator. If the direction is a credit then the fee is a debit to the transaction originator.	tfr	Cardholder funds transfer.	
				Value	Description														
				pos	Point of Sale transaction.														
				atm	Automated Teller Machine transaction (Cash Withdrawal/Advance)														
				pos_cb	Point of Sale transaction with cashback.														
				pos_re	Purchase refund.														
				fee	Fee collection. If direction is a debit the fee is a credit to the transaction originator. If the direction is a credit then the fee is a debit to the transaction originator.														
tfr	Cardholder funds transfer.																		
Group	The summary group type of the transaction.	<Group>	Yes	See Group .															
ProcCode	The first two digits of the Processing Code + the two digits of the AccountType + Two digits of the Destination Account. See Processing Codes .	xs:string	If applicable	For example: "000000", "003000", "010000" Note: "390000" is used to identify an Account Verification transaction.															
Partial	If a fee was charged, indicates whether the fee was partial.	xs:string	If applicable	Default:"NA"															
FeeWaivedOff	If a fee was charged and the fee was partial, shows the amount of the fee that was not charged.	xs:decimal	If applicable	Default:0															

Example

```
<TxnCode direction="debit"Type="atm"Group="atm"ProcCode="000000"></TxnCode>
```

UniqueTransactionReference

Note: This sub-element only applies to Discover.

Example

```
<UniqueTransactionReference>073679876543210</TxnCode>
```

Usage

The [Usage](#) element indicates whether the Chargeback was credited to a card.



Description	Data Type	Constraints / Permitted Values
Indicates whether the Chargeback is manually credited to card.	xs:string	Maximum 1-character. Possible values are:

Example

```
<Usage>1</Usage>
```

3.1.2 Attributes

Attributes are listed below in alphabetical order.

approved	cardauthentity	cardpresent	domesticMaestro	MCC
authcapability	cardauthmethod	code	Group	PAN
cardholderpresent	cardinputmethod	direction	inputcapability	PDS0105

approved

The [approved](#) attribute describes whether a transaction was approved.

Permitted Value	Description	Data Type
yes	Approved	xs:string
no	Not Approved	xs:string

Example

```
approved="yes"
```

authcapability

The [authcapability](#) attribute describes the capabilities of the terminal.

Permitted Value	Description	Data Type
0	No electronic authentication	xs:string
1	PIN	xs:string
2	Electronic Signature Analysis	xs:string
3	Biometrics	xs:string



Permitted Value	Description	Data Type
4	Biographs	xs:string
5	Manual signature verification	xs:string
6	Manual other	xs:string
7	Offline PIN	xs:string
8	Online PIN	xs:string
9	3D-Secure	xs:string
10	Account based digital signature	xs:string
11	Public key based digital signature	xs:string
12	Unknown	xs:string
13	RFU	xs:string
14	RFU	xs:string
15	RFU	xs:string
16	RFU	xs:string
17	RFU	xs:string
18	RFU	xs:string
19	RFU	xs:string

Example

```
authcapability="1"
```

cardholderpresent

The [cardholderpresent](#) attribute describes whether a cardholder was present during a transaction.

Permitted Value	Description	Data Type
0	Cardholder present	xs:string
1	Not present, unspecified	xs:string
2	Not present, mail order	xs:string
3	Not present, telephone	xs:string
4	Not present, standing authorisation	xs:string
5	Not present, electronic order	xs:string



Permitted Value	Description	Data Type
6	Not present, instalment transaction	xs:string
8		
9	Unknown	xs:string
Empty	Empty to enable Null value support	xs:string

Example

```
cardholderpresent="3"
```

cardauthenticity

The [cardauthenticity](#) attribute describes the entity that authenticated the cardholder.

Permitted Value	Description	Data Type
0	Not Authenticated	xs:string
1	Integrated Chip Card	xs:string
2	ISO10202 = Terminal	xs:string
3	Authorising Agent	xs:string
4	Merchant	xs:string
5	Other	xs:string
6	Cardholder device	xs:string
7	Wallet Provider / Token Requestor	xs:string
8	Unknown	xs:string

Example

```
cardauthenticity="8"
```

cardauthmethod

The [cardauthmethod](#) attribute describes the authentication method used in a card transaction.

Permitted Value	Description	Data Type
0	Not authenticated	xs:string
1	PIN	xs:string
2	electronic signature analysis	xs:string



Permitted Value	Description	Data Type
3	Biometrics	xs:string
4	Biographic	xs:string
5	Manual Signature Verification	xs:string
6	Manual Other (e.g. Licence)	xs:string
7	Other	xs:string
8	Unknown	xs:string
9	Passcode/Password (e.g mobile phone unlock code, or One-Time-Passcode sent to cardholder)	xs:string
A	Pattern (e.g. mobile phone device unlock pattern)	xs:string
B	Possession of hardware device (eg phone, number generating keyfob)	xs:string
C	As 'B' but additionally with user verification	xs:string
D	Possession of software application (e.g. passcode generating program)	xs:string
E	As 'D' but additionally with user verification	xs:string
S	3D-secure cardholder authentication	xs:string

Example

```
cardauthmethod="1"
```

cardinputmethod

The [cardinputmethod](#) attribute describes the method used to input the card data (e.g.,PAN) into the point of sale terminal.

Permitted Value	Description	Data Type
0	unspecified	xs:string
1	manual, no terminal	xs:string
2	magnetic stripe read	xs:string
3	bar code	xs:string
4	OCR	xs:string
5	integrated circuit card (ICC)	xs:string
6	key entered	xs:string
7	contactless ICC	xs:string
C	E-Commerce with channel encryption and chip cryptogram used	xs:string



Permitted Value	Description	Data Type
E	Contactless magnetic stripe	xs:string
F	Account Data on file	xs:string
G	Key entered by acquirer	xs:string
M	MICR reader	xs:string
P	Mobile banking application	xs:string
Q	QR code	xs:string
V	E-Commerce	xs:string
W	DPAN	xs:string
Empty	Empty to enable Null value support	xs:string

Example

```
cardinputmethod="5"
```

cardpresent

The [cardpresent](#) attribute indicates whether a card was present during a transaction.

Permitted Value	Description	Data Type
0	Card not present	xs:string
1	Card present	xs:string
9	Unknown	xs:string
Empty	Empty to enable Null value support	xs:string

Example

```
cardpresent="1"
```

code

The [Code](#) attribute describes the card acceptor terminal ID (Mastercard DE 41 field). This is a unique code identifying a terminal at the card acceptor location.

Description	Base Data Type	Constraints / Permitted Values
Terminal Code	xs:string	Maximum 8 Characters

Example

```
code="12345678"
```



direction

The [Direction](#) attribute describes the direction of a cash movement.

Permitted Value	Description	Data Type
credit	Describes a credit transaction.	xs:string
debit	Describes a debit transaction.	xs:string

Example

```
direction="debit"
```

domesticMaestro

The [domesticMaestro](#) attribute indicates whether a transaction originates from a Domestic Maestro card.

Permitted Value	Description	Data Type
yes	Used to indicate that the transaction originates from a domestic Maestro card.	xs:string
no	Used to indicate that the transaction does not originate from a domestic Maestro card.	xs:string

Example

```
domesticMaestro="yes"
```

Group

The [Group](#) attribute describes the high-level transaction type.

Permitted Value	Description	Data Type
pos	Point of Sale Transactions (including reversals).	xs:string
atm	Automated Teller Machine transactions (including reversals).	xs:string
fee	Fees.	xs:string

Example

```
Group="atm"
```

inputcapability

The [inputcapability](#) attribute describes the card input capability.

Permitted Value	Description	Data Type
0	Unknown	xs:string
1	Manual - no Location	xs:string



Permitted Value	Description	Data Type
2	Magnetic Stripe Read	xs:string
3	Bar Code	xs:string
4	OCR	xs:string
5	EMV contact	xs:string
6	Key Entered	xs:string
7	Contactless Magnetic Stripe	xs:string
8	EMV contactless	xs:string
9	Account Data on file	xs:string
10	QR code	xs:string
11	E-Commerce	xs:string
12	E-Commerce with EMV cryptogram	xs:string
13	MICR reader	xs:string
14	Mobile Banking	xs:string
15	RFU	xs:string
16	RFU	xs:string
17	RFU	xs:string
18	RFU	xs:string
19	RFU	xs:string

Example

```
inputcapability="6"
```

MCC

The [MCC](#) attribute describes the Merchant Category Code (MCC).

Description	Base Data Type	Constraints / Permitted Values
Merchant category code.	xs:string	Maximum 4 characters. Permissible values as per Mastercard Global Rules for Merchant Classification Codes.

Example

```
MCC="5921"
```



PAN

The [PAN](#) attribute contains the Primary Account Number if you are PCI DSS Compliant or otherwise the [Thredd 16-digit public token](#).

Description	Base Data Type	Constraints / Permitted Values
PAN (Primary Account Number).	xs:string	Minimum 14 characters, maximum 19 characters

Example

```
PAN="1234567812345678"
```

Thredd 16-digit public token

The format of the 16-digit Thredd public token is as follows:

xxxYYYYYYYYzzzz

where:

- xxx – is the 3 digits derived from the Thredd internal scheme ID
- YYYYYYYYY – is the 9-digit Thredd public token
- zzzz – is the last 4 digits of the card's PAN

PDS0105

The [PDS0105](#) attribute describes the name of the financial advice file received from Mastercard.

Description	Base Data Type	Constraints / Permitted Values
File_ID_PDS0105	xs:string	Format as follows : “T112.001” + “YYMMDD” + “00000012181” + XXYZZ Where XX = Clearing cycle indicator Y = delivery cycle ZZ = file number in the given clearing cycle



SECTION 4: APPENDICES

This section contains a list of appendices.



4.1 Appendices

Refer to the table below for details of available appendices:

#	Appendix	Description
4.2	Card Status Codes	Lists the possible card status codes or the status of a payment token.
4.3	FeeClass Element	Details of the FeeClass element.
4.6	Message Reason Codes	List of message reason codes.
4.7	Payment Token Fields	Provides details of possible values for the fields which hold payment token information.
4.8	Load Sources	Provides details of possible values for the source of a Load or Unload request.
4.9	Transaction XML Example	Provides an example of a transaction XML file.
4.10	Transaction XML Schema.	Provides a description of the transaction XML schema.



4.2 Card Status Codes

This section lists the possible card status codes. These are status codes that you can set for card via web services, Smart Client, or Thredd Portal. They are also used to indicate the status of a payment token.

Status Code	Description
00	All Good. Indicates that the card is good for use, but does not indicate whether it is active.
01	Refer to card issuer
02	Card not yet activated
04	Capture card
05	Do not honour
14	Invalid card. If you receive this status, it indicates that this card does not exist on the Thredd system and was used for a fraudulent transaction.
41	Lost card
43	Stolen card
46	Closed Account
54	Expired card
57	Transaction not permitted to cardholder
59	Suspected Fraud
62	Restricted card
63	Security violation
70	Cardholder to contact issuer
75	Allowable number of PIN tries exceeded
83	Card destroyed
98	Refund given to customer
99	Card voided
G1	A short-term block which temporarily blocks card usage for all card transactions (excluding credits and refunds) for a short period.
G2	Short-term full block (all transactions are blocked).
G3	Long-term block (excluding credits and refunds).
G4	Long-term full block (all transactions are blocked).
G5	Thredd Protect: A short-term block which temporarily blocks card usage for all card transactions (excluding credits and refunds) for a short period.



Status Code	Description
G6	Thredd Protect: Short-term full block (all transactions are blocked).
G7	Thredd Protect: Long-term block (excluding credits and refunds).
G8	Thredd Protect: Long-term full block (all transactions are blocked).
G9	IVR Lost/Stolen block. Non-reversible status, equivalent to status code 41.



4.3 FeeClass Element

Code	Description	Fee Category
0	This value must be used when the FeeClass “type” attribute is 0, 2, 4 or 5. This is when it is a settlement fee.	Settlement Fee
1	For Card Financial Fee Class element record, The “code” attribute always has a value of “1”	Settlement Fee
1000	Cash	Card transaction
1010	Sale/sale with tip	Card transaction
1020	Sale with cashback	Card transaction
1030	Declined transaction	Card transaction
1040	Other transaction (e.g. PIN change)	Card transaction
1060	Currency exchange mark-up percentage	Card transaction
1061	Foreign exchange due to markup on network rate	Card transaction
1062	Currency exchange rate mark-up percentage for authorisation padding	Card transaction
1063	Currency Conversion Assessment(CCA)	Card transaction
1100	Retail club out-of-club fee	Card transaction
2010	Card issue	Card production
2011	Card reissue (renewal)	Card production
2012	Damaged card replacement	Card production
2013	Lost/stolen card replacement	Card production
2014	Card restriction	Card production
2015	Changing card limit	Card production
2016	Authorisation override	Card production
2110	PIN issue	Card production
2111	PIN reissue (new PIN)	Card production
2112	PIN reminder (same PIN)	Card production
2300	Card value load	Card operation
2301	Card activation	Card operation
2302	Status change	Card operation
2303	Balance enquiry	Card operation



Code	Description	Fee Category
2304	Account enquiry	Card operation
2306	Card transfer	Card operation
2307	Card value unload	Card operation
2308	Cardholder registration	Card operation
2309	Card value unload and status change	Card operation
2310	Cardholder details update	Card operation
2311	Set PIN real-time	Card operation
2312	Get PIN real-time	Card operation
2313	Change PIN real-time	Card operation
2314	Generate and Get PIN real-time	Card operation
2320	SMS miscellaneous service fee	Card operation
2401	Card dormancy	Card management
2402	Card management	Card management
2441	Card expiry breakage	Card management
2442	Card lost/stolen breakage	Card management
2443	Account end-of-life breakage	Card management
6000	Non-Domestic Fee	Card transaction





4.4 Message Reason Codes

Reason Codes vary depending upon the transaction type (Domestic Maestro/MasterCard International), and the record type involved. The following tables describe all available values.

4.4.1 Domestic Maestro Reason Codes

The table below defines the Message Reason Codes ([ReasonCode](#)) for the UK Domestic Maestro.

