Global Transaction 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 a reference guide that provides information on Thredd's Global Transaction Reporting, including the Clearing Report and the Non-Clearing Report. The guide describes the report elements, sub-elements and attributes.

Target Audience

The target audience is technical team(s) that handle the processing of the transaction report files. They 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 basic information on the report files, see the Introduction and Transactional Data Files topics.

For details about the record types and fields in the report files, see Primary Elements.

To view an example of a Clearing (CLR) transaction report file, see Clearing (CLR) Transaction Report Example.

To view an example of a Non-Clearing (NCLR) Transaction report file, see Non-Clearing (NCLR) Transaction Report Example.

Other Documentation

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

Document	Description
Global Balance Reporting 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).
Smart Client Guide	Describes how to use the Thredd Smart Client to manage your account.
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 to Thredd reports in Global Transaction Reporting. This will enable you to understand the types of reports that are available and how they are provided.

Topics covered in this section:

- Introduction
- Transactional Data Files
- Reports Data Schema

Tip: To find out what has changed, see the Document History.

1.1 Introduction

Thredd's Global Transaction Reporting provides transaction reports that you can receive at the local time you require, regardless of your organisation's timezone. This ensures that the sending of the reports are not fixed to a specific UTC time as set by Thredd. The reports contain details of transactions processed on the system during the past 24 hours, including authorisations and financial transactions for the Visa and Mastercard card schemes, as well as MNE (Mastercard Networks Exchange)and DGN (Discover Global Network).

Transaction reports use Thredd's XML reporting system for Global Transaction Reporting, which employs the Secure File Transfer Protocol (sFTP). In the reporting system, Thredd processes incoming requests from the Card Schemes (payment networks) using its real-time authorisation engine.

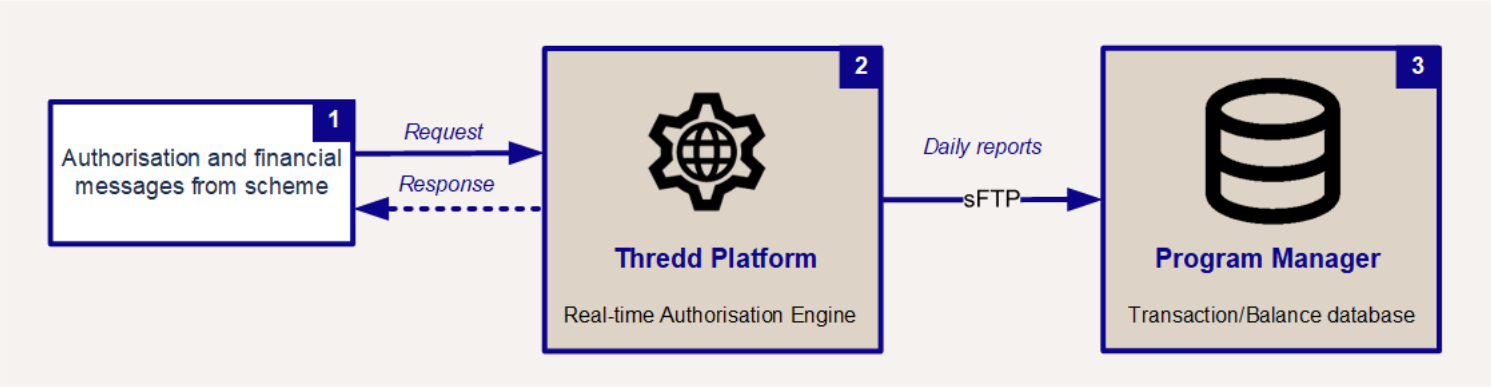

Figure 1: Global Transaction Reporting

1.1.1 Non-Clearing and Clearing Reports

Thredd's Global Transaction Reporting provides Non-clearing and Clearing reports for cardholder transactions.

The Non-Clearing Report includes data relating to authorisations, loads/unloads, balance adjustments (via webservices). The report also consists of cardholder fees generated by Thredd (you have set up in your fee groups) and other Thredd data.

The Clearing Report provides details on financials, interchange fees and chargebacks.

You can use these reports to reconcile against Mastercard or Visa settlement advices. You can also use the reports to reconcile with data received from EHI. The format and content of the transaction clearing and non-clearing data reports are described in this guide.

1.1.2 Other Types of Reports

In addition to Non-Clearing and Clearing reports, Thredd generates the:

- Balance Report
- Fee Collection Report
- Quarterly Scheme Report

Balance Report

The Balance Report is relevant where Thredd maintains details of card balances, such as in EHI modes 2, 3 and 4 or where EHI is not being used. This report provides details of the balance on each card at the time of your chosen cut-off and generation. You can use this report to confirm how much money is on the card according to Thredd systems (where Thredd maintain the balance). You can compare this to information you hold in your local card database. Like the transaction reports, you can receive reports at the local time you require regardless of your organisation's time-zone.

Fee Collection Report

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

Quarterly Scheme Report

The Quarterly Scheme Report contains quarterly data needed to fill in/submit the quarterly scheme reports:

- **Mastercard** – Quarterly Management Reports
- **VISA** – Global Operation Certificates
- **Discover** – Quarterly Scheme Report

The report include details such as the number of live cards, cards issued, and information on card activity and status. This report is provided to issuers and self-issuers. For more information, contact your Thredd Implementation Manager or Account Manager.

1.2 Transactional Data Files

For Global Transaction Reporting, Thredd can supply you with daily transaction-related data reports in the XML file format at the time settings you require. The files are delivered to you via sFTP.

Note: Bear in mind that if you need to keep transaction records over time, you must follow the right business processes for maintaining the records.

1.2.1 XML File Contents

File contents include either the Clearing Report or the Non-Clearing Report.

Clearing Report

The Clearing Report contains all the available presentments on the Thredd platform, which have been received and processed at the InitiationTime. This is data that is used for clearing. For an example of a Clearing Report, see Clearing Transaction Report Example.

Non-Clearing Report

The Non-Clearing Report contains authorisation, load, unload and fee data on the Thredd platform. This data is received and processed at the InitiationTime. For an example of a Non-Clearing Report, see Non-Clearing Transaction Report Example.

1.2.2 File Sending Schedule

Thredd can send files of generated reports at a time that meets your business requirements. For each report type, you can choose the InitiationTime, ToTime and FromTime settings. The following table summarises the time settings:

Time	Description
InitiationTime	The time of day you select for Thredd to start the generation of an individual report.
ToTime	The latest time threshold/end interval during the day for the timestamp transactions to be included in the report. InitiationTime is always >= to the ToTime.
FromTime	The earliest time threshold/start interval during the day for timestamp transactions to be included in the report. By default, FromTime = ToTime over a 24h period.
GenerationTime	The time needed to produce a report, spanning between InitiationTime and the time when the XML file for the report has been created.
TransportationTime	Disk and network time needed to copy a readily available XML file/report to the client sFTP folder.
DeliveryTime	The time when the XML file/report is available in the client's sFTP folder for pick-up.

GenerationTimes and TransportationTimes determine the DeliveryTime of the report. The DeliveryTime depends on the number or volume of transactions in the file that passed from the report InitiationTime.

By default, Thredd use the following logic for the reports:

- **Non-Clearing Report** – By default, the InitiationTime is after midnight in your selected timezone. The FromTime is 00:00 of the previous day (D-1) in relation to the InitiationTime. The ToTime is 23:59 of the previous day (D-1) in relation to the report InitiationTime.
- **Clearing Report**– The Initiation, From and ToTimes are selectable (FromTime = ToTime over a 24h period).

Card Scheme and Gateway Provider Considerations

If you want your Clearing Reports to include Visa and Mastercard transactions, you need to consider the clearing cycles for these card schemes. The clearing cycles can influence the XML file sending schedule from Thredd for the Clearing Reports. For MNE[1] gateway transactions, the clearing cycles **do not** apply. This is because MNE sends transactions that are SMS messages, where authorisation and clearing data are in the same message. When Thredd sends to you MNE transactions data, these are included within **Non-Clearing Reports**.

The clearing cycles are summarised as follows:

- **Mastercard** – There are 6 clearing cycles per day, seven days per week. After each clearing cycle, Mastercard sends Thredd clearing files, which contain the settlement data. Data from cycles 5-6 from the night before and 1-4 from current day form a compete settlement day picture for most regions. These contain all the information you need to reconcile your settlements with Mastercard.
- **Visa**– Visa provide 2 clearing files (Domestic and International) each day. For International visa cycles, different timings exist for some regions (For example, Australia and Hong Kong). There is a maximum file size where, for the largest clients, it is possible that more than one Domestic and/or International file will be received on the same day. Visa domestic cycles start at 9 am, while international cycles start at mid-day. The clearing cycles occur for 7 days a week.
- **Discover**– Discover implement one release cycle per day.

1.2.3 File Naming Convention

The transaction report files that you receive from Thredd use the following naming convention:

Type of Report	Environment	Naming Convention
Non-Clearing Report	PX	THRD-PPPP-NCLR-YYYYMMDDHHMM-YYYYMMDDHHMM.PX.xml
Clearing Report	PX	THRD-PPPP-CLR-YYYYMMDDHHMM-YYYYMMDDHHMM.PX.xml

Where:

- **THRD** – Abbreviation for Thredd.
- **PPPP** – Programme manager code or name.
- **NCLR** – Report code. NCLR is for a Non-Clearing file and CLR is for a clearing file.
- **YYYYMMDDHHMM** – FromTime, first occurrence after report code. This includes YYYY for year (4 digits), MM for month (2 digits) and DD for day (2 digits).
- **YYYYMMDDHHMM** – ToTime, second occurrence after report code). This includes YYYY for year (4 digits), MM for month (2 digits) and DD for day (2 digits).
- **PX** - Thredd production environment used to generate the report, value of X indicating the exact environment.

Examples

The following shows examples of files for a Non-Clearing Report and Clearing Report.

Example	Type of Report	Description
THRD-ABC-NCLR-202401250000-202401260000.P1.xml	Non-Clearing Report	This file includes a snapshot of all non-clearing transactions recorded for the ABC program manager, available on the Thredd platform. The file includes the respective statuses at the report InitiationTime with a timestamp between the 25th of January 2024, 00:00 and the 26th of January 2024, 00:00 on Thredd's Production 1 environment.
THRD-ABC-CLR-202402151400-202402161400.P2.xml	Clearing Report	This file includes a snapshot of all clearing transactions recorded for the ABC program manager, available on the Thredd platform. This file includes the respective statuses at the report InitiationTime with a timestamp between the 15th of February 2024, 14:00 and the 16th of February 2024, 14:00 on Thredd's Production 2 environment.