Record Type	Code	Meaning
<CardFinancial>	1400	Not previously authorised
<CardFinancial>	1401	Previously approved authorization where the amount is the same
<CardFinancial>	1402	Previously approved authorization where the amount differs
<CardFinancial>	1403	Previously approved authorization where there is a partial amount and multi-clearing
<CardFinancial>	1404	Previously approved authorization where there is a partial amount and final clearing
<CardFee>	7601	Recovered card award fee for the collection of reward for a card acceptor, or financial institution employee when a card has been recovered
<CardFee>	7604	Emergency card replacement fee for the collection of fees associated with the Emergency Card Replacement
<CardFee>	7777	Merchant Funds Transfer for a transfer of funds between an acquirer and a merchant's bank on behalf of a merchant

4.4.2 Mastercard International Reason Codes

The table below defines the Message Reason Codes ([ReasonCode](#)) for MasterCard International.

Record Type	Code	Meaning
<CardFinancial>	1400	Not previously authorised
<CardFinancial>	1401	Previously approved authorization where the amount is the same
<CardFinancial>	1402	Previously approved authorization where the amount differs
<CardFinancial>	1403	Previously approved authorization where there is a partial amount and multi-clearing
<CardFinancial>	1404	Previously approved authorization where there is partial amount and final clearing
Representments/Reversals	2000	General or invalid chargeback
Representments/Reversals	2001	Invalid Acquirer Reference Data on chargeback; no documentation required or provided
Representments/Reversals	2002	Non receipt of required documentation to support chargeback
Representments/Reversals	2003	Correct transaction date provided
Representments/Reversals	2004	Invalid Acquirer Reference Data on chargeback; documentation was received



Record Type	Code	Meaning
Representments/Reversals	2005	Correct card acceptor location/description provided
Representments/Reversals	2008	Issuer authorised transaction
Representments/Reversals	2011	Credit previously issued
Representments/Reversals	2700	Chargeback remedied (see corresponding documentation)
Representments/Reversals	2701	Duplicate chargeback
Representments/Reversals	2702	Past chargeback time limit
Representments/Reversals	2703	Requested transaction document provided (requires hardship variance)
Representments/Reversals	2704	Invalid merchant message text
Representments/Reversals	2705	Correct MCC provided
Representments/Reversals	2706	Authorisation advised suspicious
Representments/Reversals	2707	No authorization request required nor attempted
Representments/Reversals	2708	Account was not listed on the applicable warning bulletin as of the transaction date
Representments/Reversals	2709	Documentation received was illegible
Representments/Reversals	2710	Documentation received was invalid/incomplete
Representments/Reversals	2711	Missing documentation is being supplied Reserved for UK domestic use
Representments/Reversals	2712	Other than required/requested documentation provided Reserved for UK domestic use
Representments/Reversals	2713	Invalid Chargeback
Representments/Reversals	2870	Chip Liability Shift Reserved for intra-European use only
Chargebacks / Reversals	4515	Cardholder Denies
Chargebacks / Reversals	4522	Authorisation Declined
Chargebacks / Reversals	4801	Requested transaction data was not received
Chargebacks / Reversals	4802	Requested information illegible or missing
Chargebacks / Reversals	4804	Multiple Processing, Duplicate
Chargebacks / Reversals	4807	Warning bulletin
Chargebacks / Reversals	4808	Requested/required authorization not obtained
Chargebacks / Reversals	4809	Transaction Not Reconciled



Record Type	Code	Meaning
Chargebacks / Reversals	4812	Account number was not on file
Chargebacks / Reversals	4831	Transaction amount differs
Chargebacks / Reversals	4834	Duplicate processing
Chargebacks / Reversals	4835	Card not valid or expired
Chargebacks / Reversals	4837	Fraudulent transaction; no cardholder authorization
Chargebacks / Reversals	4840	Fraudulent processing of transaction
Chargebacks / Reversals	4841	Canceled recurring transaction
Chargebacks / Reversals	4842	Late presentment
Chargebacks / Reversals	4846	Correct transaction currency code was not provided
Chargebacks / Reversals	4847	Fraudulent transaction; exceeds floor limit and not authorized
Chargebacks / Reversals	4849	Questionable card acceptor activity
Chargebacks / Reversals	4850	Credit posted as purchase
Chargebacks / Reversals	4853	Cardholder Dispute Defective/Not as Described
Chargebacks / Reversals	4854	Cardholder dispute not elsewhere classified (U.S. only)
Chargebacks / Reversals	4855	Non receipt of merchandise
Chargebacks / Reversals	4857	Card-activated phone transaction
Chargebacks / Reversals	4859	Services not rendered
Chargebacks / Reversals	4860	Credit not processed
Chargebacks / Reversals	4862	Counterfeit transaction; magnetic strip POI fraud
Chargebacks / Reversals	4863	Cardholder does not recognize(potential fraud) Not valid for domestic UK transactions
Chargebacks / Reversals	4870	Chip Liability Shift Reserved for intra-European use
Chargebacks / Reversals	4900	General and invalid second presentment. Second Presentment did not remedy First Chargeback
Chargebacks / Reversals	4901	Required documentation not received to support prior Second Presentment
Chargebacks / Reversals	4902	Documentation received was illegible
Chargebacks / Reversals	4903	Documentation received was invalid/incomplete
Chargebacks / Reversals	4905	Invalid Acquirer Reference Data in Second Presentment. Documentation was received or was not required



Record Type	Code	Meaning
Chargebacks / Reversals	4906	Missing documentation is being supplied
Chargebacks / Reversals	4907	Other than required/requested documentation provided Reserved for UK Domestic use
Chargebacks / Reversals	4908	Invalid Acquirer Reference Data in Second Presentment, Documentation was received.
Chargebacks / Reversals	4999	Domestic Chargeback Dispute Reserved for intra-European use
<CardFee>	7600	Lost/stolen telex/phone fee. This is for the collection of stolen report fee and phone or telex costs incurred for taking a lost or stolen card report
<CardFee>	7601	Recovered card award fee. This is for the collection of reward for a card acceptor or financial institution employee when a card ahs been recovered
<CardFee>	7602	Emergency cash disbursement fee. This is for the collection of fees associated with the handling of emergency cash disbursements to cardholders. Not valid for intra-European transactions
<CardFee>	7603	Compliance ruling settlement. This is for the collection of a compliance ruling settlement amount
<CardFee>	7604	Emergency card replacement fee. This is for the collection of fees associated with the Emergency Card Replacement Service (ECR)
<CardFee>	7605	Warning bulletin handling fee-issuer originated. This is for the settlement of warning bulletin handling fees in accordance with MasterCard operating rules
<CardFee>	7606	Good faith acceptance settlement. This is for settlement of the amount of a good faith acceptance
<CardFee>	7607	Collection letter handling fee. This is for settlement of the amount of a collection letter acceptance
<CardFee>	7608	Telex authorization fee. This is for collection of fees associated with an international telex authorisation
<CardFee>	7610	Investigation fee. This is for fee collection when an investigation report has been completed by an investigating member on behalf of the requesting member.
<CardFee>	7611	Retrieval fee reversal. This is for issuer-originate, and is used to reverse a retrieval request fulfillment fee for documents never received or invalid documents. Note: An issuer would use this code in response to receiving an invalid message from an acquirer containing code 7614,
<CardFee>	7612	Retrieval handling fee; issuer-originated. This is used to penalize an acquirer for incorrect information verified by the retrieval request document.
<CardFee>	7614	Non-MasterCom fulfillment fee settlement. This is for settlement of retrieval request fulfillment not processed through the MasterCom system
<CardFee>	7616	Warning bulletin handling fee (acquirer originated). This is for settlement of warning bulletin handling fees in accordance with MasterCard operating rules. OR Handling fee for second presentment of reason codes 4812 and 4835 for chip transactions where transaction certificate and DE 55 are present in the clearing



Record Type	Code	Meaning
		message. Acquirer originated.
<CardFee>	7617	Adjustment for promotional transactions
<CardFee>	7618	Reversal of previously reimbursed State Fuel Tax. Refer to the MasterCard Government Card Service Guide. Not valid for intra-European transactions
<CardFee>	7619	Emergency card replacement center, cash advance lockbox fee. Not valid for intra-European transactions
<CardFee>	7621	ATM Balance Inquiry Fee
<CardFee>	7622	Handling Fee for Authorisation Related Chargebacks (4807, 4808 and 4847). This is for issuer use in a Fee Collection (Handling Fee) message after sending First Chargeback for one of the specified authorization related chargebacks. Not valid for intra-European transactions
<CardFee>	7623	Handling Fee for Authorisation Related Chargebacks (4807, 4808 and 4847). This is for issuer use in a Fee Collection (Handling Fee) message after sending Second Presentment, which indicates that the transaction was authorized. Not valid for intra-European transactions
<CardFee>	7624	Handling Fee for Authorisation Related Chargebacks (4807, 4808 and 4847). This is for issuer use in a Fee Collection (Handling Fee) message after sending Arbitration Chargeback for one of the specified authorization related chargebacks. Not valid for intra-European transactions
<CardFee>	7625	PIN management Service at ATM For intra-European use only.
<CardFee>	7626	Authorisation reversal. This is for acquirer use to advise the issuer of an authorization that needs to be reversed
<CardFee>	7627	Failure to provide a merchant advice code in a Fee Collection (Handling Fee) message.
<CardFee>	7628	Reclaim surcharge. This is restricted to intra-European and European transaction-related services.
<CardFee>	7640 to 7649	Funds Transfer Service. This is for fee collection use cases, enabling better identification and processing of fee collection transactions.
<CardFee>	7680	Installments - Merchant fee for single purchase.
<CardFee>	7681	Installments - Merchant fee for aggregated purchases.
<CardFee>	7700	Intracurrency agreement settlement; for settlement of amounts in accordance with an intracurrency agreement between transaction originator and transaction destination parties. Not valid for intra-European transactions
<CardFee>	7500 to 7779	Bilateral agreement settlement. This is for settlement amounts in accordance with a bilateral agreement between transaction originator and transaction destination parties.



Record Type	Code	Meaning
<CardFee>	7780 to 7781	Bilateral agreement settlement. This is for settlement amounts in accordance with a bilateral agreement between transaction originator and transaction destination parties.
<CardFee>	7782 to 7789	Bilateral agreement settlement. This is for settlement amounts in accordance with a bilateral agreement between transaction originator and transaction destination parties.
<CardFee>	7790 to 7799	Bilateral agreement settlement. This is for settlement amounts in accordance with a bilateral agreement between transaction originator and transaction destination parties.
<CardFee>	7800	MCBS member settlement; for collection or payment of such things as member assessments, processed through the MasterCard Consolidated Billing System (MCSB). Not valid for intra-European transactions.
<CardFee>	7801	MasterCard compliance case filling fee. This is for collection of a member arbitration or compliance case filling fee.
<CardFee>	7802	Interchange compliance adjustment. This is for settlement of financial amounts related to interchange compliance.
<CardFee>	7803	Interchange compliance adjustment reversal. This is for settlement of financial amounts related to the reversal of a previous interchange compliance adjustment.
<CardFee>	7804	ATM transaction settlement; for settlement of daily ATM transaction amounts.
<CardFee>	7805	ATM intracountry switch fee settlement. This is for settlement of daily ATM transaction intracountry switch fees. Not valid for intra-European transactions.
<CardFee>	7806	ATM Network Information Control System (NICS) switch fee settlement. This is for settlement of MDS NICS Switch fees. Not valid for intra-European transactions
<CardFee>	7807	ATM intracountry first chargeback settlement; for settlement of daily ATM transaction intracountry first chargeback amounts. Not valid for intra-European transactions
<CardFee>	7811	Reimbursement of State Fuel Tax. Refer to the MasterCard Government Card Services Guided. Not valid for intra-European transactions
<CardFee>	7812	Collection of return of collateral for security arrangement. Not valid for intra-European transactions
<CardFee>	7813	Mexico IVA fees Not valid for intra-European transactions
<CardFee>	7814	Mexico IVA Fees Not valid for intra-European transactions
<CardFee>	7815	Mexico IVA fees. Not valid for intra-European transactions
<CardFee>	7820	Disaster Relief Fund



Record Type	Code	Meaning
		Not valid for intra-European transactions
<CardFee>	7821	MCBS Emergency Borrowing Collection. Not valid for intra-European transactions
<CardFee>	7822	Settlement Adjustment. Not valid for intra-European transactions
<CardFee>	7823	MDS Offline Debit Settlement Not valid for intra-European transactions MDS feed via Settlement Account Management system (S.A.M.)

4.4.3 Visa Dispute Reason Codes

The table below lists relevant Dispute (Chargeback/reversal) reason codes received in the Visa Clearing message. Thredd maps some Visa dispute reason codes to their Mastercard equivalents. For more information on Visa Clearing message reason codes, refer to the *VisaNet Base II Message Specifications* available at <https://www.visaonline.com/>.

Record Type	Code	Meaning
Chargebacks / Reversals	10	Fraud: 10.1. EMV Liability Shift Counterfeit Fraud 10.2. EMV Liability Shift Non-Counterfeit Fraud 10.3. Other Fraud: Card-Present Environment / Condition 10.4. Other Fraud: Card-absent Environment / Condition 10.5. Visa Fraud Monitoring Program
Chargebacks / Reversals	11	Authorisation: 11.1. Card Recovery Bulletin 11.2. Declined Authorisation 11.3. No Authorisation
Chargebacks / Reversals	12	Processing errors: 12.1. Late Presentment 12.2. Incorrect Transaction Code 12.3. Incorrect Currency 12.4. Incorrect Account Number 12.5. Incorrect Amount 12.6.1. Duplicate Processing 12.6.2. Paid by Other Means 12.7. Invalid Data
Chargebacks / Reversals	13	Consumer disputes: 13.1. Merchandise / Services Not Received 13.2. Cancelled Recurring Transaction 13.3. Not as Described or Defective Merchandise / Services 13.4. Counterfeit Merchandise 13.5. Misrepresentation 13.6. Credit Not Processed 13.7. Cancelled Merchandise / Services 13.8. Original Credit Transaction Not Accepted 13.9. Non-Receipt of Cash or Load Transaction Value at ATM



Tip: The following website provides more details on the above Visa Dispute codes: <https://chargebacks911.com/chargeback-reason-codes/visa/>





4.5 Payment Token Fields

This section provides details of the fields which hold payment token information.

4.5.1 activationmethod

Describes the method used to activate the payment token. The table below describes the valid options and the content for each method.

PaymentToken_activationMethod	Description	Content included
0	None	Empty
1	SMS to mobile	Mobile phone number held on Thredd for the cardholder
2	Email	Email address held on Thredd for the cardholder
3	Cardholder to call automated call centre	Call centre number
4	Cardholder to call normal call centre	Call centre number
5	Website	Website URL
6	Mobile application	Mobile application reference
7	Cardholder will receive a voice call	Mobile phone number held on Thredd for the cardholder

4.5.2 devicetype

Describes the type of device the payment token is installed on. Below is a list of possible values.

PaymentToken_deviceType	Description
A	Clothing or apparel
B	Media or gaming device(e.g., Xbox, TV, set-top box)
C	Card
E	Mini-card. A physical card of reduced dimensions (height and width) which is smaller than the standard ID-1 card size (See ISO 7810 for the ID-1 standard.)
D	Domestic application (e.g., fridge, washing machine)
F	Fob or key fob
G	Mobile tag, case or sleeve
H	Fashion accessory (e.g., handbag, glasses)
J	Jewelry (e.g., necklace, rings, bracelets). For Visa Contactless devices, this implies any wrist-worn device (including watches and wristbands.)
M	Mobile phone



PaymentToken_deviceType	Description
N	Non-Card. This originates from Visa Contactless devices, where it indicates anything except: Card (C), Mini-Card (E), Mobile Phone (M) or Wrist-worn device (J).
P	Personal computer or laptop
R	Wristband
S	Sticker
T	Tablet
U	Unknown
V	Vehicle
W	Watch
X	Mobile phone or tablet
other	Ask Thredd for any additional values

4.5.3 type

Describes the type of payment token. Below is a list of possible values.

PaymentToken_type	Description
BW	Browser accessible Wallet
C	Contactless device PAN
CF	Card on File PAN
CL	Cloud-based payments PAN
P	Real PAN
SE	Secure Element PAN
U	Unknown (other PAN mapping not otherwise defined)
V	Virtual PAN

4.5.4 creatorstatus

Describes the status of the payment token on the token creator's system. Below is a list of possible values.

Note: Thredd receive this value from the token creator's system.



PaymentToken_creatorStatus	Description	Is this status reversible?
A	Active	Yes
D	Deleted on cardholder device	No
I	Inactive	Yes
N	Not tokenised	Yes
S	Suspended	Yes
X	Deactivated	No

4.5.5 wallet

Describes the type of eWallet the payment token belongs to. Below is a list of possible values.

PaymentToken_wallet	Description
ADYEN	Adyen (Gateway TSP)
AMAZON	Amazon
ANDROID	Google Pay Wallet (known before 20/2/2018 as “Android Pay Wallet”)
APPLE	Apple Pay Wallet
ASIA	Asia Pay
CHUNGHWA	Chungwa
FITBIT	Fitbit Pay Wallet
GARMIN	Garmin Pay
LGPAY	LG Electronics
MASTERPASS	MasterPass from Mastercard
MICROSOFT	Microsoft
MRCHTOKEN	Merchant Tokenisation Program
MTBLANC	Montblanc Pay
PAYNETPHYR	Phyre
RELIANCE	Reliance
SAMA	Saudi Arabia Monetary Authority
SAMSUNG	Samsung Pay Wallet
SECURECO	SecureCo



PaymentToken_wallet	Description
STOCARD	Stocard Pay Wallet
VISA_DCA	Visa Digital Commerce App
VISACKOUT	Visa Checkout
WORLDPAY	WorldPay
other	Ask Thredd for any additional wallets



4.6 Processing Codes

The Processing code ([ProcCode](#)) is a 6 digit field made up of:

- 2 characters transaction code. See [Transaction Codes](#).
- 2 characters source account type code. See [Account Type Codes](#).
- 2 characters destination account type code. See [Account Type Codes](#).

For transactions initiated via web services or the Cards API, the processing code is formed of:

- 3 digits load source supplied in the request
- 3 digits “999”

4.6.1 Transaction Codes

The first two characters of the processing code is the transaction code as follows:

Value	Description	Impacts Balance
00	Debits (goods and services)	Yes
01	Debits (for ATM withdrawals, or for cash disbursements using Maestro cards)	Yes
02	Adjustment Credits	Yes
09	Debits (goods with cash back)	Yes
10	Account Funding	Yes
11	Quasi-Cash (e.g., gambling chips, money order, wire-transfer)	Yes
12	Debits (for cash advances)	Yes
17	Debits (for cash advances)	Yes
18	Unique Transaction (requires unique MCC)	Yes
19	Debit Adjustments	Yes
20	Credits (for refund)	Yes
21	Credits (for deposit)	Yes
22	Credits (Card Load)	Yes
23	Debits (Card Unload_	Yes
26	Original Credits	Yes
28	Credits (for payment transaction)	Yes
30	Balance inquiry service	No
32	Visa Tokenisation (Tokenisation Eligibility). Only used by Visa.	No
33	MDES / Visa Tokenisation (Tokenisation Authorisation)	No



Value	Description	Impacts Balance
34	MDES/ Visa Tokenisation (Activation Code Notification)	No
35	MDES / Visa Tokenisation (Tokenisation Complete Notification)	No
36	MDES / Visa Tokenisation (Token Event Notification. See the 'Message_Source' field for which system originated the Token Event. See the 'Message_Why' field for the Token Event that occurred.	No
37	Visa Tokenisation. Get Supported Cardholder Authentication Methods (for Approve with Authentication). Only used by Visa.	No
38	Visa Tokenisation (Device Binding). Only used by Visa.	No
39	Indicates an Account Verification transaction.	No
70	PIN change	No
71	Card Data File Action (eg new PAN or expdate)	No
72	PIN unblock	No
91	PIN unblock	No
92	PIN change	No

4.6.2 Account Type Codes

The 3rd & 4th digits in Processing code is the Source account type code.
The 5th and 6th digits in Processing code is the Destination account type code.
Both codes are from the following list of account type codes (based on [ISO 8583:2003 Account Type Codes](#)).

Value	Description
00	Default Account (not specified or not applicable)
10	Savings Account
20	Cheque Account
30	Credit Card Account
38	Credit Line Account
39	Corporate Account
40	Universal Account
50	Money Market Investment Account
58	IRA Investment Account
60	Stored Value Account



Value	Description
90	Revolving Loan Account
91	Instalment Loan Account
92	Real Estate Loan Account



4.7 Load Sources

Refer to the table below for a list of load sources available for the <LoadSource> field.

Source	Description
1	POS standard
2	Thredd Kiosk
3	Thredd Web Site
4	Card Processor
5	Standard Web Service
6	Agent
7	Head Office
8	Call Centre
9	Customer Website
10	Wirecard (no longer used)
11	Customer kiosk
12	Customer mobile app
13	Thredd IVR
14	Unknown
16	Load From Card Request File
17	Corporate
18	epay
19	HOCA Verifiable
20	Post Office
21	HOCA Non Verifiable
22	Paypoint
23	DXB POS Reload
24	TCC Web Report
25	TCC Online
26	VIRGIN POS Reload
27	TCC POS Reload



Source	Description
28	TCC Promotion
29	DXB Zero Load
30	AlFardan Reload
31	UAEx Reload
32	AlAnsari Reload
33	14 day Cool Off
34	Unload to Repatriate
35	Loan Repayment
36	DXB Online
37	Payzone
38	VIRGIN Zero Load
39	VIRGIN POS standard
40	JADE Web Report
41	JADE POS standard
42	JADE POS Reload
43	JADE Zero Load
44	Wirecard-Cadooz
45	Crunch POS Standard
46	CRUNCH POS Reload
47	Unload Fee Test
48	Balance Transfer Fee Test
49	Sofort Banking
50	Wirecard e-commerce
51	UAExAirport POS Standard
52	UAExAirport Reload
53	Cadooz Load
54	Cadooz Reload
55	Cadooz web unload



Source	Description
56	Sofort Bank Transfer Load
57	Billpay Payment
60	Post Office and Paypoint
61	Credit Limit
62	Credit Card Payment
63	Ukash Payment
64	Bank Transfer
65	Giropay
66	Sofortüberweisung
67	Debit Card
68	Primary Card
74	Master Virtual Card
75	Micropayment
76	MVC Load
77	iMVC Load
78	P2P Transfer
79	Auto-transfer from Primary Card
91	Incoming SEPA Transfers
92	Incoming Direct Debit
93	Outgoing Sepa Transfers
94	Outgoing Direct Debit
95	Voucher
96	Cash Incentive Rewards
97	Entercash
98	Payvision
101	La Banque Postale
102	Loyalty Programme
103	KYC Upgrade_Grp Chng



Source	Description
106	First Load from MVC
107	Cash Deposit
108	International Bank Transfer
109	Balance Transfer - Mtel
110	Balance Transfer - Phyre
111	Balance Transfer - CashTerminal
112	Balance Transfer - Payoo