[1] MNE (Mastercard Networks Exchange) This is a US PIN debit network provider for opening access to US debit networks.

Note: For details on which production environment applies to your programme, check with your Thredd implementation manager or account manager.

Regenerated Reports

Thredd includes _REG in the filename of a Non-Clearing Report or Clearing Report for regeneration. The filenames can include the following naming conventions:

- THRD-PPPP-NCLR-YYYYMMDDHHMM-YYYYMMDDHHMM_REG.PX.xml
- THRD-PPPP-CLR-YYYYMMDDHHMM-YYYYMMDDHHMM_REG.PX.xml

Example	Type of Report	Description
THRD-ABC-NCLR-202501250000-202501260000_REG.P1.xml.	Non-Clearing Report	The regenerated report includes the same timestamp as the original report recorded for the ABC program manager. In this case, the timestamp of the original report is between the 25th of January 2025, 00:00 and the 26th of January 2025, 00:00. The report is regenerated in the P1 production environment.
THRD-ABC-CLR-202502151400-202502161400_REG.P2.xml.	Clearing Report	The regenerated report includes the same timestamp as the original report recorded for the ABC program manager. In this case, the timestamp of the original report is between the 15th of February 2025, 14:00 and the 16th of February 2025, 14:00. The report is regenerated in the P2 production environment.

Note: Thredd increments a number for multiple regenerations. For example, the filename is as follows for a second regeneration of a Non-Clearing Report: THRD-MCB-NCLR-202401250000-202401260000_REG.P1(1).xml.

1.2.4 Encryption and Encoding

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

All of the XML data files are well-formed XML (UTF-8 encoded).

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

1.3 Transaction Matching

All transactions reported to Thredd via the card schemes (Visa, Mastercard, MNE, and Discover) are included in the Clearing Report and the Non-Clearing Report, as well as the EHI data feed. You can use the information in these reports to match and reconcile against data received via EHI, check for any duplicate records, and match authorisation records. When matching authorisation records, you can match advices and reversals to financial records (for example, presentments and chargebacks.)

1.3.1 Matching Authorisations to Financial Records

You can use the following fields to match records in each of the reports:

Field Type	Non-Clearing report: CardAuthorisation Record	Clearing report: 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
Information for uniquely identifying a transaction	Trace	-

1.3.2 Matching Transaction Records to EHI Records

You can use the following fields to match transaction records in the reports to EHI records:

Field Type	Transaction Report Record	EHI Record
Unique identifier of the card linked to the transaction (available in both the Clearing Report and the Non-Clearing Report)	PAN	Token
Unique identifier of an authorisation transaction (available in both the Clearing and Non-Clearing Report)	AuthId	TXn_ID
Unique identifier of a financial record (available in the Clearing Report)	FinId	TXn_ID

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

1.4 Reports Data Schema

The data schemas for the Non-Clearing Report and Clearing Report in Global Transaction Reporting describe their structure and possible data values within those reports.

You can validate each transaction XML file you receive from Thredd against the provided Schema (XSD file). This ensures that the transaction file is in the correct format.

The data schemas for the Non-Clearing Report and Clearing Report are subject to change as the standard evolves. When Thredd updates either XSD report file, Thredd implements a new version and notifies you.

1.4.1 Schema Versions

Schema files are versioned according to changes in the schemas. The schema filename indicates the schema version number. There is a comments section in each schema file that provides details of the version changes. Thredd sends schema files when a new version of the XML is published.

For an example of the current data schema, see the Non-Clearing Report XML Data Schema and Clearing Report XML Data Schema.

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 the transaction reports for Global Transaction Reporting.

Topics covered in this section:

- Primary Elements

Non-Clearing Report

- CardAuthorisation
- CardOnline Financial
- CardFee
- CardLoadUnload
- ApprovedAgencyBanking
- DeclinedAgencyBanking
- AgencyBankingFee
- CardBalAdjust
- CardEvent

Clearing Report

- CardFinancial
- CardFee (interchange)
- MasterCardFee
- CardChrgBackRepRes

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.

Note: For Discover Global Network reporting, Thredd use the new Global Transaction reporting format, which separates primary element into two separate reports:
• **Non-clearing report** – containing authorisation and other real-time messages.
• **Clearing report** – containing financial messages based on the card scheme's release cycles (Discover implement one release cycle per day).

Element Name	Description	Data Type	Occurs
Non-Clearing Report Primary Elements			
CardAuthorisation	Describes an Authorisation or Reversal.	<CardAuthorisation>	0 - n
CardOnlineFinancial	Describes single message transactions for the requirements of card payment networks in the US. **Note**: Not applicable to the Discover Global Network.	<CardOnlineFinancial>	0 - n
CardFee (Interchange)	Describes a fee (and commission). **Note**: Not applicable to the Discover Global Network.	<CardFee>	0 - n
CardLoadUnload	Describes loading and unloading of a card. **Note**: Not applicable to the Discover Global Network.	<CardLoadUnload>	0 - n
ApprovedAgencyBanking	Describes an approved Agency Banking transaction (relevant only if you are using the Agency Banking service) **Note**: Not applicable to the Discover Global Network.	<ApprovedAgencyBanking>	0 - n
DeclinedAgencyBanking	Describes declined Agency Banking transaction (relevant only if you are using the Agency Banking service) **Note**: Not applicable to the Discover Global Network.	<DeclinedAgencyBanking>	0 - n
AgencyBankingFee	Describes any bank charges applied to Agency Banking transaction (relevant only if you are using the Agency Banking service). **Note**: Not applicable to the	<AgencyBankingFee>	0 - n

Element Name	Description	Data Type	Occurs
	Discover Global Network.		
CardBalAdjust	Describes a card account Balance Adjustment or Reversal. **Note**: Not applicable to the Discover Global Network.	<CardBalAdjust>	0 - n
CardEvent	Describes a card status change event. **Note**: Not applicable to the Discover Global Network.	<CardEvent>	0 - n
Clearing Report Primary Elements			
CardFinancial	Describes a Financial Advice or Financial Reversal.	<CardFinancial>	0 - n
CardFee	Describes a fee (and commission). **Note**: Not applicable to the Discover Global Network.	<CardFee>	0 - n
MasterCardFee	Describes a Financial Advice or Financial Reversal MasterCard fee.	<MasterCardFee>	0 - n
CardChrgBackRepRes	Describes a Chargeback, Chargeback Reversal, Representment or Representment Reversal.	<CardChrgBackRepRes>	0 - n

Note: 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.

Non Clearing Report XML Example

This example shows the Primary Elements in a Non Clearing Report.

```
<?xmlversion="1.0"encoding="utf-8"?>
<Transactions>
   <CardAuthorisation>…detail ommitted…</CardAuthorisation>
   <CardOnlineFinancial>…detail ommitted…</CardOnlineFinancial>
   <CardFee>…detail ommitted…</CardFee>
   <CardLoadUnload>…detail ommitted…</CardLoadUnload>
   <CardBalAdjust>…detail ommitted…</CardBalAdjust>
   <CardEvent>…detail ommitted…</CardEvent>
   <ApprovedAgencyBanking>…detail ommitted…</ApprovedAgencyBanking>
   <AgencyBankingFee>…detail ommitted…</AgencyBankingFee>
</Transactions>
```

Clearing Report XML Example

This example shows the Primary Elements in a Clearing Report.

```
<?xmlversion="1.0"encoding="utf-8"?>
<Transactions>
   <CardFinancial>…detail ommitted…</CardFinancial>
   <CardFee>…detail ommitted…</CardFee>
   <MasterCardFee>…detail ommitted…</MasterCardFee>
```

```
   <CardChrgBackRepRes>…detail ommitted…</CardChrgBackRepRes>
</Transactions>
```

Non-clearing Report Elements

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 *Advice* or *Reversal*.	<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 identitifier for this CardAuthorisation record.	xs:unsignedLong	Yes	0 to 2^64
AuthTxnId	Alternative unique identitifier of a CardAuthorisation record.	xs:unsignedInt	Yes	0 to 2^32
LocalDate	The date and time the record was generated by the terminal (POS or ATM) or acquirer.	<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 SettlementDatesub-element
Card	Details of the card used in the transaction.	<Card>	Yes	See the Cardsub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Accountsub-element
TxnCode	Indicates the type of transaction.	<TxnCode>	Yes	See the TxnCode sub-element
TxnAmt	Indicates the value of	<BasicAmount>	Yes	See theTxnAmt sub-

Child Element	Description	Data Type	Required	Constraints / Permitted Values
	the transaction requested by the cardholder.			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 *Card Acceptor Identifier*).	<MerchCode>	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 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	

Child Element	Description	Data Type	Required	Constraints / Permitted Values
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 CardAuthorisation reversals).	<ReversalReason>	If Applicable	Only applicable if the RecType is “REV”. 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	<Receiver>	If Applicable	See the Receiver sub-element

Child Element	Description	Data Type	Required	Constraints / Permitted Values
	payment, where there is a money transfer. **Note**: Not applicable to Discover Global Network.			

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="9999999999999995" MaskedPAN="999999******9995" product="MCRD" MVC="N" 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" />
    <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 CardOnlineFinancial

The CardOnlineFinancial primary element is used for single message transactions for the requirements of card payment networks in the US.