4.8 Transaction XML Example

Below is an example of a transaction XML report. For a description of the XML schema, see [Transaction XML Schema](#).

```
<?xml version="1.0" encoding="utf-8"?>
<Transactions>
  <!-- Visa Accepted Auth on Multi-FX wallet card-->
  <CardAuthorisation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <RecType>ADV</RecType>
    <AuthId>6459161819</AuthId>
    <AuthTxnID>2289985143</AuthTxnID>
    <LocalDate>20210727091051</LocalDate>
    <SettlementDate>20210727</SettlementDate>
    <Card PAN="45678923456789012" product="VISA" programid="VMFX1" branchcode="" productid="10001"/>
    <Account no="7892345678" type="02"/>
    <TxnCode direction="debit" Type="pos" Group="pos" ProcCode="000000" Partial="NA" FeeWaivedOff="0"/>
    <TxnAmt value="22.0000" currency="978"/>
    <CashbackAmt value="0.00" currency="978"/>
    <BillAmt value="20.00" currency="826" rate="1.000000" clientfxrate="0.00000000"/>
    <ApprCode>678123</ApprCode>
    <Trace auditno="789234" origauditno="789234" Retrefno="025923146889"/>
    <MerchCode>498750002308287</MerchCode>
    <Term code="99999999" location="GOOGLE ADS2157005349 Dublin IE" street="" city="" country="IE" inputcapability="1" auth-
  Dublin    capability="12"/>
    <Schema>VISA</Schema>
    <Txn cardholderpresent="5" cardpresent="0" cardinputmethod="V" cardauthmethod="0" cardauthentity="0"/>
    <MsgSource value="54" domesticMaestro="no"/>
    <PaddingAmt value="0.00" currency="826"/>
    <Rate_Fee value="0.00"/>
    <Fixed_Fee value="0.00"/>
    <CommissionAmt value="0.00" currency="826"/>
    <Classification MCC="7311"/>
    <Response approved="yes" actioncode="0" responsecode="00" additionaldesc=" Accepted by EHI    GOOGLE ADS2157005349
  Dublin    IE"/>
    <OrigTxnAmt value="22.00" currency="978"/>
    <ReversalReason/>
  </CardAuthorisation>
  <CardFinancial xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <RecordType>ADV</RecordType>
    <FinId>123456789</FinId>
    <AuthId xsi:nil="true"/>
    <PresentmentID>123456789</PresentmentID>
    <LocalDate>20200831000000</LocalDate>
    <SettlementDate>20200902</SettlementDate>
    <SchemeSettlementDate>20200902</SchemeSettlementDate>
    <SchemeReconciliationDate>20200901</SchemeReconciliationDate>
    <CycleNumber>06</CycleNumber>
    <Card PAN="1234567890123456" product="MCRD" programid="SAMPLE" branchcode="MAES" productid="1234"/>
    <Account no="456789012" type="01"/>
    <TxnCode direction="credit" Type="pos_re" Group="pos"/>
    <TxnAmt value="109.9400" currency="978"/>
    <CashbackAmt value="0.00" currency="978"/>
    <BillAmt value="109.9400" currency="978" rate="1.000000"/>
    <ApprCode>    </ApprCode>
    <Trace auditno="" origauditno="" Retrefno="123456789012"/>
    <MerchCode>8042632</MerchCode>
    <Term code=""    " location="NORWEGIAN123456789012345" street="OKSENOYVEIEN 3" city="LYSAKER" country="NO" input-
  capability="1" authcapability="0"/>
    <Schema>MCRD</Schema>
    <Txn cardholderpresent="0" cardpresent="1" cardinputmethod="1" cardauthmethod="0" cardauthentity="0"/>
    <MsgSource value="67" domesticMaestro="no"/>
    <Fee direction="debit" value="0.005300" currency="978" value2="0.0000"/>
    <FeeAmt direction="debit" value="0.00" currency="978"/>
    <FeeClass interchangeTransaction="no" type="1" code="1"/>
    <SettlementAmt value="109.9400" currency="978" rate="1.000000"/>
    <ARN>5518422024123456789012</ARN>
    <FIID>010495</FIID>
    <RIID>012181</RIID>
    <ReasonCode>1401</ReasonCode>
    <Classification MCC="3211"/>
  </CardFinancial>
</Transactions>
```



```
<Response approved="yes"/>
<OrigTxnAmt value="109.9400" currency="978"/>
<CCAAmount value="0.00" currency="978" included="no"/>
<SettlementIndicator>0</SettlementIndicator>
<Additional_Amt_DE54/>
<BSA>3</BSA>
<FXConv
bookingtype="P" bookingstatus="B" fxratebooked="1.2345000" providercode="CCI" fixedamountflag="B" settlementdate="20200902"/>
  <PaymentToken id="23480180" creator="VISA-T" expdate="2023-12-
31" type="CL" status="00" creatorstatus="A" wallet="GARMIN" devicetype="W" lang="en" activationexpiry="" activationmethod=""/>
</CardFinancial>
<CardFinancial xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <RecordType>ADV</RecordType>
  <FinId>6470438861</FinId>
  <AuthId>6458867997</AuthId>
  <PresentmentID>1829291639</PresentmentID>
  <LocalDate>20200901000000</LocalDate>
  <SettlementDate>20200902</SettlementDate>
  <SchemeSettlementDate>20200902</SchemeSettlementDate>
  <SchemeReconciliationDate>20200902</SchemeReconciliationDate>
  <CycleNumber>05</CycleNumber>
  <Card PAN="4567891234567890" product="VISA" programid="VTEST1" branchcode="MAES" productid="1234"/>
  <Account no="789123456" type="02"/>
  <TxnCode direction="debit" Type="pos" Group="pos"/>
  <TxnAmt value="1.8500" currency="978"/>
  <CashbackAmt value="0.00" currency="978"/>
  <BillAmt value="1.8500" currency="978" rate="1.000000"/>
  <ApprCode>156965</ApprCode>
  <Trace auditno="149116" origauditno="149116" Retrefno="
"/>
  <MerchCode>498750000011107</MerchCode>
  <Term code="
" location="FACEBK M9TZVUJ592" street="" city="fb.me/ads" country="IE" inputcapability="1" auth-
capability="0"/>
  <Schema>VISA</Schema>
  <Txn cardholderpresent="5" cardpresent="0" cardinputmethod="V" cardauthmethod="0" cardauthentity="0"/>
  <MsgSource value="54" domesticMaestro="no"/>
  <Fee direction="credit" value="0.350000" currency="978"/>
  <FeeAmt direction="debit" value="0.00" currency="978"/>
  <FeeClass interchangeTransaction="no" type="1" code="1"/>
  <SettlementAmt value="1.8500" currency="978" rate="1.000000"/>
  <ARN>74987500259000648873528</ARN>
  <FIID/>
  <RIID/>
  <ReasonCode>1401</ReasonCode>
  <Classification MCC="7311"/>
  <Response approved="yes"/>
  <OrigTxnAmt value="1.8500" currency="978"/>
  <CCAAmount value="0.00" currency="978" included="no"/>
  <SettlementIndicator>0</SettlementIndicator>
  <Additional_Amt_DE54>0040978D000000000000</Additional_Amt_DE54>
  <BSA/>
</CardFinancial>
<CardChrgBackRepRes xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <RecordType>CB</RecordType>
  <ChgbackRepresId>6468581823</ChgbackRepresId>
  <LocalDate>20200901011841</LocalDate>
  <SettlementDate>20200901</SettlementDate>
  <Card PAN="2345678901234567" product="MCRD" programid="SAMPLE1" productid="2345" branchcode=""/>
  <Account no="567890123" type="01"/>
  <TxnCode direction="debit" Type="atm" Group="atm"/>
  <TxnAmt value="0.0000" currency="826"/>
  <CashbackAmt value="0.00" currency="826"/>
  <BillAmt value="0.00" currency="826" rate="1.000000"/>
  <ApprCode>152827</ApprCode>
  <Trace auditno="007635" origauditno="007635" Retrefno="091200007635"/>
  <MerchCode>
</MerchCode>
  <Term code="MID7Z61 " location="ROYAL BK OF SCOTLAND" street="TESCO OAK VALE EXP" city="OAKLEY VALE" country="GB" input-
capability="5" authcapability="1"/>
  <Schema>MCRD</Schema>
  <Txn cardholderpresent="0" cardpresent="1" cardinputmethod="5" cardauthmethod="1" cardauthentity="3" TVR="0"/>
  <MsgSource value="67" domesticMaestro="no"/>
  <Repeat>1</Repeat>
```



```
<SettlementAmt value="0.00" currency="826" rate="1.000000" date="20200915"/>
<Fee direction="debit" value="0.0000" currency="826"/>
<ARN>85433250256007635076354</ARN>
<FIID>003325</FIID>
<RIID>017962</RIID>
<ReasonCode>4834</ReasonCode>
<Classification MCC=""/>
<OrigTxnAmt value="30.0000" currency="826"/>
<PartialReversal>false</PartialReversal>
<SettlementCycle> </SettlementCycle>
<ReconciliationDate xsi:nil="true"/>
<ReconciliationCycle> </ReconciliationCycle>
<Usage>0</Usage>
<Pending_Billing_Amount>5.00</Pending_Billing_Amount>
<SettlementIndicator>0</SettlementIndicator>
<Additional_Amt_DE54/>
<ChargebackRefNum>9034102149</ChargebackRefNum>
</CardChrgBackRepRes>
<!-- SecondPresentment -->
<CardChrgBackRepRes xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <RecordType>REPRES</RecordType>
  <ChgbackRepresId>6475787598</ChgbackRepresId>
  <LocalDate>20200918005649</LocalDate>
  <SettlementDate>20200918</SettlementDate>
  <Card PAN="3456789012345678" product="MCRD" programid="SAMPLE2" productid="123" branchcode=""/>
  <Account no="678901234" type="01"/>
  <TxnCode direction="debit" Type="pos" Group="pos"/>
  <TxnAmt value="336.8600" currency="840"/>
  <CashbackAmt value="0.00" currency="826"/>
  <BillAmt value="260.48" currency="826" rate="0.773259"/>
  <ApprCode>172526</ApprCode>
  <Trace auditno="" origauditno="" Retrefno="" />
  <MerchCode>002401002167 </MerchCode>
  <Term code="60019389" location="BANGKOK AIRWAYS" street="99 M.14 VIPHAWADEE-RANGSIT RD." city="BANGKOK" country="TH" input-
capability="0" authcapability="12"/>
  <Schema>MCRD</Schema>
  <Txn cardholderpresent="5" cardpresent="0" cardinputmethod="V" cardauthmethod="8" cardauthentity="8" TVR="0"/>
  <MsgSource value="67" domesticMaestro="no"/>
  <Repeat>2</Repeat>
  <SettlementAmt value="260.48" currency="826" rate="0.773259" date="20200918"/>
  <Fee direction="credit" value="5.2100" currency="826" value2="0.0000"/>
  <ARN>05444829345002900600375</ARN>
  <FIID>005698</FIID>
  <RIID>012181</RIID>
  <ReasonCode>2700</ReasonCode>
  <Classification MCC=""/>
  <OrigTxnAmt value="336.8600" currency="840"/>
  <PartialReversal>false</PartialReversal>
  <SettlementCycle>01</SettlementCycle>
  <ReconciliationDate>20200918</ReconciliationDate>
  <ReconciliationCycle>01</ReconciliationCycle>
  <Usage>S</Usage>
  <Pending_Billing_Amount>0.00</Pending_Billing_Amount>
  <SettlementIndicator>0</SettlementIndicator>
  <Additional_Amt_DE54/>
  <ChargebackRefNum/>
</CardChrgBackRepRes>
<!-- CardFee matches CardFinancial -->
<CardFee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <CardFeeId>1234567890</CardFeeId>
  <LocalDate>20200831000000</LocalDate>
  <SettlementDate>20200902</SettlementDate>
  <Card PAN="1234567890123456" product="MCRD" programid="SAMPLE" branchcode="00000000" productid="1234"/>
  <Account no="456789012" type="01"/>
  <TxId>123456789</TxId>
  <FeeClass interchangeTransaction="yes" type="5" code="0"/>
  <LoadUnloadId>0</LoadUnloadId>
  <Desc>Interchange Fee</Desc>
  <FeeAmt direction="debit" value="2.200000" currency="978"/>
  <Amt direction="debit" value="2.200000" currency="978"/>
  <ReasonCode>7802</ReasonCode>
```



```
</CardFee>
<!-- CardFee matches REPRES -->
<CardFee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <CardFeeId>1880771152</CardFeeId>
  <LocalDate>20191210025400</LocalDate>
  <SettlementDate>20200918</SettlementDate>
  <Card PAN="3456789012345678" product="MCRD" programid="SAMPLE2" branchcode="00000000" productid="123"/>
  <Account no="678901234" type="01"/>
  <TxId>6475787598</TxId>
  <FeeClass interchangeTransaction="yes" type="4" code="0"/>
  <LoadUnloadId>0</LoadUnloadId>
  <Desc>Interchange Fee</Desc>
  <FeeAmt direction="credit" value="6.740000" currency="840"/>
  <Amt direction="credit" value="5.210000" currency="826"/>
  <ReasonCode>7802</ReasonCode>
</CardFee>
<MasterCardFee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <RecordType>FC</RecordType>
  <MastercardFeeId>1234567</MastercardFeeId>
  <MTID>1644</MTID>
  <Function_Code_024>685</Function_Code_024>
  <Conversion_Rate_Reconciliation_009>1.000000</Conversion_Rate_Reconciliation_009>
  <Additional_Data_048>
014800484020165001M0300025906200831000000190660177903720071442450037400200037800100390017D0000000000000000391017C00000000000013949-
039201800D0000000000000279039301800C000000000000000394017C000000000000139490395016D0000000000002790396017C00000000000013670040001000-
000000000401010000000000204020100000000002</Additional_Data_048>
  <LocalDate>20200901004727</LocalDate>
  <SettlementDate/>
  <FeeClass interchangeTransaction="no" type="0" code="0" memberID="012345"/>
  <Desc/>
  <FeeAmt direction="debit" value="2.7900" currency="840"/>
  <Amt direction="debit" value="2.7900" currency="840"/>
  <ReasonCode>6861</ReasonCode>
  <Data_Record_072/>
  <DE93_Txn_Dest_ID>012345</DE93_Txn_Dest_ID>
  <DE94_Txn_Orig_ID/>
  <File_ID_PDS0105>T112.0012009010000001218101101 </File_ID_PDS0105>
  <FileProcessDate>20200901004727</FileProcessDate>
  <Recon date="" cycle=""/>
  <Settlement date="" cycle=""/>
</MasterCardFee>
<CardLoadUnload xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <RecordType>LOAD</RecordType>
  <LoadUnloadId>6474876238</LoadUnloadId>
  <LocalDate>20200901195810</LocalDate>
  <SettlementDate>20200901</SettlementDate>
  <Card PAN="2345678901234567" product="MCRD" programid="SAMPLE1" productid="2345" branchcode="00000000"/>
  <Account no="567890123" type="01"/>
  <MerchCode/>
  <Amount direction="credit" value="18.00" currency="826"/>
  <Desc>Transfer from Vladyslav Testes </Desc>
  <Load Source="48" Type="0" FixedFee="0.00" Rate_Fee="0.00"/>
</CardLoadUnload>
<ApprovedAgencyBanking xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <CashType>RCP</CashType>
  <BankingId>6467146394</BankingId>
  <SettlementDate>20200901</SettlementDate>
  <Card PAN="2345678901234567" productid="2345" product="MCRD" programid="SAMPLE1" branchcode=""/>
  <AgencyAccount no="567890123" type="01" sortcode="040083" bankacc="01234567" name="FRANK TESTES"/>
  <External sortcode="110150" bankacc="12345678" name="M Sample"/>
  <CashCode direction="credit" CashType="fpy" CashGroup="rcp"/>
  <Desc> </Desc>
  <CashAmt value="315.00" currency="826"/>
  <Fee direction="credit" value="1.50" currency="826"/>
  <BillAmt value="315.00" currency="826" rate="0"/>
</ApprovedAgencyBanking>
<DeclinedAgencyBanking xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <CashType>RCP</CashType>
  <BankingId>6468106650</BankingId>
  <SettlementDate>20200901</SettlementDate>
  <Card PAN="2345678901234567" productid="1234" product="MCRD" programid="SAMPLE1" branchcode=""/>
```



```
<AgencyAccount no="77665544" type="01" sortcode="040083" bankacc="03344556" name="DUMITRU TESTER"/>
<External sortcode="201147" bankacc="22334455" name="HMRC SA"/>
<CashCode direction="credit" CashType="bac" CashGroup="rcp"/>
<Desc> </Desc>
<CashAmt value="4296.00" currency="826"/>
<DeclineReason>03</DeclineReason>
</DeclinedAgencyBanking>
<AgencyBankingFee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <BankingFeeId>95010465</BankingFeeId>
  <SettlementDate>20200901</SettlementDate>
  <Card PAN="2345678901234567" productid="1234" product="MCRD" programid="SAMPLE1" branchcode=""/>
  <AgencyAccount no="11223344" type="01" sortcode="040083" bankacc="01234567" name="FRANK PERSON"/>
  <AbId>6467146394</AbId>
  <Desc>PT:FPIN : ;SC:110150;Acc:11884567;Name:M Sample;Ref:Payment from M Sample: MONEY
    </Desc>
  <Amt direction="debit" value="1.50" currency="826"/>
</AgencyBankingFee>
<CardBalAdjust xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <LocalDate>20200901085036</LocalDate>
  <AdjustId>6470167587</AdjustId>
  <SettlementDate>20200901</SettlementDate>
  <Card PAN="2345678901234567" product="MCRD" programid="SAMPLE1" branchcode="00000000" productid="2345"/>
  <Account no="567890123" type="01"/>
  <Amount direction="credit" value="165.40" currency="826"/>
  <MerchCode/>
  <Desc>ADJ - Cheque</Desc>
  <AdjustType>Actual</AdjustType>
</CardBalAdjust>
<CardEvent xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <Card PAN="2345678901234567" productid="2345"/>
  <Event Type="Lost" Source="0" ActivationDate="" ConvertedDate="" StatCode="41" OldStatCode="00" Date="20200901192324"/>
</CardEvent>
<CardEvent xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <Card PAN="2345678901234567" productid="2345"/>
  <Event
Type="StatusChange" Source="0" ActivationDate="" ConvertedDate="" StatCode="00" OldStatCode="57" Date="20200901190835"/>
</CardEvent>
<!-- Wallet Transaction records for the above CardAuthorisation (AuthId=6459161819), showing movement of funds and then author-
isation-->
<WalletTransaction xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <WalletTransactionId>278654</WalletTransactionId>
  <TransactionId>6459161819</TransactionId>
  <SequenceNumber>1</SequenceNumber>
  <OperationType>6</OperationType>
  <Source walletId="836" basecurrency="826" balancechange="-10.00" blockchange="0.00" newbalance="90.00" newblock="0.00"/>
  <Destination walletid="1017" balancechange="11.00" blockchange="0.00" newbalance="22.00" newblock="0.00"/>
  <Other amount="" currency=""/>
  <FXRate>1.10</FXRate>
</WalletTransaction>
<WalletTransaction xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <WalletTransactionId>278655</WalletTransactionId>
  <TransactionId>6459161819</TransactionId>
  <SequenceNumber>2</SequenceNumber>
  <OperationType>1</OperationType>
  <Source walletId="1017" basecurrency="978" balancechange="0.00" blockchange="22.00" newbalance="22.00" newblock="22.00"/>
  <Destination walletid="" balancechange="" blockchange="" newbalance="" newblock=""/>
  <Other amount="22.00" currency="978"/>
  <FXRate>1.00</FXRate>
</WalletTransaction>
<!--Stand-alone, unrelated WalletTransaction record representng the opening of a new wallet-->
<WalletTransaction xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <WalletTransactionId>278658</WalletTransactionId>
  <TransactionId>8765432101</TransactionId>
  <SequenceNumber>1</SequenceNumber>
  <OperationType>10</OperationType>
  <Source walletId="17836" basecurrency="826" balancechange="0.00" blockchange="0.00" newbalance="0.00" newblock="0.00"/>
  <Destination walletid="" balancechange="" blockchange="" newbalance="" newblock=""/>
  <Other amount="0.00" currency="764"/>
  <FXRate>1.00</FXRate>
</WalletTransaction>
</Transactions>
```