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

Child Element	Description	Data Type	Required	Constraints / Permitted Values
RecType	Record type, indicates Advice or Reversal.	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 subelement
OnlineFinId	Unique identitifier for the CardOnlineFinancial record. record.	xs:unsignedLong	Yes	0 to 2^64
OnlineFinTxnId	Alternative identifier of the CardOnlineFinancial record.	xs:unsignedInt	Yes	0 to 2^32
LocalDate	The date and time the record was generated by the terminal (POS or ATM) or acquirer.	<LocalDate>	Yes	See the LocalDate sub-element.
LocalDateUTC	The transaction date and Time in UTC as received from Mastercard, Visa and MNE.	Numeric	Yes	Format:MMDDHHMMSS 10 digits
SettlementDate	The date the transaction was processed (in UK time).	<SettlementDate>	Yes	See the SettlementDate sub-element
SchemeSettlementDate	Settlement date value for the transaction by Mastercard, Visa, Thredd or MNE.	xs:string	Yes	4-digit format of mmyy
SchemeReconciliationDate	The Mastercard/Visa/MNE reconciliation date for the transaction.	xs:string	Yes	4-digit format of mmyy
CycleNumber	Reconciliation cycle number (relevant to Mastercard only).	<CycleNumber>	Yes	Currently, this is set to 1.
Card	Provides 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

Child Element	Description	Data Type	Required	Constraints / Permitted Values
TxnCode	Indicates the type of transactions.	<TxnCode>	Yes	See the TxnCode sub-element
TxnAmt	The transaction amount.	<BasicAmount>	Yes	See the TxnAmt sub-element
CashbackAmt	The Cashback amount (if applicable).	<Basicmount>	Yes	See the CashbackAmt sub-element
BillAmt	The amount posted to the cardholder account, which does not include interchange.	<RateAmount>	Yes	See the BillAmt sub-element
SettlementAmt	The amount posted to the settlement account.	<SettlementAmt>	Yes	See the Settlement sub-element
OrigTxnAmt	Original Transaction Amount. The value of the original transaction requested by the cardholder. This is used where there are partial amounts.	<PartialAmount>	Yes	See the OrigTxnAmtsub-element
Additional_Amt_DE54	Additional amounts field where additional fees such as card network fees are held.	<Additional_Amt_DE54>	No	See the Additional_Amt_DE54 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. (Mastercard only; Visa is empty)	<Trace>	Yes	See the Trace sub-element
MerchCode	A unique code identifying the Merchant (also known as the Card Acceptor Identifier.)	<MerchCode>	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 and authentication properties used in a transaction.	<Txn>	Yes	See the Txn sub-element
MsgSource	Describes the derivative source of the record.	<MsgSource>	Yes	Currently, this is only used for Visa.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
Rate_Fee	The amount of any rate-based POS or ATM fee that wascharged.	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. Commission is defined as an 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
ReversalReason	The reason for the reversal. This is only used in CardAuthorisation reversals.	<ReversalReason>	Yes	See the ReversalReason sub-element
PaymentToken	This element is populated from payment token data when used for the transaction. If a payment token is not used, then the PaymentToken element is omitted.	<PaymentToken>	Yes	See the PaymentToken sub-element
Sender	Provides details of the sender of the payment, where there is a money transfer.	<Sender>	No	See the Sender sub-element
Receiver	Provides details of the receiver of the payment, where there is a money transfer.	<Receiver>	No	See the Receiver sub-element
FIID	Forwarding Institution identification code.	<FIID>	No	See the FIID sub-element
SettlementIndicator	Indicator for Domestic or International settlement.	<SettlementIndicator>	No	See the SettlementIndicator sub-element
BSA	Business Service Arrangement type code (Mastercard only; Visa will always be empty).	<BSA>	No	See the BSA sub-element

Example (Advice)

```
<CardOnlineFinancial>
    <RecType>ADV</RecType>
    <Auth_type>0</Auth_type>
    <OnlineFinId>3762559204</OnlineFinId>
    <OnlineFinTxnId>0</OnlineFinTxnId>
    <LocalDate>20200110000400</LocalDate>
    <LocalDateUTC />
    <SettlementDate>20200110</SettlementDate>
    <SchemeSettlementDate />
    <SchemeReconciliationDate />
    <CycleNumber>1</CycleNumber>
    <Card PAN="7593112748461123" MaskedPAN="759311******1123" product="VISA" MVC="Y"
    programid="567" productid="5687" branchcode="" />
    <Account no="311274846" type="02" />
    <TxnCode direction="debit" Type="pos" Group="pos" ProcCode="000000" Partial="NA" FeeWaivedOff="0" />
    <TxnAmt value="10.00" currency="826" />
    <CashbackAmt value="0.00" currency="826" />
    <BillAmt value="10.00" currency="826" rate="0.000000" clientfxrate="0.00000000" />
    <SettlementAmt value="10.00" currency="826" rate="1.000000" />
    <OrigTxnAmt value="10.00" currency="826" />
    <Additional_Amt_DE54 />
    <ApprCode />
    <Trace auditno="862644" origauditno="862644" Retrefno="" />
    <MerchCode />
    <Term code="" location="" street="" city="" country="GB" inputcapability="0" authcapability="12" />
    <Schema>VISA</Schema>
    <Txn cardholderpresent="9" cardpresent="9" cardinputmethod="0" cardauthmethod="8" cardauthentity="8" />
    <MsgSource value="54" domesticMaestro="no" />
    <Rate_Fee value="0.00" />
    <Fixed_Fee value="2.00" />
    <CommissionAmt value="2.00" currency="826" />
    <Classification MCC="" />
    <Response approved="yes" actioncode="0" responsecode="" additionaldesc=" The Local Bank London GB" />
    <ReversalReason />
    <PaymentToken id="" creator="" expdate="" type="" status="" creatorstatus="" wallet="" devicetype="" lang=""
    activationexpiry="" activationmethod="" />
    <FIID />
    <SettlementIndicator />
    <BSA />
</CardOnlineFinancial>
```

2.4 CardFee

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

Note: The CardFee element is present in both Clearing Reports and Non-Clearing Reports. The Clearing report contains any interchange fees and the Non-Clearing report contains any non-interchange fees. For details, the FeeClasssub-element.

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

Child Element	Description	Data Type	Required	Constraints / Permitted Values
CardFeeId	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 CardFeeId.	xs:unsignedLong	Yes	0 to 2^64
LocalDate	The date and time the terminal (POS or ATM) or acquirer generates the record.	<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 Cardsub-element
Account	Provides details of the cardholder account related to the fee.	<Account>	Yes	See the Accountsub-element
TxId	If applicable, the *FinId* of the related *CardFinancial* (transaction) record for this CardFee record (foreign key). For Fee Collection rrecords, it shows the *AuthId* of the related *CardAuthorisation* record (if found) If a matching *CardAuthorisation* or *CardFinancial* 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 *Card Acceptor Identifier*)	<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 FeeClasssub-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 Descsub-element
FeeAmt	The FeeAmt represents the fee amount.	<Direction	No	See the FeeAmtsub-

Child Element	Description	Data Type	Required	Constraints / Permitted Values
	This has the following behaviour: • When FeeClass type is 1 then it is 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.	Amount>		element
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 Amtsub-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 FIIDsub-element
ReasonCode	Message reason code.	xs:string	Yes	Only applicable for settlement See Message_Reason_Codes.htm For Fees, see the FeeClasssub-element
Recon	Details of the reconciliation.	<Recon>	No	See the Reconsub-element

Non-Clearing Report Example

```
<CardFee>
  <CardFeeId>13961469923</CardFeeId>
  <LocalDate>20240213033057</LocalDate>
  <SettlementDate>20240213</SettlementDate>
  <Card PAN="1132466665781123" MaskedPAN="113246******1123" product="MCRD" programid="ONEUKA"
  productid="4368" branchcode="00000000" />
  <Account no="246666578" type="01" />
  <TxId>13961469923</TxId>
  <FeeClass interchangeTransaction="no" type="1" code="1000" />
  <LoadUnloadId>0</LoadUnloadId>
  <Desc>CCB ATM A5600225       DOLNA BANYA   BGR</Desc>
  <FeeAmt value="0.50" currency="826" direction="debit" />
  <Amt value="0.50" currency="826" direction="debit" />
  <ReasonCode />
</CardFee>
```

Clearing Report Example

```
<CardFee>
  <CardFeeId>843249</CardFeeId>
  <LocalDate>20190326000000</LocalDate>
  <SettlementDate>20200103</SettlementDate>
  <Card PAN="8062328177229342" MaskedPAN="806232******9342" 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>
```

2.5 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.	<LocalDate>	Yes	See the LocalDate sub-element
SettlementDate	The settlement date and time for the Load/Unload.	<SettlementDate>	Yes	See the SettlementDatesub-element
Card	Provides details of the card's attributes.	<Card>	Yes	See the Cardsub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Accountsub-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" MaskedPAN="579288******4123" product="MCRD" programid="POCKIT05"
    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>
```

2.6 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="1132466669224123" MaskedPAN="113246******4123" 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>
```

2.7 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: • 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 name of the file 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 SettlementDatesub-element
Card	Provides details of the card used in the transaction.	<Card>	Yes	See the Cardsub-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 Externalsub-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 DeclineReasonsub-

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" MaskedPAN="113273******5123" 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>
```

2.8 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 identitifier 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 Cardsub-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 Amtsub-element

Example

```
<AgencyBankingFee>
    <BankingFeeId>902400</BankingFeeId>
    <SettlementDate>20200101</SettlementDate>
    <Card PAN="8063993043846328" MakedPAN="806399******6328" 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>
```

2.9 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.	<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 Cardsub-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 Descsub-element
AdjustType	The type of adjustment: *Actual* or *Block*.	<AdjustType>	Yes	See the AdjustType sub-element

Example

```
<CardBalAdjust>
    <LocalDate>20240213010242</LocalDate>
    <AdjustId>13961012925</AdjustId>
    <SettlementDate>20240213</SettlementDate>
    <Card PAN="5271278671128123" MaskedPAN="527127******8123"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>
```

2.10 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" MaskedPAN="579304******7123" productid="1463" />
    <Event Type="Activation" Source="2" ActivationDate="20240213161108" StatCode="" OldStatCode="" Date="20240213161108" trans-
actionid="" />
</CardEvent>
```

Clearing Report Elements

2.11 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 *Advice* or *Reversal*.	xs:string	Yes	Valid values are: ADV, REV
FinId	Unique identitifier 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 identitifier for this CardFinancial Record, primary key in Thredd.	xs:unsignedLong	Yes	0 to 2^32
LocalDate	The local date/time of the transaction (where the transaction was done).	<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

Child Element	Description	Data Type	Required	Constraints / Permitted Values
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 Cardsub-element
Account	Provides details of the cardholder account.	<Account>	Yes	See the Accountsub-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
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. (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 know as the *Card Acceptor Identifier*)	<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