4.9 Transaction XML Schema

Below is a copy of the latest Thredd transaction XML schema.

```
<xs:schema
xmlns:xs="http://www.w3.org/2001/XMLSchema" attributeFormDefault="unqualified" elementFormDefault="qualified" version="0.4">
  <xs:complexType name="BasicAmount">
    <xs:attribute name="value" type="xs:decimal" use="required"/>
    <xs:attribute name="value2" type="xs:decimal" use="optional"/>
    <xs:attribute name="currency" type="ISOCurrencyCode" use="required"/>
  </xs:complexType>
  <xs:complexType name="RateAmount">
    <xs:complexContent>
      <xs:extension base="BasicAmount">
        <xs:attribute name="rate" type="Rate" use="required"/>
        <xs:attribute name="clientfxrate" type="Rate" use="optional"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ConversionRateAmount">
    <xs:complexContent>
      <xs:extension base="BasicAmount">
        <xs:attribute name="rate" type="ConversionRate" use="required"/>
        <xs:attribute name="clientfxrate" type="Rate" use="optional"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="DirectionAmount">
    <xs:complexContent>
      <xs:extension base="BasicAmount">
        <xs:attribute name="direction" type="Direction" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="PartialAmount">
    <xs:complexContent>
      <xs:extension base="BasicAmount">
        <xs:attribute name="partial" type="YesNoString" use="optional"/>
        <xs:attribute name="origItemId" type="xs:unsignedInt" use="optional"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="SettlementAmt">
    <xs:attribute name="value" type="xs:decimal" use="required"/>
    <xs:attribute name="currency" type="ISOCurrencyCode" use="required"/>
    <xs:attribute name="rate" type="Rate" use="required"/>
    <xs:attribute name="date" use="optional">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="8"/>
          <xs:pattern value="([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|(((2-9)\d)(0[48]|([2468][048]|([13579][26])|((([2468][048]|([3579][26])00))0229)))"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:complexType>
  <xs:complexType name="ConversionSettlementAmt">
    <xs:attribute name="value" type="xs:decimal" use="required"/>
    <xs:attribute name="currency" type="ISOCurrencyCode" use="required"/>
    <xs:attribute name="rate" type="ConversionRate" use="required"/>
    <xs:attribute name="date" use="optional">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="8"/>
          <xs:pattern value="([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|(((2-9)\d)(0[48]|([2468][048]|([13579][26])|((([2468][048]|([3579][26])00))0229)))"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:complexType>
```



```
<xs:complexType name="CCAAmount">
  <xs:complexContent>
    <xs:extension base="BasicAmount">
      <xs:attribute name="included" type="YesNoString" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="FeeClass">
  <xs:attribute name="interchangeTransaction" type="YesNoString" use="required"/>
  <xs:attribute name="type" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="0"/>
        <xs:enumeration value="1"/>
        <xs:enumeration value="2"/>
        <xs:enumeration value="4"/>
        <xs:enumeration value="5"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="code" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="0"/>
        <xs:enumeration value="1"/>
        <xs:enumeration value="1000"/>
        <xs:enumeration value="1010"/>
        <xs:enumeration value="1020"/>
        <xs:enumeration value="1030"/>
        <xs:enumeration value="1040"/>
        <xs:enumeration value="1060"/>
        <xs:enumeration value="1061"/>
        <xs:enumeration value="1062"/>
        <xs:enumeration value="1063"/>
        <xs:enumeration value="1100"/>
        <xs:enumeration value="2010"/>
        <xs:enumeration value="2011"/>
        <xs:enumeration value="2012"/>
        <xs:enumeration value="2013"/>
        <xs:enumeration value="2014"/>
        <xs:enumeration value="2015"/>
        <xs:enumeration value="2016"/>
        <xs:enumeration value="2110"/>
        <xs:enumeration value="2111"/>
        <xs:enumeration value="2112"/>
        <xs:enumeration value="2300"/>
        <xs:enumeration value="2301"/>
        <xs:enumeration value="2302"/>
        <xs:enumeration value="2303"/>
        <xs:enumeration value="2304"/>
        <xs:enumeration value="2306"/>
        <xs:enumeration value="2307"/>
        <xs:enumeration value="2308"/>
        <xs:enumeration value="2309"/>
        <xs:enumeration value="2310"/>
        <xs:enumeration value="2311"/>
        <xs:enumeration value="2312"/>
        <xs:enumeration value="2313"/>
        <xs:enumeration value="2314"/>
        <xs:enumeration value="2320"/>
        <xs:enumeration value="2401"/>
        <xs:enumeration value="2402"/>
        <xs:enumeration value="2441"/>
        <xs:enumeration value="2442"/>
        <xs:enumeration value="2443"/>
        <xs:enumeration value="6000"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="MasterCardFeeClass">
```



```
<xs:attribute name="interchangeTransaction" use="required">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="no"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
<xs:attribute name="type" use="required">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="0"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
<xs:attribute name="code" use="required">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="0"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
<xs:attribute name="memberID" use="required">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="11"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="Response">
  <xs:attribute name="approved" type="YesNoString" use="required"/>
  <xs:attribute name="actioncode" type="xs:string" use="optional"/>
  <xs:attribute name="responsecode" type="xs:string" use="optional"/>
  <xs:attribute name="additionaldesc" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="500"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="Classification">
  <xs:attribute name="MCC" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="4"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="MsgSource">
  <xs:attribute name="value" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:decimal">
        <xs:enumeration value="12"/>
        <xs:enumeration value="17"/>
        <xs:enumeration value="54"/>
        <xs:enumeration value="66"/>
        <xs:enumeration value="67"/>
        <xs:enumeration value="70"/>
        <xs:enumeration value="74"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="domesticMaestro" type="YesNoString" use="required"/>
</xs:complexType>
<xs:complexType name="MsgSourceCardAuthorisation">
  <xs:attribute name="value" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:decimal">
        <xs:enumeration value="12"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```



```
<xs:enumeration value="17"/>
<xs:enumeration value="54"/>
<xs:enumeration value="62"/>
<xs:enumeration value="66"/>
<xs:enumeration value="67"/>
<xs:enumeration value="70"/>
<xs:enumeration value="74"/>
</xs:restriction>
</xs:simpleType>
</xs:attribute>
<xs:attribute name="domesticMaestro" type="YesNoString" use="required"/>
</xs:complexType>
<xs:complexType name="Txn">
  <xs:attribute name="cardholderpresent" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value=""/>
        <xs:enumeration value="0"/>
        <xs:enumeration value="1"/>
        <xs:enumeration value="2"/>
        <xs:enumeration value="3"/>
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        <xs:enumeration value="8"/>
        <xs:enumeration value="9"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="cardpresent" use="optional">
    <xs:simpleType>
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        <xs:enumeration value="1"/>
        <xs:enumeration value="9"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="cardinputmethod" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value=""/>
        <xs:enumeration value="0"/>
        <xs:enumeration value="1"/>
        <xs:enumeration value="2"/>
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        <xs:enumeration value="6"/>
        <xs:enumeration value="7"/>
        <xs:enumeration value="C"/>
        <xs:enumeration value="E"/>
        <xs:enumeration value="F"/>
        <xs:enumeration value="G"/>
        <xs:enumeration value="M"/>
        <xs:enumeration value="P"/>
        <xs:enumeration value="Q"/>
        <xs:enumeration value="V"/>
        <xs:enumeration value="W"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="cardauthmethod" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value=""/>
        <xs:enumeration value="0"/>
        <xs:enumeration value="1"/>
        <xs:enumeration value="2"/>
        <xs:enumeration value="3"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>

```



```
<xs:enumeration value="4"/>
<xs:enumeration value="5"/>
<xs:enumeration value="6"/>
<xs:enumeration value="7"/>
<xs:enumeration value="8"/>
<xs:enumeration value="9"/>
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<xs:enumeration value="S"/>
</xs:restriction>
</xs:simpleType>
</xs:attribute>
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    <xs:restriction base="xs:string">
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      <xs:enumeration value="0"/>
      <xs:enumeration value="1"/>
      <xs:enumeration value="2"/>
      <xs:enumeration value="3"/>
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      <xs:enumeration value="6"/>
      <xs:enumeration value="7"/>
      <xs:enumeration value="8"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
<xs:attribute name="TVR" type="xs:unsignedLong" use="optional"/>
<xs:attribute name="TTI" use="optional">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="3"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="Term">
  <xs:attribute name="code" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="8"/>
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    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="location" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="128"/>
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    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="street" use="required">
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        <xs:maxLength value="64"/>
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    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="city" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="64"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="country" type="ISOCountryCode" use="optional"/>
  <xs:attribute name="inputcapability" use="optional">
```



```
<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value=""/>
    <xs:enumeration value=" "/>
    <xs:enumeration value="0"/>
    <xs:enumeration value="1"/>
    <xs:enumeration value="2"/>
    <xs:enumeration value="3"/>
    <xs:enumeration value="4"/>
    <xs:enumeration value="5"/>
    <xs:enumeration value="6"/>
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</xs:simpleType>
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  <xs:simpleType>
    <xs:restriction base="xs:string">
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      <xs:enumeration value="1"/>
      <xs:enumeration value="2"/>
      <xs:enumeration value="3"/>
      <xs:enumeration value="4"/>
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      <xs:enumeration value="13"/>
      <xs:enumeration value="14"/>
      <xs:enumeration value="15"/>
      <xs:enumeration value="16"/>
      <xs:enumeration value="17"/>
      <xs:enumeration value="18"/>
      <xs:enumeration value="19"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="Trace">
  <xs:attribute name="auditno" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="6"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="origauditno" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="6"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="Retrefno" use="required">
```



```
<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:maxLength value="12"/>
  </xs:restriction>
</xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="TxnCode">
  <xs:attribute name="direction" type="Direction" use="required"/>
  <xs:attribute name="Type" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="6"/>
        <xs:enumeration value="pos"/>
        <xs:enumeration value="atm"/>
        <xs:enumeration value="pos_cb"/>
        <xs:enumeration value="pos_re"/>
        <xs:enumeration value="fee"/>
        <xs:enumeration value="tfr"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="Group" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="pos"/>
        <xs:enumeration value="atm"/>
        <xs:enumeration value="fee"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="ProcCode" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="6"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="Partial" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="3"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="FeeWaivedOff" type="xs:decimal" use="optional"/>
</xs:complexType>
<xs:complexType name="Card">
  <xs:attribute name="PAN" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:minLength value="14"/>
        <xs:maxLength value="19"/>
        <xs:pattern value="\d+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="product" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="4"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="programid" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="50"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```



```
<xs:attribute name="branchcode" use="optional">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="8"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
<xs:attribute name = "productid" use = "optional">
  <xs:simpleType>
    <xs:restriction base = "xs:string">
      <xs:maxLength value = "5"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="Account">
  <xs:attribute name="no" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="28"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="type" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="00"/>
        <xs:enumeration value="01"/>
        <xs:enumeration value="02"/>
        <xs:enumeration value="07"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="AccountChrgBack">
  <xs:attribute name="no" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="28"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="type" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="00"/>
        <xs:enumeration value="01"/>
        <xs:enumeration value="02"/>
        <xs:enumeration value="07"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:simpleType name="Rate">
  <xs:restriction base="xs:decimal">
    <xs:fractionDigits value="6"/>
    <xs:minInclusive value="0"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ConversionRate">
  <xs:restriction base="xs:decimal">
    <xs:fractionDigits value="9"/>
    <xs:minInclusive value="0"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MerchCode">
  <xs:restriction base="xs:string">
    <xs:maxLength value="30"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="RecType">
```



```
<xs:restriction base="xs:string">
  <xs:enumeration value="ADV"/>
  <xs:enumeration value="REV"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="ReversalReason">
  <xs:restriction base="xs:string">
    <xs:enumeration value=""/>
    <xs:enumeration value="0"/>
    <xs:enumeration value="1"/>
    <xs:enumeration value="2"/>
    <xs:enumeration value="3"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Direction">
  <xs:restriction base="xs:string">
    <xs:enumeration value="debit"/>
    <xs:enumeration value="credit"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="LocalDate">
  <xs:restriction base="xs:string">
    <xs:pattern value=""/>
    <xs:maxLength value="14"/>
    <xs:pattern value="([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|(((2-9)\d)
(0[48]| [2468][048]| [13579][26])|(((2468)[048]| [3579][26])00)0229)([0-1][0-9]| [2][0-3])([0-5][0-9])([0-5][0-9])"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="LocalDateUTC">
  <xs:restriction base="xs:string">
    <xs:pattern value=""/>
    <xs:maxLength value="10"/>
    <xs:pattern value="[0-9]{10}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SettlementDate">
  <xs:restriction base="xs:string">
    <xs:pattern value="\s*|([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|(((2-
9)\d)(0[48]| [2468][048]| [13579][26])|(((2468)[048]| [3579][26])00)0229)"/>
    <xs:maxLength value="8"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ApprCode">
  <xs:restriction base="xs:string">
    <xs:maxLength value="6"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Schema">
  <xs:restriction base="xs:string">
    <xs:minLength value="3"/>
    <xs:maxLength value="4"/>
    <xs:enumeration value="CIRR"/>
    <xs:enumeration value="ECDR"/>
    <xs:enumeration value="MAES"/>
    <xs:enumeration value="CIMA"/>
    <xs:enumeration value="MCRD"/>
    <xs:enumeration value="VISA"/>
    <xs:enumeration value="PLUS"/>
    <xs:enumeration value="DGN"/>
  </xs:restriction>
</xs:simpleType>
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  <xs:restriction base="xs:string">
    <xs:maxLength value="23"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FIID">
  <xs:restriction base="xs:string">
    <xs:maxLength value="11"/>
  </xs:restriction>
</xs:simpleType>
```



```

<xs:simpleType name="RIID">
  <xs:restriction base="xs:string">
    <xs:maxLength value="11"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Desc">
  <xs:restriction base="xs:string">
    <xs:maxLength value="500"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AdjustType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Actual"/>
    <xs:enumeration value="Block"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="LoadSource">
  <xs:attribute name="Source">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="3"/>
        <!-- <xs:pattern value="([0-9]|1[0-9]|2[0-9]|3[0-9]|4[0-9]|5[0-9]|6[0-9]|7[0-9]|8[0-9]|9[0-9]|100|102|209|210)"/> -->
        <xs:pattern value="[0-9]{1,3}"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="Type">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="2"/>
        <xs:enumeration value="0"/>
        <xs:enumeration value="1"/>
        <xs:enumeration value="2"/>
        <xs:enumeration value="3"/>
        <xs:enumeration value="4"/>
        <xs:enumeration value="5"/>
        <xs:enumeration value="6"/>
        <xs:enumeration value="7"/>
        <xs:enumeration value="8"/>
        <xs:enumeration value="9"/>
        <xs:enumeration value="10"/>
        <xs:enumeration value="11"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="FixedFee" type="xs:decimal" use="optional"/>
  <xs:attribute name="Rate_Fee" type="xs:decimal" use="optional"/>
</xs:complexType>
<xs:simpleType name="ISOCurrencyCode">
  <xs:restriction base="xs:string">
    <xs:pattern value="\d{3}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ISOCountryCode">
  <xs:restriction base="xs:string">
    <xs:maxLength value="2"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="YesNoString">
  <xs:restriction base="xs:string">
    <xs:enumeration value="yes"/>
    <xs:enumeration value="no"/>
    <xs:enumeration value="YES"/>
    <xs:enumeration value="NO"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="CycleNumber">
  <xs:restriction base="xs:string">
    <xs:maxLength value="2"/>
    <xs:enumeration value="01"/>
    <xs:enumeration value="02"/>
  </xs:restriction>
</xs:simpleType>

```



```
<xs:enumeration value="03"/>
<xs:enumeration value="04"/>
<xs:enumeration value="05"/>
<xs:enumeration value="06"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="EventType">
  <xs:restriction base="xs:string">
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    <xs:enumeration value="Renewed"/>
    <xs:enumeration value="ReportedToSAFE"/>
    <xs:enumeration value="Lost"/>
    <xs:enumeration value="Stolen"/>
    <xs:enumeration value="Cancelled"/>
    <xs:enumeration value="PINtriesExceeded"/>
    <xs:enumeration value="Voided"/>
    <xs:enumeration value="Expired"/>
    <xs:enumeration value="Activation"/>
    <xs:enumeration value="UnBlocked"/>
    <xs:enumeration value="StatusChange"/>
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  <xs:restriction base="xs:string">
    <xs:maxLength value="4"/>
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<xs:simpleType name="Function_Code_024">
  <xs:restriction base="xs:string">
    <xs:maxLength value="3"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Conversion_Rate_Reconciliation_009">
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    <xs:totalDigits value="15"/>
    <xs:fractionDigits value="6"/>
  </xs:restriction>
</xs:simpleType>
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  <xs:restriction base="xs:string">
    <xs:maxLength value="8000"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Data_Record_072">
  <xs:restriction base="xs:string">
    <xs:maxLength value="200"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DE93_Txn_Dest_ID">
  <xs:restriction base="xs:string">
    <xs:maxLength value="11"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DE94_Txn_Orig_ID">
  <xs:restriction base="xs:string">
    <xs:maxLength value="16"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="File_ID_PDS0105">
  <xs:restriction base="xs:string">
    <xs:maxLength value="50"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FileProcessDate">
  <xs:restriction base="xs:string">
    <xs:pattern value=""/>
    <xs:maxLength value="14"/>
    <xs:pattern value="([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|(((2-9)\d)
(0[48]|[2468][048]|[13579][26])|(((2468)[048]|[3579][26])00))0229)([0-1][0-9]|[2][0-3])([0-5][0-9])([0-5][0-9])"/>
  </xs:restriction>
</xs:simpleType>
```



```
<xs:complexType name="Recon">
  <xs:attribute name="date" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="\s*|([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|
        (([2-9]\d)(0[48]|([2468][048]|([13579][26])|((([2468][048]|([3579][26])00))0229))0229)"/>
        <xs:maxLength value="8"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="cycle" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="2"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="Settlement">
  <xs:attribute name="date" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="\s*|([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|
        (([2-9]\d)(0[48]|([2468][048]|([13579][26])|((([2468][048]|([3579][26])00))0229))0229)"/>
        <xs:maxLength value="8"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="cycle" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="2"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:simpleType name="sortcode">
  <xs:restriction base="xs:string">
    <xs:maxLength value="6"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="accountno">
  <xs:restriction base="xs:string">
    <xs:maxLength value="8"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ABFile">
  <xs:attribute name="filedate" type="LocalDate" use="required"/>
  <xs:attribute name="filename" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="500"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="ABAccount">
  <xs:attribute name="no" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="28"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="type" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="00"/>
        <xs:enumeration value="01"/>
        <xs:enumeration value="02"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```



```
</xs:simpleType>
</xs:attribute>
<xs:attribute name="sortcode" type="sortcode" use="required"/>
<xs:attribute name="bankacc" type="accountno" use="required"/>
<xs:attribute name="name" use="required">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:maxLength value="50"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
</xs:complexType>
<xs:complexType name="ABExternal">
  <xs:attribute name="sortcode" type="sortcode" use="required"/>
  <xs:attribute name="bankacc" type="accountno" use="required"/>
  <xs:attribute name="name" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="50"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="ABCashCode">
  <xs:attribute name="direction" type="Direction" use="required"/>
  <xs:attribute name="CashType" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  <xs:attribute name="CashGroup" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="rcp"/>
        <xs:enumeration value="pay"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:simpleType name="ABDeclineReason">
  <xs:restriction base="xs:string">
    <xs:enumeration value="00"/>
    <xs:enumeration value="01"/>
    <xs:enumeration value="02"/>
    <xs:enumeration value="03"/>
    <xs:enumeration value="04"/>
    <xs:enumeration value="05"/>
    <xs:enumeration value="06"/>
    <xs:enumeration value="07"/>
    <xs:enumeration value="08"/>
    <xs:enumeration value="9"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ABDirection">
  <xs:restriction base="xs:string">
    <xs:enumeration value="debit"/>
    <xs:enumeration value="credit"/>
    <xs:enumeration value="shared"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ABDirectionAmount">
  <xs:complexContent>
    <xs:extension base="BasicAmount">
      <xs:attribute name="direction" type="ABDirection" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:simpleType name="NullOrULong">
  <xs:restriction base="xs:string">
    <xs:pattern value="\d*|\s{0}" />
  </xs:restriction>
</xs:simpleType>
```



```

    </xs:restriction>
</xs:simpleType>
<xs:complexType name="SenderReceiver">
  <xs:attribute name="firstname" type="xs:string" use="optional"/>
  <xs:attribute name="middlename" type="xs:string" use="optional"/>
  <xs:attribute name="lastname" type="xs:string" use="optional"/>
  <xs:attribute name="streetaddress" type="xs:string" use="optional"/>
  <xs:attribute name="city" type="xs:string" use="optional"/>
  <xs:attribute name="provincecode" type="xs:string" use="optional"/>
  <xs:attribute name="country" type="xs:string" use="optional"/>
  <xs:attribute name="postcode" type="xs:string" use="optional"/>
  <xs:attribute name="phonenumber" type="xs:string" use="optional"/>
  <xs:attribute name="dateofbirth" type="xs:string" use="optional"/>
  <xs:attribute name="accountnumber" type="xs:string" use="optional"/>
  <xs:attribute name="idtype" type="xs:string" use="optional"/>
  <xs:attribute name="idnbr" type="xs:string" use="optional"/>
  <xs:attribute name="idctrycode" type="xs:string" use="optional"/>
  <xs:attribute name="idexpdate" type="xs:string" use="optional"/>
  <xs:attribute name="nationality" type="xs:string" use="optional"/>
  <xs:attribute name="birthctry" type="xs:string" use="optional"/>
  <xs:attribute name="acctnbrtype" type="xs:string" use="optional"/>
  <xs:attribute name="fundssource" type="xs:string" use="optional"/>
  <xs:attribute name="claimcode" type="xs:string" use="optional"/>
</xs:complexType>
<xs:complexType name="FXConv">
  <xs:attribute name="bookingstatus" type="xs:string" use="optional"/>
  <xs:attribute name="fxratebooked" type="xs:decimal" use="required"/>
  <xs:attribute name="providercode" type="xs:string" use="required"/>
  <xs:attribute name="fixedamountflag" type="xs:string" use="required"/>
  <xs:attribute name="settlementdate" type="SettlementDate" use="optional"/>
</xs:complexType>
<xs:complexType name="PaymentToken">
  <xs:attribute name="id" type="xs:string" use="required"/>
  <xs:attribute name="creator" type="xs:string" use="required"/>
  <xs:attribute name="expdate" type="xs:string" use="optional"/>
  <xs:attribute name="type" type="xs:string" use="required"/>
  <xs:attribute name="status" type="xs:string" use="required"/>
  <xs:attribute name="creatorstatus" type="xs:string" use="required"/>
  <xs:attribute name="wallet" type="xs:string" use="required"/>
  <xs:attribute name="devicetype" type="xs:string" use="required"/>
  <xs:attribute name="lang" type="xs:string" use="optional"/>
  <xs:attribute name="activationexpiry" type="xs:string" use="optional"/>
  <xs:attribute name="activationmethod" type="xs:string" use="optional"/>
</xs:complexType>
  <xs:complexType name="WalletTransactionSource">
    <xs:attribute name="walletid" type="xs:string"/>
    <xs:attribute name="basecurrency" type="xs:string"/>
    <xs:attribute name="balancechange" type="xs:string"/>
    <xs:attribute name="blockchange" type="xs:string"/>
    <xs:attribute name="newbalance" type="xs:string"/>
    <xs:attribute name="newblock" type="xs:string"/>
  </xs:complexType>
  <xs:complexType name="WalletTransactionDestination">
    <xs:attribute name="walletid" type="xs:string"/>
    <xs:attribute name="balancechange" type="xs:string"/>
    <xs:attribute name="blockchange" type="xs:string"/>
    <xs:attribute name="newbalance" type="xs:string"/>
    <xs:attribute name="newblock" type="xs:string"/>
  </xs:complexType>
  <xs:complexType name="WalletTransactionOther">
    <xs:attribute name="amount" type="xs:string"/>
    <xs:attribute name="currency" type="xs:string"/>
  </xs:complexType>
<xs:element name="Transactions">
  <xs:complexType>
    <xs:sequence>
      <xs:choice maxOccurs="unbounded">
        <xs:element minOccurs="0" maxOccurs="unbounded" name="CardAuthorisation">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="RecType" type="RecType" minOccurs="1" maxOccurs="1" nillable="false"/>

```



```
<xs:element name="AuthId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="AuthTxnID" type="xs:unsignedLong" minOccurs="1" maxOccurs="1" nillable="false"/>
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<xs:element name="LocalDateUTC" type="LocalDateUTC" minOccurs="0" maxOccurs="1" nillable="true"/>
<xs:element name="SettlementDate" type="SettlementDate" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="Card" type="Card" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="Account" type="Account" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="TxnCode" type="TxnCode" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="TxnAmt" type="BasicAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="CashbackAmt" type="BasicAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="BillAmt" type="RateAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="ApprCode" type="ApprCode" minOccurs="1" maxOccurs="1" nillable="true"/>
<xs:element name="Trace" type="Trace" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="MerchCode" type="MerchCode" minOccurs="1" maxOccurs="1" nillable="true"/>
<xs:element name="Term" type="Term" minOccurs="1" maxOccurs="1" nillable="false"/>
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<xs:element name="Txn" type="Txn" minOccurs="1" maxOccurs="1" nillable="false"/>
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  <xs:complexType>
    <xs:attribute name="value" type="xs:decimal" use="required"/>
  </xs:complexType>
</xs:element>
<xs:element name="Fixed_Fee">
  <xs:complexType>
    <xs:attribute name="value" type="xs:decimal" use="required"/>
  </xs:complexType>
</xs:element>
<xs:element name="CommissionAmt" type="BasicAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="Classification" type="Classification" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="Response" type="Response" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="OrigTxnAmt" type="PartialAmount" minOccurs="0" maxOccurs="1" nillable="true"/>
<xs:element name="ReversalReason" type="ReversalReason" minOccurs="0" maxOccurs="1" nillable="true"/>
<xs:element name="Sender" type="SenderReceiver" minOccurs="0" maxOccurs="1" nillable="true"/>
<xs:element name="Receiver" type="SenderReceiver" minOccurs="0" maxOccurs="1" nillable="true"/>
<xs:element name="FXConv" type="FXConv" minOccurs="0" maxOccurs="1" nillable="true"/>
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</xs:sequence>
</xs:complexType>
</xs:element>
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    <xs:sequence>
      <xs:element name="RecordType" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="ADV"/>
            <xs:enumeration value="REV"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="FinId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="AuthId" type="NullOrULong" minOccurs="0" maxOccurs="1" nillable="true"/>
      <xs:element name="PresentmentID" type="xs:unsignedLong" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="LocalDate" type="LocalDate" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="LocalDateUTC" type="LocalDateUTC" minOccurs="0" maxOccurs="1" nillable="true"/>
      <xs:element name="SettlementDate" type="SettlementDate" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="SchemeSettlementDate" type="SettlementDate" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="SchemeReconciliationDate" type="SettlementDate" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="CycleNumber" type="CycleNumber" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="Card" type="Card" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="Account" type="Account" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="TxnCode" type="TxnCode" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="TxnAmt" type="BasicAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="CashbackAmt" type="BasicAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="BillAmt" type="ConversionRateAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="ApprCode" type="ApprCode" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="Trace" type="Trace" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="MerchCode" type="MerchCode" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="Term" type="Term" minOccurs="1" maxOccurs="1" nillable="false"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```



```
<xs:element name="Schema" type="Schema" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="Txn" type="Txn" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="MsgSource" type="MsgSource" minOccurs="1" maxOccurs="1" nillable="false"/>
<xs:element name="Fee" type="DirectionAmount" minOccurs="1" maxOccurs="1" nillable="false"/>
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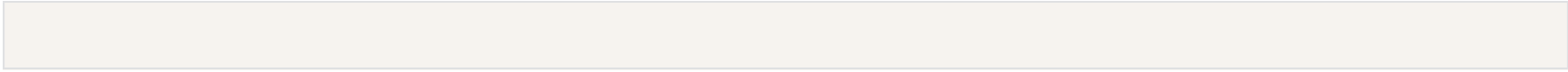
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</xs:schema>

```





4.9.1 Schema Changes

Refer to the list of changes below.