Child Element	Description	Data Type	Required	Constraints / Permitted Values
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 derivation and nature of the fee.	<FeeClass>	Yes	See the FeeClass sub-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 InstitutionIdentification 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

Child Element	Description	Data Type	Required	Constraints / Permitted Values
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 Arrangement type code (Mastercard only; Visa will always be empty). **Note**: Not applicable to Discover Global Network.	<BSA>	If applicable	See the BSA 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
UniqueTransactionReference	Unique transaction reference. Not applicable to Visa.	<UniqueTransactionReference>	If applicable	See UniqueTransactionReference sub-element

Child Element	Description	Data Type	Required	Constraints / Permitted Values
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" MaskedPAN="748102******1502" product="MCRD" MVC="Y" 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" />
    <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>
```

2.11 CardFee

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

Note: The CardFee element is present in both Clearing Reports and Non-Clearing Reports. The Clearing report contains any interchange fees and the Non-Clearing report contains any non-interchange fees. For details, the FeeClasssub-element.

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

Child Element	Description	Data Type	Required	Constraints / Permitted Values
CardFeeId	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 CardFeeId.	xs:unsignedLong	Yes	0 to 2^64
LocalDate	The date and time the terminal (POS or ATM) or acquirer generates the record.	<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 Cardsub-element
Account	Provides details of the cardholder account related to the fee.	<Account>	Yes	See the Accountsub-element
TxId	If applicable, the *FinId* of the related *CardFinancial* (transaction) record for this CardFee record (foreign key). For Fee Collection rrecords, it shows the *AuthId* of the related *CardAuthorisation* record (if found) If a matching *CardAuthorisation* or *CardFinancial* 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 *Card Acceptor Identifier*)	<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 FeeClasssub-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 Descsub-element
FeeAmt	The FeeAmt represents the fee amount.	<Direction	No	See the FeeAmtsub-

Child Element	Description	Data Type	Required	Constraints / Permitted Values
	This has the following behaviour: • When FeeClass type is 1 then it is 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.	Amount>		element
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 Amtsub-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 FIIDsub-element
ReasonCode	Message reason code.	xs:string	Yes	Only applicable for settlement See Message_Reason_Codes.htm For Fees, see the FeeClasssub-element
Recon	Details of the reconciliation.	<Recon>	No	See the Reconsub-element

Non-Clearing Report Example

```
<CardFee>
    <CardFeeId>13961469923</CardFeeId>
    <LocalDate>20240213033057</LocalDate>
    <SettlementDate>20240213</SettlementDate>
    <Card PAN="1132466665781123" MaskedPAN="113246******1123 product="MCRD" programid="ONEUKA" productid="4368"
branchcode="00000000" />
    <Account no="246666578" type="01" />
    <TxId>13961469923</TxId>
    <FeeClass interchangeTransaction="no" type="1" code="1000" />
    <LoadUnloadId>0</LoadUnloadId>
    <Desc>CCB ATM A5600225       DOLNA BANYA   BGR</Desc>
    <FeeAmt value="0.50" currency="826" direction="debit" />
    <Amt value="0.50" currency="826" direction="debit" />
    <ReasonCode />
  </CardFee>
```

Clearing Report Example

```
  <CardFee>
    <CardFeeId>843249</CardFeeId>
    <LocalDate>20190326000000</LocalDate>
    <SettlementDate>20200103</SettlementDate>
    <Card
```

```
PAN="8062328177229342" MaskedPAN="806232******9342" 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>
```

2.12 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.
MastercardFeeId	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 *Mastercard IPM Clearing Formats manual*.
LocalDate	The local date and time of the transaction.	<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, this field provides details	<Direction Amount>	Yes	See the FeeAmt sub-element.

Child Element	Description	Data Type	Required	Constraints / Permitted Values
	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>013701766700000000000000014800497820158030MCC3050012
    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>T112.00119011400000001705302201     </File_ID_PDS0105>
    <FileProcessDate>20200120054648</FileProcessDate>
    <Recon date="20200120" cycle="02" />
    <Settlement date="20210121" cycle="01" />
  </MasterCardFee>
```

2.13 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 identitifier for this CardChrgBackRepRes record.	xs:unsignedLong	Yes	0 to 2^64
LocalDate	The date and time the record was generated by the terminal (POS or ATM) or acquirer.	<LocalDate>	Yes	See the LocalDate sub-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 Cardsub-element
Account	Details of the cardholder account.	<Account>	Yes	See the Accountsub-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	<BasicAmount>	Yes	See the CashbackAmt sub-element

Child Element	Description	Data Type	Required	Constraints / Permitted Values
	Discover Global Network.			
BillAmt	The amount posted to the cardholder account. This 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. **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 *Card Acceptor Identifier*).	<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 source of the record.	<MsgSource>	Yes	See the MsgSource 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.	<RIID>	Yes	See the RIID sub-element

Child Element	Description	Data Type	Required	Constraints / Permitted Values
	Note: Only applicable to Mastercard chargebacks.			
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-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 *Domestic* or *International* 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.	<ChargebackRefNum>	If applicable	See the ChargebackRefNum

Child Element	Description	Data Type	Required	Constraints / Permitted Values
	Note: Only applicable to Mastercard chargebacks. **Note**: Not applicable to Discover Global Network.			sub-element

Example

```
<CardChrgBackRepRes>
    <RecordType>CB</RecordType>
    <ChgbackRepresId>2300500740</ChgbackRepresId>
    <LocalDate>20210121003337</LocalDate>
    <SettlementDate>20210121</SettlementDate>
    <Card PAN="8063463816397253" MaskedPAN="806346******7253" 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>
```

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

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: Value: Description 00: Domestic Maestro 01: MasterCard 02: VisaCard

Example

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

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:

Description	Base Data Type	Required	Constraints / Permitted Values
			Value: 0 — Normal/undefined Value: P — Preauth where the amount is an estimate. Value: F — Final authorisation where the amount is correct and for the full amount. Value: 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.
MaskedPAN	Masked Primary Account Number (PAN) where six of the digits are replaced with the * character.	<PAN>	Required	See MaskedPAN
productID	The Thredd product ID associated with the card.	numeric	No	Numeric, maximum 5 characters.
MVC	Indicates whether or not the token is a Master Virtual Card (MVC)	xs:string	No	Alphanumeric string, maximum 1 character.

Example

```
<Card PAN="1234567812345678"MaskedPAN="999999******9995"product="MCRD"MVC="N"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:

CashType	Description
bac	BACS
CHAPS	CHAPS
fpy	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 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

<table>
<tr><th>Attribute</th><th>Description</th><th>Data Type</th><th>Required</th><th>Constraints / Permitted Values</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><th>CashType</th><th>Description</th></tr>
<tr><td></td><td>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>SEPAOut</td><td>Outbound SEPA 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>
</td></tr>
<tr><td>CashGroup</td><td>The summary group type of the transaction.</td><td>xs:string</td><td>Yes</td><td>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>
</td></tr>
</table>

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.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
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 chararacters: Value: Description 00: Not specified 01: Insufficient funds 02: Maximum number of transactions exceeded 03: Transaction exceeds maximum permitted value 04: Maximum account balance exceeded 05: Black listed destination 06: Not a valid account 07: Account closed 08: Cardholder deceased 09: No valid Direct Debit instruction

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.
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 • PINTriesExceeded • 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 *Web Services Guide*. 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 *Status Codes* in the *Web Services Guide*.
OldStatCode	Status code of the card before the event.	xs:string	Yes	See *Status Codes* in the *Web Services Guide*.
Date	Date and time of the event (UK daylight savings time).	xs:string	Yes	Format: YYYYMMDDHHMMSS
transactionid	The unique transaction ID for a *ReportedToSafe* event. This event can be used to track Mastercard SAFE reporting transactions.	xs:string	If applicable	Numeric. Only applicable if the event Type is *ReportedToSAFE*.

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	Decimal value.

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 *yes* and *no* 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.
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. Value / Description: 0 Not Specified 1 Cash 2 Debit card 3 Credit Card 4 Import 5 Savings Stamps 6 Cheque 7 Standing Order 8 Export 9 Transfer 10 Funding Card 11 From/To Offline Balance

Example

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

LocalDate

The LocalDate element describes the date and time when the message was received from the card network in local UK time.

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 *2:20.33*pm 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 *yes* and *no* 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>Attribute</th><th>Description</th><th>Data Type</th><th>Required</th><th>Constraints / Permitted Values</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<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>
</td></tr>
<tr><td>code</td><td>Specifies the type of cardholder fee.</td><td>xs:string</td><td>Yes</td><td>0</td></tr>
<tr><td>memberid</td><td>Specifies the Mastercard Member ID (i.e. ICA)</td><td>xs:string</td><td>Yes</td><td>Maximum 6 characters.
Note: This element is only present when the container element of FeeClass is “MastercardFee”.</td></tr>
</table>

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.

<table>
<tr><th>Attribute</th><th>Description</th><th>Data Type</th><th>Required</th><th>Constraints / Permitted Values</th></tr>
<tr><td>value</td><td>The source from which this message is derived.</td><td>xs:decimal</td><td>Yes</td><td>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></td></tr>
<tr><td>domesticMaestro</td><td>Indicates Domestic Maestro.</td><td><domestic Maestro></td><td>Yes</td><td>See domesticMaestro.</td></tr>
</table>

Example

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

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

<table>
<tr><th>Attribute</th><th>Description</th><th>Data Type</th><th>Required</th><th>Constraints / Permitted Values</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table><tr><th>Value</th><th>Description</th></tr><tr><td>05-10</td><td>Reserved</td></tr></table></td></tr>
<tr><td>idnbr</td><td>Id number</td><td>xs:string</td><td>No</td><td>Alphanumeric, maximum 99 characters.</td></tr>
<tr><td>idctrycode</td><td>ID Country Code</td><td>xs:string</td><td>No</td><td>Normally 3-character alpha ISO code</td></tr>
<tr><td>nationality</td><td>Nationality</td><td>xs:string</td><td>No</td><td>Normally 3-character alpha ISO code</td></tr>
<tr><td>phonenumber</td><td>Phone Number</td><td>xs:string</td><td>No</td><td>Alphanumeric, maximum 99 characters.</td></tr>
<tr><td>idexpdate</td><td>ID expiry Date</td><td>xs:string</td><td>No</td><td>Format: MMDDYYYY</td></tr>
<tr><td>acctnbrtype</td><td>Account Number Type</td><td>xs:string</td><td>No</td><td><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></td></tr>
<tr><td>birthctry</td><td>Birth Country</td><td>xs:string</td><td>No</td><td>Normally 3-character alpha ISO code</td></tr>
<tr><td>fundssource</td><td>Fund Source</td><td>xs:string</td><td>No</td><td><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></td></tr>
<tr><td>claimcode</td><td>Claim Code</td><td>xs:string</td><td>No</td><td>Alphanumeric, maximum 99 characters.</td></tr>
</table>

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 *MCB*. 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 *MCF*, refer to the MasterCardFee record for details of pre-aribtration and arbitration case filing fees.	xs:string	Maximum length 3. Value: FC — From FeeCollection. Value: MCB — Mastercom Chargebacks. Raised either via Mastercom UI or Mastercom SmartClient API. Value: MCF — Mastercom pre-arbitration or arbitration case filing. Raised either via Mastercom UI or Mastercom Smartclient API. Value: 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 *ResponseStatus* 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 *ResponseStatus* 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 *ResponseStatus* 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>
```