Version	Description
V1.54	Added value of 8 to <i>cardholderpresent</i> .
V1.53	Updated <i>inputcapability</i> , <i>authcapability</i> , <i>cardholderpresent</i> , <i>cardpresent</i> , <i>cardinputmethod</i> , <i>cardauthmethod</i> , and <i>cardauthentity</i> .
V1.52	Added <code><xs: enumeration value= " " /></code> for the <i>cardholderpresent</i> , <i>cardpresent</i> , and <i>cardinputmethod</i> attributes, ensuring support for null values.
V1.51	Removed list of ISO country codes and ISO currency codes.
V1.50	Added currency codes 531 and 534.
V1.49	Removed <i>VoidedAdjustId</i> as is not used.
V1.48	Updated minimum length requirement of PAN in <code><Card></code> to 14 digits. Added new ISO currency code: 924.
V1.47	Changed Trace/auditno attribute from required to optional. Added a new currency code value of 157 (CNH) to the <i>ISOCurrencyCode</i> type.
V1.46.1	Changed the data type of <i>PresentmentID</i> from <i>unsigned Int</i> to <i>unsigned Long</i> .
V1.46	The maximum length of the <i>DE94_Txn_Orig_ID</i> field has been updated to 16.
V1.45	Changed <i>CardChrgBackRepRes BillAmt</i> and <i>SettlementAmt</i> Rate to support 9 decimal places. Added CHAPS to <i>Cashtype</i> Added Currency Code 925 (<i>SLE</i>) In the <i>CardAuthorisation</i> record, the <i>Apprcode</i> element has been updated to nillable="true" Removed element: <i>FXConversion</i>
V1.44.2	A new record type called <i>VFC</i> (Visa Fee Collection) has been added to the <i>MasterCardFee</i> element. The maximum length of the <i>DE94_Txn_Orig_ID</i> data element has been updated to 16.
V1.44.1	In the <i>AgencyAccount</i> element, the <i>sortcode</i> and <i>bankacc</i> attributes have been updated to support alphanumeric characters.
V1.44	Added new element : <i>WalletTransaction</i> Added new element : <i>FXConversion</i>
V1.43.1	Changed the type of <i>AuthTxnID</i> from <i>unsignedint</i> to <i>unsignedlong</i> . Added the two-digit country code SS (South Sudan) to the <i>ISOCountryCode</i> list. For some elements, the <i>Desc</i> element is set to nillable="true".
V1.43	Added a new <i>transactionid</i> attribute to the CardEvent / Event element. Updated MaxLength of <i>DE94_Txn_Orig_ID</i> Element to 13 to match MaxLength in VisaCollection table.
V1.42	Added a new element: <i>LocalDateUTC</i> to CardAuthorisation and CardFinancial primary elements.
V1.41	Added new element : PaymentToken to CardAuthorisation and CardFinancial primary elements. Updated list of ISO currency codes.



Version	Description
V1.40	Changed CardFinancial/BillAmt@Rate and CardFinancialSettlementAmt/@Rate to support 9 decimal places.
V1.39	Added new element : FXConv to CardAuthorisation and CardFinancial primary elements.
V1.38	Added new elements : Sender and Reciever.
V1.37	Added new element - RecordType. Increased length of affected MastercardFee elements
V1.36	Added new element - BSA. Updated cardauth method and cardauthentity
V1.35	ProductID can be 5 digits long
V1.34	Removed IssuerReferenceNumber element. Added ChargebackRefNum element
V1.33.1	Banking File element not mandatory
V1.33	DEV_REPORTING-422. Added IssuerReferenceNumber element
V1.32	DEV_REPORTING-413. Added value2 attribute
V1.31	DEV_REPORTING-396. Added one more ISOCurrencyCode - 929. Added two new ABDeclineReason - 00,9. AbId changed from Int to Long. Removing ProductID from MastercardFee
V1.30	DEV_REPORTING-327. Added Additional_Amt_DE54 in Financial and Chargebacks. DEV_WEBSERVICES-302. Multiple patterns in a Restriction was found not to validate when checking online XML validators. Substituted with \s* in regular expression.
V1.29	DEV_REPORTING-350. Included ProductID in MastercardFee. Increased length of Additional_Data_048 in MastercardFee. Settlementdate can be blank in Mastercardfee. Recon Date can be blank in Mastercardfee. Settlement Date can be blank in Mastercardfee
V1.28	DEV_REPORTING-350. Corrected SettlementIndicator in Fin and Chargeback. Corrected MerchCode in Auth and Chargeback. Added recon in Cardfee. Added CardChrgBackRepRes Account type 02. Added Currency 928. Added Nullable AuthID in CardFinancial. Made CardChrgBackRepRes FIID and RIID optional. Changed sequence location of CardChrgBackRepRes SettlementIndicator. Corrected CardBalAdjust AdjustId sequence and removed Rectype.
V1.27	DEV_REPORTING-343. Added SettlementCycle,ReconciliationDate, ReconciliationCycle,Usage and Pending_Billing_Amount.
V1.25	DEV_REPORTING-154. Added SettlementIndicator.
V1.24	DEV_REPORTING-318. Updated CardFinancial AuthId
V1.23	DEV_REPORTING-319. Updated cardholderpresent and cardpresent
V1.22	DEV_REPORTING-142. Updated inputcapability, authcapability, cardholderpresent,cardpresent, cardinputmethod, cardauthmethod and cardauthentity.
V1.18	DEV_MT_API-1520. Removed Programid attribute. Changed MarchCode to 30 length. Changed Desc to 500 length
V1.11	Removed reference to ResponseFinancial element (DEV_MT_API-537)



General FAQs

This section provides answers to frequently asked questions.

XML Reports

What type of XML reports does Thredd provide?

Thredd provides the following reports to Programme Managers:

- Transaction XML report
- Balance XML report

Note:

For Issuers and Self-Issuers, Thredd provides two additional reports:

- Fee Collection Report
- Quarterly Management Report (QMR)

For details, please contact your implementation manager or account manager.

Can I configure the details provided in each report?

No, the Thredd reports are standard. If you require bespoke reports, please speak to your account manager.

How often are reports provided? Can I change this?

The Thredd reports are provided daily. For specific details regarding report timing, please speak to your account manager.

For more frequent transaction information, we recommend you use the External Host Interface (EHI) which provides transaction reporting in real-time.

How are reports provided to customers?

The daily XML reports are sent to you via sFTP. This is on a push only basis.

How often do you change the fields in the report?

Thredd will add new fields to the report in line with updates from the card schemes (Visa and Mastercard) or to reflect other changes relevant to the payments industry or our service.

When we make changes to the XML reports, we will update the technical documentation and notify you of the change.

Are reports encrypted?

Yes. Reports are encrypted using the PGP standard.

How do I identify the version of the XML report?

The XML schema version is listed in the comments section of the schema, together with details of what has changed. See [Transaction XML Schema](#). We currently do not provide the XML version within the XML report.

How large is a typical report?

This is based on the number of your transactions and can be anything from 1Kb to 2GB. We will split up anything larger than 2GB into smaller files: eg., *filename.001*, *filenename.002* and so on.

Why does the size of a report attribute appear to exceed its limit?

When receiving a report, the size of an attribute may be larger than the expected limit. For example, the location attribute in an NCLR file may be longer than the 64 character limit. The field may also show malformed XML as a result.

This is because the report contains characters in XML that are reserved, for example, the & character, and that your XML parser has not decoded the character to its original value. To ensure that an XML file can be parsed with the correct field length containing the decoded representation of characters. client systems need to be able to decode these reserved characters through correct parsing and validation.



Do you store reports and if so, for how long?

Reports are stored for up to 2 calendar days on the sFTP server, after which they are deleted from the sFTP server. We keep an archive of historical files for a limited period . For access to historical files, please raise a JIRA request.

How can I use the XML reports?

You can use them to do the following:

- Update to your transactions database
- For transaction reconciliation purposes



Glossary

This page provides a list of glossary terms used in this guide.

A

Account Verification

A type of authorisation transaction which is intended to confirm that the account is genuine and active. Account Verifications are always for a zero amount, so only appear in Authorisation messages and never in clearing messages.

Acquirer

The merchant acquirer or bank that offers the merchant a trading account, to enable the merchant to take payments in store or online from cardholders.

Authentication

This includes checks to confirm the cardholder identity, such as PIN, CVV2 and CAVV.

Authorisation

Stage where a merchant requests approval for a card payment by sending a request to the card issuer to check that the card is valid, and that the requested authorisation amount is available on the card. At this stage the funds are not deducted from the card.

C

Card Scheme

Card network, such as MasterCard or Visa, responsible for managing transactions over the network and for arbitration of any disputes.

Chargeback

Where a cardholder disputes a transaction on their account and is unable to resolve directly with the merchant, they can raise a chargeback with their card issuer. The chargeback must be for a legitimate reason, such as goods and services not received, faulty goods, or a fraudulent transaction.

Clearing File/Clearing Transaction

Thredd receive batch clearing files from the card networks, containing clearing transactions, such as presentments and network fees. The card issuer transfers the requested settlement amount to the acquirer and 'clears' the amount on the card, reducing the available card balance accordingly.

E

External Host Interface (EHI)

The External Host Interface provides a facility to enable exchange of data between Thredd and external systems via our web services. All transaction data processed by Thredd is transferred to the External Host side via EHI in real time. For certain types of transactions, such as Authorisations, the External Host can participate in payment transaction authorisation.

I

ICA

The Interbank Card Association Number (ICA) is a five-digit number assigned by MasterCard to a financial institution, third-party processor or other member to identify the member in the transaction.

Issuer

The card issuer, typically a financial organisation authorised to issue cards. The issuer has a direct relationship with the relevant card scheme.

M

Mastercard clearing cycle

Mastercard provides 6-8 clearing updates during each day, with details of financial transactions that are due for settlement.

Merchant

The shop or store providing a product or service that the cardholder is purchasing. A merchant must have a merchant account, provided by their acquirer, in order to trade. Physical stores use a terminal or card reader to request authorisation for transactions.



Online sites provide an online shopping basket and use a payment service provider to process their payments.

Merchant Category Code (MCC)

A unique identifier of the merchant, to identity the type of account provided to them by their acquirer.

MNE (Mastercard Networks Exchange)

A US PIN debit network provider for opening access to US debit networks.

P

PGP

Pretty Good Privacy (PGP) is an encryption system used for both sending encrypted emails and encrypting sensitive files.

Presentments

Stage in a transaction where the funds authorised on a card are captured (deducted from the cardholder's account). Also known as Clearing.

Programme Manager

A Thredd customer who manages a card programme. The programme manager can create branded cards, load funds and provide other card or banking services to their end customers.

R

reconciliation cycle

Thredd receive six cycles of settlement data from Mastercard.

reconciliation date

The system processing date associated with the settlement of funds, as provided by Mastercard.

S

SAFE Reporting

You can report fraudulent transactions to Mastercard by creating a new fraud event in Mastercom, using their SAFE reporting facility (now referred to as the Mastercard Fraud and Loss Database).

sFTP

Secure File Transfer Protocol. File Transfer Protocol (FTP) is a popular unencrypted method of transferring files between two remote systems. SFTP (SSH File Transfer Protocol, or Secure File Transfer Protocol) is a separate protocol packaged with SSH that works in a similar way but over a secure connection.

Smart Client

Smart Client is Thredd's user interface for managing your account on the Thredd Platform. Smart Client is installed as a desktop application and requires a secure connection to Thredd systems in order to be able to access your account.

SSL Certification

An SSL certificate displays important information for verifying the owner of a website and encrypting web traffic with SSL/TLS, including the public key, the issuer of the certificate, and the associated subdomains.

T

Thredd Portal

Thredd Portal is Thredd's new web application for managing your cards and transactions on the Thredd Platform

U

UTC

Coordinated Universal Time or UTC is the primary time standard by which the world regulates clocks and time.



Document History

This section gives details of what has changed since the previous document release.

Version	Date	Reason	Revised by
2.1.6	25/08/2026	Included Reason Codes from 7640 to 7649 for fee collection use cases in the Mastercard International Reason Codes list.	KD
2.1.5	06/11/2025	The following attributes under the TXN element are now optional: cardholderpresent , cardpresent , cardinputmethod , cardauthmethod , and cardauthentity . These attributes under the Term element are also now optional: inputcapability and authcapability . See Sub-elements and Attributes .	KD
	23/10/2025	Removed all references to MaskedPAN.	KD
	24/09/2025	Clarified descriptions of LocalDate to specify that it is the date and time within the local timezone. See Sub-elements and Attributes as an example.	KD
	28/07/2025	Added new schema where the cardholderpresent , cardpresent , and cardinput to include empty fields, to allow for Null support. Updated the the tables for these fields in the Attributes section. See Transaction XML Schema and Sub-Elements and Attributes	KD
	12/06/2025	Added new Transaction XML schema where country and currency codes are removed (see Transaction XML Schema). Removed country and currency codes reference sections.	KD
	12/06/2025	Added Mastercard Reason Codes 7680 and 7681. See Message Reason Codes .	JB
	30/04/2025	Updated the description of the SchemeSettlementDate element. See Sub-elements and Attributes .	WS
	10/04/2025	Added currency code for the Caribbean Guilder currency (XCG) for Curacao and Sint Maartens that replaces Netherlands Antillean guilder (see ISO Currency Codes). Added Curacao and Sint Maartens to the currency list for this new currency.	KD
	13/02/2025	Added references to Thredd Portal, our new online portal for managing your cards and transactions.	KD
	06/02/2025	For the Transaction XML schema child elements, amended data types and removed child elements that are no longer in use. Amended and removed child elements in various records.	KD
	28/01/2025	Updated the description of LocalDateUTC in CardAuthorisation and CardFinancial to indicate that it is the time and date of the matching authorisation. Added LocalDateUTC with examples to Sub-Elements and Attributes .	KD
	13/12/2024	Updated FIID Element to indicate that it is not required. See CardChrdBackRepRes	KD
	11/12/2024	Updated the maximum length of the location field in the Term element to 128 characters. See Sub-elements and Attributes: Term .	WS
	21/11/2024	Added a new attribute called <i>TTI</i> (Transaction Type Identifier) to the <i>Txn</i> element. Updated minimum length requirement of PAN in <Card> to 14 digits. Added new ISO currency code: 924.	KD



Version	Date	Reason	Revised by
	04/11/2024	Updated the description of the Desc field maximum value to 500 characters. See Sub-elements and Attributes > Desc .	WS
	23/07/2024	In the CardChrgBackRepRes element, clarified that FIID , RIID , and ChargebackRefNum are populated only for Mastercard chargebacks.	WS
02/07/2024	Updated the company address.	PC	WS
2.1.4	19/06/2024	Added descriptions of the different types of chargeback records that can be provided in the CardChrgBackRepRes element.	
	24/05/2026	Changed the ReasonCode field in the CardFinancial element from mandatory to <i>If Applicable</i> .	WS
	21/06/2023	Added new values to the CashType attribute. See Sub-elements and Attributes > CashCode . Added details of Visa Dispute Reason Codes; added Mastercard Reason Codes 1403 and 1404. See Message Reason Codes .	WS
	07/06/2023	Updated Operations email address to be occ@thredd.com	MW
	27/04/2023	Guide rebrand to new company name and brand identity.	WS
2.1.3	14/03/2023	Added a new attribute called <i>TTI</i> (Transaction Type Identifier) to the <i>Txn</i> element in the CardFinancial record type. See the Txn sub-element.	WS
	08/03/2023	Updates to the Transaction XML data schemas to change the data type of <i>PresentmentID</i> from <i>unsigned Int</i> to <i>unsigned Long</i> . Added a new currency code value of 157 (CNH) to the <i>ISOCurrencyCode</i> type in the schema file. See Transaction XML Schema .	WS
	28/02/2023	Added Chinese Offshore Renminbi (currency code CNH) to the list of supported currencies. See Currency Codes .	WS
	20/02/2023	Updated XML Schema version. Trace <i>auditno</i> attribute changed from required to optional. See PRN-138.	WS
2.1.2	17/02/2023	Updated the description of the Trace element to clarify its usage. See Trace . Updated the section Matching Transaction XML Records to EHI Records to remove reference to use of <i>Trace</i> element as a unique identifier.	WS
	25/01/2023	Update to the description of the XML report file naming convention. See Transaction Data Files .	WS
	20/01/2023	Update to description of frequency of XML reports in FAQs section.	WS
	01/12/2022	Updated the Copyright Statement.	MW
2.1.1	28/10/2022	The maximum length of the <i>DE94_Txn_Orig_ID</i> field has been updated to 16. See Transaction XML Schema .	WS
	27/10/2022	Added a description of the Thredd 16-digit public token.	WS
	12/10/2022	Updates to the transaction XML filename format to include details of the applicable Production environment. See Transactional Data Files .	WS



Version	Date	Reason	Revised by
	23/09/2022	Update to the table Matching Transaction XML Records to EHI Records .	WS
2.1.0	21/09/2022	New transaction XML schema 1.45: In the <i>CardAuthorisation</i> record, the <i>Apprcode</i> element has been updated to nillable="true" Removed element: <i>FXConversion</i>	WS
	08/09/2022	Added a new Currency Code , SLE, for the new Sierra Leonean leone.	WS
	30/08/2022	A new record type called <i>VFC</i> (Visa Fee Collection) has been added to the <i>MasterCardFee</i> element. See PRN-85. The maximum length of the <i>DE94_Txn_Orig_ID</i> data element has been updated to 16. See PRN-85.	WS
2.0.9	01/09/2022	Updated CardEvent to reflect report handling for CardEvent records that exceed 2GB in size. See PRN-120.	MW
	27/07/2022	In the AgencyAccount element, the <i>sortcode</i> and <i>bankacc</i> attributes have been updated to support alphanumeric characters. See PRN-118. In the CashCode element, the <i>CashType</i> attribute has been updated to include <i>CHAPS</i> . See PRN-117.	WS
	05/07/2022	Updates made to Introduction (QMR section) and Transactional Data Files (Sending of Files section).	JB
2.0.8	09/05/2022	Added a link to the Downloads page on the Documentation Portal, where you can view and download upcoming/future schema versions.	WS
	06/04/2022	New WalletTransaction element added to the transaction XML. See PRN-100. In XSD schema file, changed the type of <i>AuthTxnID</i> from <i>unsignedint</i> to <i>unsignedlong</i> ; Added the two-digit country code SS (South Sudan) to the <i>ISOCountryCode</i> list. See Transaction XML Schema . See PRN-111. For MasterCardFee, ApprovedAgencyBanking, DeclinedAgencyBanking and DeclinedAgencyBanking, the Desc element can be empty (nillable="true"). See PRN-110. Correction: the FeeClass type of 0 is a legacy option which will never appear in a transaction XMLrecord and reference to it has been removed from the guide. Updated the description of FeeAmt in the Card Fee element.	WS
2.0.7	16/03/2022	Processing Code (<i>ProcCode</i>) = 39 is now used to identify an Account Verification transaction. See the TxnCode field in the <i>CardAuthorisation</i> element. See PRN-102. Clarified that the fee amount (FeeAmt) in the CardFinancial record is the sum total of any rate fee and fixed fee applied to the transaction.	WS
2.0.6	04/02/2022	Removed reference to the <i>ResponseFinancial</i> element in the XML Schema .	WS
	04/01/2022	The <i>ReportedToSAFE</i> event type has been added to the transaction XML Schema file.	WS
	13/12/2021	The RecordType element has been updated to include a new Visa Fee Collection (VFC) value, and the <DE94_Txn_Orig_ID> element maximum length has increased	AL



Version	Date	Reason	Revised by
		from 6 to 13. See PRN-85.	
2.0.5	19/10/2021	The CardEvent primary element has been updated to include a new <i>ReportedToSAFE</i> event type; this provides a transactionid attribute to identify a SAFE reporting transaction, but will be blank for other event types. For examples, see the Event sub-element. See PRN-75. FXConversion record updated with <i><FXRateBilled></i>	WS
2.0.4	04/11/2021	For a Visa purchase with Cashback, Thredd now sends the value of <i>ProcCode</i> as 09 (instead of 00) and includes the cashback amount in the <i>Additional_Amt_DE54</i> field. Thredd has standardised the format of the Additional_Amt_DE54 element to use the format provided by GCMS IPM / Visa Base 2, which contains only the data (a multiple of 20 characters). See PRN-72.	WS
	15/10/2021	Added a new primary element <i>FXConversion</i> to indicate Foreign Exchange (FX) rate conversion. This contains the sub-elements BookingType and BookingStatus.	AL
2.0.3	20/08/2021 15/09/2021	Added a new field <i><LocalDateUTC></i> to CardAuthorisation and CardFinancial records. This field contains the <i>LocalDateUTC</i> data that Thredd receives from Mastercard and Visa. See PRN-59. Added new appendix Load Source, which provides updated details of possible values for the source of a Load or Unload request. Removed value 0 from the type attribute in the FeeClass element, as this value is no longer supported. Updates to Card Status Codes to include new values G1-G9. See PRN-48.	WS
2.0.2	26/07/2021	Updates to include clarification on usage of actioncode and responsecode fields in the Response element. New <i><PaymentToken></i> field added to CardAuthorisation and CardFinancial records to help support Programme Manager Apple-Pay Reporting requirements. See PRN-49.	WS
2.0.1	16/06/2021	Updates to include clarification around transaction reporting times and cycle times. See Transactional Data Files. Information on XML reports available for issuers. See Introduction. New details of fields to use for matching transaction XML records to EHI records and matching financials to authorisations. See Transaction Matching The BillAmt rate and the SettlementAmt rate has been updated to show 9 decimal places. See PRN-44.	WS
2.0	25/04/2021	Major revamp to look and feel and organisation of the guide. Rewrite of content to simplify and make the guide easier to use. Updates to description of the <i><Amt></i> field. Added new element: FXConv in CardAuthorisation and CardFinancial primary elements. See PRN-37. Change to the values of the TxId field in the CardFee record. See PRN-41.	WS
1.41	29/12/2020	Added new elements Sender and Receiver in CardAuthorisation .	DM
1.40	24/12/2020	Added new RecordType element and other data changes in MastercardFee.	DM
1.39	08/12/2020	Added new BSA element in CardFinancial .	DM
1.38	23/10/2020 18/02/2021	Corrected value of 'Repeat' in example provided. Updated list of cardauthmethods and cardauthenticity	DM IF
1.37	22/10/2020	Removed IssuerReferenceNumber, added ChargebackRefNum	DM



Version	Date	Reason	Revised by
1.36.1	29/09/2020	Banking File data not mandatory.	DM
1.36	21/08/2020	Added new IssuerReferenceNumber element in Chargeback.	DM
1.35	19/08/2020	Added new value2 attribute in Financial and Chargeback.	DM
1.34	27/07/2020	Corrected PAN (Primary Account Number) length description.	VS
1.33	24/07/2020	DEV_REPORTING-396 changes added	DM
1.32	15/05/2020	SettlementIndicator available for MC too.	DM
1.31	06/05/2020	Added new element Additional_Amt_DE54	DM
1.30	04/05/2020	Corrected CardFianncial/AuthID description	DM
1.29	09/04/2020	Added new element SettlementIndicator	DM
1.28	09/04/2020	Added recon field in CardFee, productid in MasterCardFee.	DM
1.27	25/03/2020	New 5 fields added in Chargeback section: SettlementCycle, ReconciliationDate, ReconciliationCycle, Usage and Pending_Billing_Amount	DM
1.26	02/03/2020	Some fields in MasterCardFee that shows Chargeback data can be blank. Updated those details in this revision.	DM
1.25	17/12/2019	Updated inputcapability, authcapability, cardholderpresent, cardpresent, cardinputmethod, cardauthmethod and cardauthentity.	DM
1.24	5/11/2019	Updated Function_Code_024 of MastercardFee	DM
1.23	24/10/2019	Updated datatypes for AuthID, AdjustId, ChgbackRepresId, CardFeeld, TxId, FinID and LoadUnloadId, BankingId	HC
1.22	23/11/2018	Documented Agency Banking-related elements and attributes. Formatting.	IF
1.21	19/10/2018	Clarified Mastercard-only elements CCAAmount and SettlementAmount	IF
1.20	19/09/2018	Added 4.2.59 - AdjustType	DM
1.19	31/05/2018	Added 4.2.58 - SchemeSettlementDate	SN
1.18	16/04/2018	Updated 4.1.4 - CardFeeld description	IF
1.17	06/03/2018	Updated 3.1.2 - Reporting Content.	IF
1.16	27/02/2018	Removed RCC attribute from Classification. Altered proccode attribute in TxnCode	SM
1.15	26/09/2017	Updated the Account attribute “no” description Many different elements added to the MasterCard Fee section so that it matches the current file output. Added Recon, Settlement, PDS0105, and FunctionCode sub elements for the	SM IF



Version	Date	Reason	Revised by
		MasterCard Fee change above. Changed description of CardFee TxId element.	
1.14	16/08/2017	Added new Fee Class Code value 1. Updated permitted values of Fee Class element "type" and "code" attributes for Card Financials. Corrected the schedule to daily not Mon - Fri	SM SM
1.11	21/07/2016	Case of XML Element "Account", attributes "No" and "Type" changed to "no" and "type", in all recordtypes ("CardAuthorisation", "CardFinancial" etc..) Case of XML Element "Response", attributes "Approved", "Actioncode", "Responsecode" and "AdditionalDesc" are changed to: "approved", "actioncode", "responsecode" and "additionaldesc" respectively, in the "CardAuthorisation" record only. Removed ResponseFinancial element description Documented memberID attribute of FeeClass Added CCAAmount to CardFinancial	IF
1.10	26/05/2016	Changed Max Length of CardLoadUnload.MerchCode from 15 to 30.	IF
1.09	28/04/2016	Various minor corrections	IF
1.08	19/10/2015	Documented Mastercard.FeeClass element, including new membered sub-element	IF
1.07	01/06/2014	Updated description of CardFee TxId	IF
1.06	01/03/2014	Added new CardFee FeeClass Code value 6000	IF
1.05	05/04/2013	Clarified use of CardEvent Type element Added VisaCard to Account Element Clarified requirement of actioncode, responsecode and AdditionalDesc attributes of Response element. Clarified Load Type attribute	IF
1.04	22/03/2013	Amended data type of Load Type element	IF
1.03	15/03/2013	Updated SettlementDate definition in CardChrgBackRepRes	IF
1.02	14/03/2013	Moved LoadUnloadId in CardFee. Added CardEvent documentation. Changed ProgramID definition.	IF
1.01	13/03/2013	Added CycleNumber, FeeAmt, FeeClass to CardFinancial Element.	IF
1.00	12/10/2012	First draft	IF



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