Schema

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:

<table>
<tr><th>Attribute</th><th>Description</th><th>Data Type</th><th>Required</th><th>Constraints / Permitted Values</th></tr>
<tr><td></td><td></td><td></td><td></td><td><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></td></tr>
<tr><td>idnbr</td><td>Identification number (e.g. passport or driver license number)</td><td>xs:string</td><td>No</td><td>Alphanumeric, maximum 99 characters.</td></tr>
<tr><td>idctrycode</td><td>ID country code (e.g. 826)</td><td>xs:string</td><td>No</td><td>Normally 3-character alpha ISO code.</td></tr>
<tr><td>nationality</td><td>Nationality</td><td>xs:string</td><td>No</td><td>Normally 3-character alpha ISO code.</td></tr>
<tr><td>phonenumber</td><td>Phone number</td><td>xs:string</td><td>No</td><td>Alphanumeric, maximum 99 characters.</td></tr>
<tr><td>idexpdate</td><td>Identification expiry date</td><td>xs:string</td><td>No</td><td>Format: MMDDYYYY</td></tr>
<tr><td>acctnbrtype</td><td>The type of account number</td><td>xs:string</td><td>No</td><td><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></td></tr>
<tr><td>birthctry</td><td>Country of birth</td><td>xs:string</td><td>No</td><td>Normally 3-character alpha ISO code.</td></tr>
<tr><td>fundssource</td><td>Source of funds</td><td>xs:string</td><td>No</td><td><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></td></tr>
</table>

Attribute	Description	Data Type	Required	Constraints / Permitted Values
				Code: 06 — Meaning: 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>

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>	Yes	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, auditno cannot be used to provide a unique reference. **Tip**: You can use the AuthId 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>	Yes	See cardholderpresent.
cardpresent	Indicates whether the card was present during the transaction.	<cardpresent>	Yes	See cardpresent.
cardinputmethod	The method used to input the information from the card to the terminal.	<cardinputmethod>	Yes	See cardinputmethod.
cardauthmethod	The cardholder authentication	<cardauthmethod>	Yes	See cardauthmethod.

Attribute	Description	Data Type	Required	Constraints / Permitted Values
	method used in a card transaction.			
cardauthentity	The component or person who verified the cardholder identity as reported in the cardauthmethod field.	<cardauthentity>	Yes	See cardauthentity.
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 (Cardauthentity 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"cardauthentity="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

<table>
<tr><th>Attribute</th><th>Description</th><th>Data Type</th><th>Required</th><th>Constraints / Permitted Values</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<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>
</td></tr>
<tr><td>Group</td><td>The summary group type of the transaction.</td><td><Group></td><td>Yes</td><td>See Group.</td></tr>
<tr><td>ProcCode</td><td>The first two digits of the Processing Code + the two digits of the AccountType + Two digits of the Destination Account. See Processing Codes.</td><td>xs:string</td><td>If applicable</td><td>For example: "000000", "003000", "010000"
Note: "390000" is used to identify an Account Verification transaction.</td></tr>
<tr><td>Partial</td><td>If a fee was charged, indicates whether the fee was partial.</td><td>xs:string</td><td>If applicable</td><td>Default:”NA”</td></tr>
<tr><td>FeeWaivedOff</td><td>If a fee was charged and the fee was partial, shows the amount of the fee that was not charged.</td><td>xs:decimal</td><td>If applicable</td><td>Default:0</td></tr>
</table>

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: Value: 0 — Credit acknowledged, cleared and not credited to a card. 1 — Credit acknowledged, cleared and credited to a card for arbitration Chargeback. M — Mastercard, Credit acknowledged, cleared and credited to a card. S — Related to a Visa card.

Example

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

3.1.2 Attributes

Attributes are listed below in alphabetical order.

approved	cardauthentity	cardpresent	domesticMaestro	MaskedPAN
authcapability	cardauthmethod	code	Group	MCC
cardholderpresent	cardinputmethod	direction	inputcapability	PAN
				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 capabilties 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
9	Unknown	xs:string
Empty	Empty to enable Null value support	xs:string

Example

```
cardholderpresent="3"
```

cardauthentity

The cardauthentity 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

```
cardauthentity="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
3	Biometrics	xs:string

Permitted Value	Description	Data Type
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
E	Contactless magnetic stripe	xs:string

Permitted Value	Description	Data Type
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
2	Magnetic Stripe Read	xs:string
3	Bar Code	xs:string
4	OCR	xs:string

Permitted Value	Description	Data Type
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"
```

MaskedPAN

Masked Primary Account Number (PAN) where six of the digits are replaced with the * character.

Description	Base Data Type	Constraints / Permitted Values
Masked Primary Account Number (PAN).	xs:string	Maximum 16 characters

Example

```
MakedPAN="592123******1134"
```

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

Description	Base Data Type	Constraints / Permitted Values
		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:

xxxYYYYYYYYYzzzz

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	Processing Codes	List of processing codes
4.9	Load Sources	Provides details of possible values for the source of a Load or Unload request.
4.10	Clearing Report Example	Provides an example of a Clearing Report.
4.11	Non-Clearing Report Example	Provides an example of a Non-Clearing Report.
4.12	Clearing Report Schema	Provides the Clearing Report schema.
4.13	Non-Clearing Report Schema	Provides the Non-Clearing Report 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 rredits 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-reversable 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 advice 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>	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.
<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.

Record Type	Code	Meaning
<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 Not valid for intra-European transactions
<CardFee>	7821	MCBS Emergency Borrowing Collection. Not valid for intra-European transactions

Record Type	Code	Meaning
<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: Threddreceive 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

0.1 Discover Processing Codes

Note: Only applicable to Discover.

Refer to the table below for details of supported Discover Network processing codes and how these map to Thredd processing codes.

Field Position	Discover Value	Thredd Value	Description	Supported	Notes
Processing Codes (Positions 1 and 2)	00	00	Goods and Services	√	
	01	01	Cash	√	
	18	39	Card Account Verification Request	√	
	20	20	Merchandise Return	√	Thredd use the wording Refund
	22		Adjustment	x	Not in scope for phase 1
	2A		Account Credit Transaction	x	Not in scope for phase 1
	31	30	Balance Inquiry	x	Not in scope for phase 1. This is for physical cards/ ATM
	98	98	PIN Change	x	Not in scope for phase 1
	99	99	PIN Unblock	x	Not in scope for phase 1
"From" Account Types (Positions 3 and 4)	00	00	Default– unspecified	√	Other types will not be received
	30	30	Credit Facility	√	Thredd call this credit account
"To" Account Types (Positions 5 and 6)	00	00	Default– unspecified	√	Other types will not be received

Field Position	Discover Value	Thredd Value	Description	Supported	Notes
	30	30	Credit Facility	√	Thredd call this credit 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 Non-Clearing Report Example

Below is an example of a Non-Clearing Report. For a description of the XML schema, see Non-Clearing Report XML Schema

```
<?xml version="1.0" encoding="utf-8"?>
    <Transactions xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
       <CardAuthorisation>
         <RecType>ADV</RecType>
         <Auth_type>0</Auth_type>
         <AuthId>6150002642</AuthId>
         <AuthTxnID>0</AuthTxnID>
         <LocalDate>20220910191808</LocalDate>
         <LocalDateUTC />
         <SettlementDate>20220910</SettlementDate>
         <Card PAN="9999999999999995" MaskedPAN="999999******9995" product="MCRD" MVC="N" 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" />
         <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>
    <CardOnlineFinancial>
       <RecType>ADV</RecType>
       <Auth_type>0</Auth_type>
       <OnlineFinId>3762559204</OnlineFinId>
       <OnlineFinTxnId>0</OnlineFinTxnId>
       <LocalDate>20200110000400</LocalDate>
       <LocalDateUTC />
       <SettlementDate>20200110</SettlementDate>
       <SchemeSettlementDate />
       <SchemeReconciliationDate />
       <CycleNumber>1</CycleNumber>
       <Card PAN="7593112748461123" MaskedPAN="759311******1123" product="VISA" MVC="Y" programid="567"
       productid="5687" branchcode="" />
       <Account no="311274846" type="02" />
       <TxnCode direction="debit" Type="pos" Group="pos" ProcCode="000000" Partial="NA" FeeWaivedOff="0" />
       <TxnAmt value="10.00" currency="826" />
       <CashbackAmt value="0.00" currency="826" />
       <BillAmt value="10.00" currency="826" rate="0.000000" clientfxrate="0.00000000" />
       <SettlementAmt value="10.00" currency="826" rate="1.000000" />
       <OrigTxnAmt value="10.00" currency="826" />
       <Additional_Amt_DE54 />
       <ApprCode />
       <Trace auditno="862644" origauditno="862644" Retrefno="" />
       <MerchCode />
       <Term code="" location="" street="" city="" country="GB" inputcapability="0" authcapability="12" />
       <Schema>VISA</Schema>
       <Txn cardholderpresent="9" cardpresent="9" cardinputmethod="0" cardauthmethod="8" cardauthentity="8" />
       <MsgSource value="54" domesticMaestro="no" />
       <Rate_Fee value="0.00" />
       <Fixed_Fee value="2.00" />
       <CommissionAmt value="2.00" currency="826" />
```

```
        <Classification MCC="" />
        <Response approved="yes" actioncode="0" responsecode="" additionaldesc=" The Local Bank London GB" />
        <ReversalReason />
        <PaymentToken id="" creator="" expdate="" type="" status="" creatorstatus="" wallet="" devicetype="" lang=""
        activationexpiry="" activationmethod="" />
        <FIID />
        <SettlementIndicator />
        <BSA />
    </CardOnlineFinancial>
    <CardFee>
        <CardFeeId>13961469923</CardFeeId>
        <LocalDate>20240213033057</LocalDate>
        <SettlementDate>20240213</SettlementDate>
        <Card PAN="1132466665781123" MaskedPAN="113246******1123" "product="MCRD" programid="ONEUKA"
        productid="4368" branchcode="00000000" />
        <Account no="246666578" type="01" />
        <TxId>13961469923</TxId>
        <FeeClass interchangeTransaction="no" type="1" code="1000" />
        <LoadUnloadId>0</LoadUnloadId>
        <Desc>CCB ATM A5600225 DOLNA BANYA BGR</Desc>
        <FeeAmt value="0.50" currency="826" direction="debit" />
        <Amt value="0.50" currency="826" direction="debit" />
        <ReasonCode />
    </CardFee>
    <CardLoadUnload>
        <RecordType>LOAD</RecordType>
        <LoadUnloadId>13964492698</LoadUnloadId>
        <LocalDate>20240213172407</LocalDate>
        <SettlementDate>20240213</SettlementDate>
        <Card PAN="5792883020134123" MaskedPAN="579288******4123" product="MCRD" programid="POCKIT05"
        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>
        <CardBalAdjust>
        <LocalDate>20240213010242</LocalDate>
        <AdjustId>13961012925</AdjustId>
        <SettlementDate>20240213</SettlementDate>
        <Card PAN="5271278671128123" MaskedPAN="527127******8123" 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>
    <CardEvent>
        <Card PAN="5793048251657123" MaskedPAN="579304******7123""productid="1463" />
        <Event Type="Activation" Source="2" ActivationDate="20240213161108" StatCode="" OldStatCode=""
        Date="20240213161108" transactionid="" />
    </CardEvent>
    <ApprovedAgencyBanking>
        <CashType>RCP</CashType>
        <BankingId>13962099212</BankingId>
        <SettlementDate>20240213</SettlementDate>
        <Card PAN="1132466669224123" MaskedPAN="113246******4123" 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>
    <AgencyBankingFee>
        <BankingFeeId>902400</BankingFeeId>
        <SettlementDate>20200101</SettlementDate>
```

```
        <Card PAN="8063993043846328" MaskedPAN="806399******6328" 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>
</Transactions>
```

4.9 Clearing Report Example

Below is an example of a Clearing Report. For a description of the XML schema, see Clearing Report XML Schema

```
<?xml version="1.0" encoding="utf-8"?>
<Transactions xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <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" MaskedPAN="748102******1502" product="MCRD" MVC="Y" 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" />
    <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>
  <CardFee>
    <CardFeeId>843249</CardFeeId>
    <LocalDate>20190326000000</LocalDate>
    <SettlementDate>20200103</SettlementDate>
    <Card PAN="8062328177229342" MaskedPAN="806232******9342"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>
  <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>01370176670000000000000001480049782015803OMCC3050012
    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>T112.00119011400000017053022O1     </File_ID_PDS0105>
    <FileProcessDate>20200120054648</FileProcessDate>
    <Recon date="20200120" cycle="02" />
    <Settlement date="20210121" cycle="01" />
  </MasterCardFee>
  <CardChrgBackRepRes>
  <RecordType>CB</RecordType>
  <ChgbackRepresId>2300500740</ChgbackRepresId>
  <LocalDate>20210121003337</LocalDate>
  <SettlementDate>20210121</SettlementDate>
  <Card PAN="8063463816397253" MaskedPAN="806346******7253" 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>
</Transactions>
```

4.10 Non-Clearing Report XML Schema

Below is a copy of the latest Non-Clearing Report XML schema.

```
<?xml version="1.0" encoding="utf-8"?>
<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="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:enumeration value="17"/>
                    <xs:enumeration value="54"/>
                    <xs:enumeration value="62"/>
                    <xs:enumeration value="66"/>
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                    <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="required">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value=""/>
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                    <xs:enumeration value="1"/>
                    <xs:enumeration value="2"/>
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                    <xs:enumeration value="4"/>
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                    <xs:enumeration value="6"/>
                    <xs:enumeration value="9"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
        <xs:attribute name="cardpresent" use="required">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value=""/>
                    <xs:enumeration value="0"/>
                    <xs:enumeration value="1"/>
                    <xs:enumeration value="9"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
        <xs:attribute name="cardinputmethod" use="required">
            <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:enumeration value="4"/>
                    <xs:enumeration value="5"/>
                    <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="required">
            <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: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="A"/>
                <xs:enumeration value="B"/>
                <xs:enumeration value="C"/>
                <xs:enumeration value="D"/>
                <xs:enumeration value="E"/>
                <xs:enumeration value="S"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="cardauthentity" use="required">
        <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:enumeration value="4"/>
                <xs:enumeration value="5"/>
                <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">
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            <xs:restriction base="xs:string">
                <xs:maxLength value="128"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="street" use="required">
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:maxLength value="64"/>
            </xs:restriction>
        </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="required">
            <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:enumeration value="4"/>
                    <xs:enumeration value="5"/>
                    <xs:enumeration value="6"/>
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            </xs:simpleType>
        </xs:attribute>
        <xs:attribute name="authcapability" 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:enumeration value="4"/>
                    <xs:enumeration value="5"/>
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                    <xs:enumeration value="11"/>
                    <xs:enumeration value="12"/>
                    <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="MaskedPAN" use="required">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:maxLength value="16"/>
                </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="MVC" use="optional">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:maxLength value="1"/>
                    <xs:enumeration value="Y"/>
                    <xs:enumeration value="N"/>
                </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: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: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>
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        <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"/>
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            <xs:maxLength value="4"/>
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            <xs:enumeration value="ECRD"/>
            <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>
    </xs:simpleType>
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        <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>
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                    <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"/>
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            </xs:simpleType>
        </xs:attribute>
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        <xs:attribute name="Rate_Fee" type="xs:decimal" use="optional"/>
    </xs:complexType>
    <xs:simpleType name="ISOCurrencyCode">
```

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            <xs:pattern value="\d{3}"/>
        </xs:restriction>
</xs:simpleType>
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            <xs:maxLength value="2"/>
        </xs:restriction>
    </xs:simpleType>
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        <xs:restriction base="xs:string">
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            <xs:enumeration value="no"/>
            <xs:enumeration value="YES"/>
            <xs:enumeration value="NO"/>
        </xs:restriction>
    </xs:simpleType>
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            <xs:enumeration value="02"/>
            <xs:enumeration value="03"/>
            <xs:enumeration value="04"/>
            <xs:enumeration value="05"/>
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    </xs:simpleType>
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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"/>
        </xs:restriction>
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            <xs:maxLength value="4"/>
        </xs:restriction>
    </xs:simpleType>
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    </xs:simpleType>
    <xs:simpleType name="Conversion_Rate_Reconciliation_009">
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            <xs:fractionDigits value="6"/>
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    </xs:simpleType>
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            <xs:maxLength value="8000"/>
        </xs:restriction>
    </xs:simpleType>
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        <xs:restriction base="xs:string">
            <xs:maxLength value="200"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="DE93_Txn_Dest_ID">
```

```
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            <xs:maxLength value="11"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="DE94_Txn_Orig_ID">
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    <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">
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            <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">
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[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:attribute>
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            <xs:simpleType>
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                    <xs:maxLength value="2"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
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                    <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"/>
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            </xs:simpleType>
        </xs:attribute>
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    <xs:simpleType name="accountno">
        <xs:restriction base="xs:string">
            <xs:maxLength value="8"/>
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```

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            </xs:simpleType>
        </xs:attribute>
    </xs:complexType>
    <xs:complexType name="ABAccount">
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                <xs:restriction base="xs:string">
                    <xs:maxLength value="28"/>
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            </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:attribute name="sortcode" type="sortcode" use="required"/>
        <xs:attribute name="bankacc" type="accountno" use="required"/>
        <xs:attribute name="name" use="required">
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                <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"/>
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        </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">
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                    <xs:enumeration value="rcp"/>
                    <xs:enumeration value="pay"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
    </xs:complexType>
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        <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">
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            <xs:enumeration value="credit"/>
            <xs:enumeration value="shared"/>
        </xs:restriction>

    </xs:simpleType>
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        <xs:complexContent>
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        </xs:complexContent>
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            <xs:pattern value="\d*|\s{0}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="SenderReceiver">
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        <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"/>
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        <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"/>
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        <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"/>
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        <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>
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        <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>
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        <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"/>
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    </xs:complexType>
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```

```
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        <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>
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        <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">
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        <xs:attribute name="currency" type="xs:string"/>
    </xs:complexType>
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        <xs:complexType>
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                        <xs:complexType>
                            <xs:sequence>
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                                <xs:element name="Auth_type" type="xs:string" minOccurs="0" 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"
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                                <xs:element name="LocalDate" type="LocalDate" minOccurs="1" maxOccurs="1"
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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"/>
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                                <xs:element name="TxnAmt" type="BasicAmount" minOccurs="1" maxOccurs="1"
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                                <xs:element name="CashbackAmt" type="BasicAmount" minOccurs="1" maxOccurs="1"
                                            nillable="false"/>
                                <xs:element name="BillAmt" type="RateAmount" minOccurs="1" maxOccurs="1"
                                            nillable="false"/>
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                                        <xs:attribute name="value" type="xs:decimal" use="required"/>
                                    </xs:complexType>
                                </xs:element>
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```
                                    nillable="false"/>
                        <xs:element name="Response" type="Response" minOccurs="1" maxOccurs="1"
                                    nillable="false"/>
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                                    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"/>
                        <xs:element name="PaymentToken" type="PaymentToken" minOccurs="0" maxOccurs="1"
                                    nillable="true"/>
                    </xs:sequence>
                </xs:complexType>

            </xs:element>
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                    <xs:sequence>
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                        <xs:element name="Auth_type" type="xs:string" minOccurs="0" maxOccurs="1"  nillable="false"/>
                        <xs:element name="OnlineFinId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
                                    nillable="false"/>
                        <xs:element name="OnlineFinTxnId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
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                        <xs:element name="LocalDate" type="LocalDate" minOccurs="1" maxOccurs="1"
                                    nillable="false"/>
                        <xs:element name="LocalDateUTC" type="LocalDateUTC" minOccurs="1" maxOccurs="1"
                                    nillable="true"/>
                        <xs:element name="SettlementDate" type="SettlementDate" minOccurs="1" maxOccurs="1"
                                    nillable="false"/>
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                                    nillable="false"/>
                        <xs:element name="SchemeReconciliationDate" type="xs:string" minOccurs="1" maxOccurs="1"
                                    nillable="false"/>
                        <xs:element name="CycleNumber" type="xs:unsignedInt" 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"/>
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                        <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="SettlementAmt" type="SettlementAmt" minOccurs="1" maxOccurs="1"
                                    nillable="false"/>
                        <xs:element name="OrigTxnAmt" type="PartialAmount" minOccurs="1" maxOccurs="1"
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                        <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="true"/>
                        <xs:element name="Term" type="Term" minOccurs="1" maxOccurs="1" nillable="false"/>
                        <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="MsgSourceCardAuthorisation" minOccurs="1"
                                    maxOccurs="1" nillable="false"/>
                        <xs:element name="Rate_Fee">
                            <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="Fee" type="DirectionAmount" minOccurs="0" maxOccurs="1"
                            nillable="false"/>
                <xs:element name="FeeAmt" type="DirectionAmount" minOccurs="0" maxOccurs="1"
                            nillable="false"/>
                <xs:element name="FeeClass" type="FeeClass" minOccurs="0" 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="ReversalReason" type="ReversalReason" minOccurs="1" maxOccurs="1"
                            nillable="true"/>
                <xs:element name="PaymentToken" type="PaymentToken" minOccurs="1" 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="FIID" type="FIID" minOccurs="0" maxOccurs="1" nillable="true"/>
                            <xs:element name="SettlementIndicator" type="xs:string" minOccurs="0" maxOccurs="1"
                                    nillable="false"/>
                            <xs:element name="BSA" type="xs:string" minOccurs="0" maxOccurs="1" nillable="true"/>
                        </xs:sequence>
                    </xs:complexType>

                </xs:element>
                <xs:element minOccurs="0" maxOccurs="unbounded" name="CardFee">
                    <xs:complexType>
                        <xs:sequence>
                            <xs:element name="CardFeeId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
                                        nillable="false"/>
                            <xs:element name="LocalDate" type="LocalDate" minOccurs="1" maxOccurs="1"
                                        nillable="false"/>
                            <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="TxId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
                                        nillable="false"/>
                            <xs:element name="TxnCode" type="TxnCode" minOccurs="0" maxOccurs="1" nillable="false"/>
                            <xs:element name="MerchCode" type="MerchCode" minOccurs="0" maxOccurs="1"
                                        nillable="false"/>
                            <xs:element name="MsgSource" type="MsgSourceCardAuthorisation" minOccurs="0"
                                        maxOccurs="1" nillable="true"/>
                            <xs:element name="FeeClass" type="FeeClass" minOccurs="1" maxOccurs="1"
                                        nillable="false"/>
                            <xs:element name="LoadUnloadId" type="xs:unsignedLong" minOccurs="0" maxOccurs="1"
                                        nillable="true"/>
                            <xs:element name="Desc" type="Desc" minOccurs="1" maxOccurs="1" nillable="false"/>
                            <xs:element name="FeeAmt" type="DirectionAmount" minOccurs="0" maxOccurs="1"
                                        nillable="true"/>
                            <xs:element name="Amt" type="DirectionAmount" minOccurs="1" maxOccurs="1"
                                        nillable="false"/>
                            <xs:element name="FIID" type="FIID" minOccurs="0" maxOccurs="1" nillable="true"/>
                            <xs:element name="ReasonCode" type="xs:string" minOccurs="1" maxOccurs="1"
                                        nillable="false"/>
                            <xs:element name="Recon" type="Recon" minOccurs="0" maxOccurs="1" nillable="false"/>
                        </xs:sequence>
                    </xs:complexType>
                </xs:element>
                <xs:element minOccurs="0" maxOccurs="unbounded" name="CardLoadUnload">
                    <xs:complexType>
                        <xs:sequence>
                            <xs:element name="RecordType" minOccurs="1" maxOccurs="1" nillable="false">
                                <xs:simpleType>
                                    <xs:restriction base="xs:string">
```

```
                        <xs:enumeration value="LOAD"/>
                        <xs:enumeration value="LOADREV"/>
                        <xs:enumeration value="UNLOAD"/>
                        <xs:enumeration value="UNLOADREV"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:element>
            <xs:element name="LoadUnloadId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
                        nillable="false"/>
            <xs:element name="LocalDate" type="LocalDate" minOccurs="1" maxOccurs="1"
                        nillable="false"/>
            <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="MerchCode" type="MerchCode" minOccurs="0" maxOccurs="1"
                        nillable="true"/>
            <xs:element name="Amount" type="DirectionAmount" minOccurs="1" maxOccurs="1"
                        nillable="false"/>
            <xs:element name="Desc" type="Desc" minOccurs="1" maxOccurs="1" nillable="false"/>
            <xs:element name="Load" type="LoadSource" minOccurs="1" maxOccurs="1" nillable="false"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element minOccurs="0" maxOccurs="unbounded" name="ApprovedAgencyBanking">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="CashType" minOccurs="1" maxOccurs="1" nillable="true">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                    </xs:restriction>
                </xs:simpleType>
            </xs:element>
            <xs:element name="BankingId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
                        nillable="false"/>
            <xs:element name="File" type="ABFile" 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="AgencyAccount" type="ABAccount" minOccurs="1" maxOccurs="1"
                        nillable="false"/>
            <xs:element name="External" type="ABExternal" minOccurs="1" maxOccurs="1"
                        nillable="false"/>
            <xs:element name="CashCode" type="ABCashCode" minOccurs="1" maxOccurs="1"
                        nillable="true"/>
            <xs:element name="Desc" type="Desc" minOccurs="1" maxOccurs="1" nillable="true"/>
            <xs:element name="CashAmt" type="BasicAmount" minOccurs="1" maxOccurs="1"
                        nillable="false"/>
            <xs:element name="Fee" type="DirectionAmount" minOccurs="1" maxOccurs="1"
                        nillable="true"/>
            <xs:element name="BillAmt" type="RateAmount" minOccurs="1" maxOccurs="1"
                        nillable="false"/>
            <xs:element name="OrigTxnAmt" type="PartialAmount" minOccurs="0" maxOccurs="1"
                        nillable="true"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element minOccurs="0" maxOccurs="unbounded" name="DeclinedAgencyBanking">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="CashType" minOccurs="1" maxOccurs="1" nillable="true">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                    </xs:restriction>
                </xs:simpleType>
            </xs:element>
            <xs:element name="BankingId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
                        nillable="false"/>
            <xs:element name="File" type="ABFile" 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="AgencyAccount" type="ABAccount" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <xs:element name="External" type="ABExternal" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <xs:element name="CashCode" type="ABCashCode" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <xs:element name="Desc" type="Desc" minOccurs="1" maxOccurs="1" nillable="true"/>
                        <xs:element name="CashAmt" type="BasicAmount" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <xs:element name="DeclineReason" type="ABDeclineReason" minOccurs="1" maxOccurs="1"
                                nillable="true"/>
                        <xs:element name="OrigTxnAmt" type="PartialAmount" minOccurs="0" maxOccurs="1"
                                nillable="true"/>
                    </xs:sequence>
                </xs:complexType>
            </xs:element>
            <xs:element minOccurs="0" maxOccurs="unbounded" name="AgencyBankingFee">
                <xs:complexType>
                    <xs:sequence>
                        <xs:element name="BankingFeeId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <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="AgencyAccount" type="ABAccount" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <xs:element name="AbId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <xs:element name="Desc" type="Desc" minOccurs="1" maxOccurs="1" nillable="true"/>
                        <xs:element name="Amt" type="ABDirectionAmount" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                    </xs:sequence>
                </xs:complexType>
            </xs:element>
            <xs:element minOccurs="0" maxOccurs="unbounded" name="CardBalAdjust">
                <xs:complexType>
                    <xs:sequence>
                        <xs:element name="LocalDate" type="LocalDate" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <xs:element name="AdjustId" type="xs:unsignedLong" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <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="Amount" type="DirectionAmount" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                        <xs:element name="MerchCode" type="MerchCode" minOccurs="0" maxOccurs="1"
                                nillable="true"/>
                        <xs:element name="Desc" type="Desc" minOccurs="1" maxOccurs="1" nillable="false"/>
                        <xs:element name="AdjustType" type="AdjustType" minOccurs="1" maxOccurs="1"
                                nillable="false"/>
                    </xs:sequence>
                </xs:complexType>
            </xs:element>
            <xs:element minOccurs="0" maxOccurs="unbounded" name="CardEvent">
                <xs:complexType>
                    <xs:sequence>
                        <xs:element name="Card">
                            <xs:complexType>
                                <xs:attribute name="PAN" type="xs:unsignedLong" use="required"/>
                                <xs:attribute name="MaskedPAN" use="required">
                                    <xs:simpleType>
                                        <xs:restriction base="xs:string">
                                            <xs:maxLength value="16"/>
                                        </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:element>
                    <xs:element name="Event">
                        <xs:complexType>
                            <xs:attribute name="Type" type="EventType" use="required"/>
                            <xs:attribute name="Source" type="xs:unsignedByte" use="required"/>
                            <xs:attribute name="ActivationDate" type="xs:string" use="required"/>
                            <xs:attribute name="ConvertedDate" type="xs:string" use="optional"/>
                            <xs:attribute name="StatCode" type="xs:string" use="required"/>
                            <xs:attribute name="OldStatCode" type="xs:string" use="required"/>
                            <xs:attribute name="Date" type="xs:string" use="required"/>
                            <xs:attribute name="transactionid" type="xs:string" use="required"/>
                        </xs:complexType>
                                </xs:element>
                            </xs:sequence>
                        </xs:complexType>
                    </xs:element>
                    <xs:element minOccurs="0" maxOccurs="unbounded" name="WalletTransaction">
                        <xs:complexType>
                            <xs:sequence>
                                <xs:element name="Id" type="xs:string" minOccurs="1" maxOccurs="1" nillable="false"/>
                                <xs:element name="TransactionId" type="xs:string" minOccurs="1" maxOccurs="1" nillable="false"/>
                                <xs:element name="SequenceNumber" type="xs:string" minOccurs="1" maxOccurs="1" nillable="false"/>
                                <xs:element name="OperationType" type="xs:string" minOccurs="0" maxOccurs="1" nillable="true"/>
                                <xs:element
name="Source" type="WalletTransactionSource" minOccurs="0" maxOccurs="1" nillable="true"/>
                                <xs:element name="Destination" type="WalletTransactionDestination" minOccurs="0" maxOccurs="1" nil-
lable="true"/>
                                <xs:element
name="Other" type="WalletTransactionOther" minOccurs="0" maxOccurs="1" nillable="true"/>
                                <xs:element name="FxRate" type="xs:string" minOccurs="1" maxOccurs="1" nillable="false"/>
                            </xs:sequence>
                        </xs:complexType>
                    </xs:element>
                </xs:choice>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
</xs:schema>
```

4.10.1 Schema Changes

Refer to the schema changes below.

Version	Description
V1.55	Added *<xs: enumeration value= " "/>* for the *cardholderpresent*, *cardpresent*, and *cardinputmethod* attributes, ensuring support for null values. Added *use="required"* to the *maskedPAN* attribute. This ensures that the maskedPAN is mandatory.
V1.54	Removed list of ISO Currency and ISO Country codes.
V1.53	Added *MaskedPAN* element.
V1.52	Added currency codes 531, 534
V1.51	*BankingFeeId* changed to *unsignedLong* *LoadUnloadId* changed to *unsignedLong* Removed *VoidedAdjustId* as no longer in use Removed *MessageId* as no longer in use Removed *VoidedLoadUnloadId*as no longer in use
V1.48	Added *MVC* token indicator to the *Card* sub-element. Updated minimum length requirement of PAN in <Card> to 14 digits. Added new ISO currency code: 924. Added a new attribute called *TTI* (Transaction Type Identifier) to the *Txn* element.
V1.47	Changed Trace/auditno attribute from required to optional. Added a new currency code value of 157 (CNH) to the *ISOCurrencyCode* type.
V1.46.1	Changed the data type of *PresentmentID* from *unsigned Int* to *unsigned Long*.
V1.46	Updated the maximum length of the *DE94_Txn_Orig_ID* field to 16.
V1.45	Changed *CardChrgBackRepRes BillAmt* and *SettlementAmt* Rate to support 9 decimal places. Added CHAPS to *Cashtype* Added Currency Code 925 (*SLE*) In the *CardAuthorisation* record, the *Apprcode* element has been updated to nillable="true" Removed element: *FXConversion*
V1.43.1	Change type of *AuthTxnID* in XSD from *unsignedint* to *unsignedlong* Change *nillable* to *true* for type *Desc* in *ApprovedAgencyBanking*, *DeclinedAgencyBanking*, *AgencyBankingFee* Added new element : *WalletTransaction* Removed digit restriction for the sortcode and accountno attributes of the *AgencyBanking* elements, to allow alphanumeric characters of 6 and 8 lengths respectively. A new record type called *VFC* (Visa Fee Collection) has been added to the *MasterCardFee* element. The maximum length of the *DE94_Txn_Orig_ID* data element has been updated to 16.
V1.43	Added new attribute in the *CardEvent/Event* element - *transactionid*
V1.42	Added new element *LocalDateUTC* to *CardAuthorisation* and *CardFinancial*
V1.41	Added new element: *PaymentToken* to *CardAuthorisation* and *CardFinancia*l primary elements. Updated list of ISO currency codes.

Version	Description
V1.40	Changed *CardFinancial/BillAmt@Rate* and *CardFinancialSettlementAmt/@Rate* to support 9 decimal places (by adding *ConversionSettlementAm*t.) Note: This is an update to the XSD only. Live code already supports 9 dp.
V1.39	Added new element : *FXConversion* n *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
V1.43.1	Changed the type of *AuthTxnID* from *unsignedint* to *unsignedlong*. Added the two-digit country code SS (South Sudan) to the *ISOCountryCode* list. For some elements, the *Desc* element is set to nillable="true".
V1.43	Added a new *transactionid* attribute to the CardEvent / Event element. Updated MaxLength of *DE94_Txn_Orig_ID* Element to 13 to match MaxLength in VisaCollection table.
V1.42	Added a new element: *LocalDateUTC* to CardAuthorisation and CardFinancial primary elements.
V1.39	Added new element : *FXConv* to *CardAuthorisation* and *CardFinancia*l primary 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	Added *IssuerReferenceNumber* element
V1.32	Added *value2* atttribute
V1.31	Added one more *ISOCurrencyCode - 929*. Added two new *ABDeclineReason* - 00, 9. *AbId* changed from Int to Long. Removed *ProductID* from *MastercardFee*
V1.30	Added *Additional_Amt_DE54* in Financial and Chargebacks. Multiple patterns in a Restriction was found not to validate when checking online XML validators. Substituted with \s*| in regular expression.
V1.29	Included *ProductID* in *MastercardFee*. Increased length of *Additional_Data_048* in *MastercardFee*. *Settlementdate* can be blank in *Mastercardfee*. Recon Date can be blank in *Mastercardfe*e. Settlement Date can be blank in *Mastercardfee*
V1.28	Corrected *SettlementIndicator* in Fin and Chargeback. Corrected *MerchCode* in Auth and Chargeback. Added *recon* in *Cardfee*.

Version	Description
	Added *CardChrgBackRepRes* Account type 02. Added Currency *928*. Added *Nullable AuthID* in *CardFinancial.* Made *CardChrgBackRepRes FIID* and *RIID* optional. Changed sequence location of *CardChrgBackRepResSettlementIndicator*. Corrected *CardBalAdjust AdjustId* sequence and removed *Rectype*.
V1.27	Added *SettlementCycle*, *ReconciliationDate*, *ReconciliationCycle*, *Usage* and *Pending_Billing_Amoun*t.
V1.25	Added *SettlementIndicator*.
V1.24	Updated *CardFinancialAuthId*
V1.23	Updated *cardholderpresent* and *cardpresent*
V1.22	Updated *inputcapability, authcapability*, *cardholderpresent*, *cardpresent*, *cardinputmethod*, *cardauthmethod* and *cardauthentity*.
V1.18	Removed *Programid* attribute. Changed *MarchCode* to 30 characters length. Changed *Desc* to 500 characters length
V1.11	Removed reference to *ResponseFinancial* element

4.11 Clearing Report XML Schema

Below is an example of a Clearing Report XML schema.

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" attributeFormDefault="unqualified" elementFormDefault="qualified"
           version="0.4">

    <!--Simple Types-->
    <xs:simpleType name="NullOrULong">
        <xs:restriction base="xs:string">
            <xs:pattern value="\d*|\s{0}"/>
        </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="CycleNumber">
        <xs:restriction base="xs:string">
            <xs:maxLength value="2"/>
            <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: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="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="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="ApprCode">
        <xs:restriction base="xs:string">
            <xs:maxLength value="6"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="MerchCode">
        <xs:restriction base="xs:string">
            <xs:maxLength value="30"/>
        </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="ECRD"/>
            <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:enumeration value="yes"/>
            <xs:enumeration value="no"/>
            <xs:enumeration value="YES"/>
            <xs:enumeration value="NO"/>
        </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>
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        <xs:restriction base="xs:string">
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        </xs:restriction>
    </xs:simpleType>
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            <xs:maxLength value="500"/>
        </xs:restriction>
    </xs:simpleType>
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        <xs:restriction base="xs:string">
            <xs:maxLength value="4"/>
        </xs:restriction>
    </xs:simpleType>
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        <xs:restriction base="xs:string">
            <xs:maxLength value="3"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="Conversion_Rate_Reconciliation_009">
        <xs:restriction base="xs:decimal">
```

```
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            <xs:fractionDigits value="6"/>
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    </xs:simpleType>
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    </xs:simpleType>
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    </xs:simpleType>
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        <xs:restriction base="xs:string">
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        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="DE94_Txn_Orig_ID">
        <xs:restriction base="xs:string">
            <xs:maxLength value="6"/>
        </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>

    <!--Complex Types-->
    <xs:complexType name="Trace">
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                    <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>
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    </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="MaskedPAN" use="required">
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        </xs:simpleType>
    </xs:attribute>
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                <xs:enumeration value="Y"/>
                <xs:enumeration value="N"/>
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    </xs:attribute>
</xs:complexType>
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                <xs:maxLength value="28"/>
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        </xs:simpleType>
    </xs:attribute>
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        <xs:simpleType>
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                <xs:enumeration value="01"/>
                <xs:enumeration value="02"/>
                <xs:enumeration value="07"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
</xs:complexType>
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    <xs:attribute name="Type" use="required">
```

```
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                    <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>
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                    <xs:enumeration value="atm"/>
                    <xs:enumeration value="fee"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
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            </xs:simpleType>
        </xs:attribute>
        <xs:attribute name="Partial" use="optional">
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                <xs:restriction base="xs:string">
                    <xs:maxLength value="3"/>
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            </xs:simpleType>
        </xs:attribute>
        <xs:attribute name="FeeWaivedOff" type="xs:decimal" use="optional"/>
    </xs:complexType>
    <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="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="Term">
        <xs:attribute name="code" use="required">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:maxLength value="8"/>
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```

```
        </xs:attribute>
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                    <xs:enumeration value="1"/>
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                    <xs:enumeration value="3"/>
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                    <xs:enumeration value="1"/>
```

```
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                <xs:enumeration value="9"/>
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                <xs:enumeration value="1"/>
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    <xs:attribute name="cardinputmethod" use="required">
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                <xs:enumeration value="C"/>
                <xs:enumeration value="E"/>
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                <xs:enumeration value="P"/>
                <xs:enumeration value="Q"/>
                <xs:enumeration value="V"/>
                <xs:enumeration value="W"/>
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                <xs:enumeration value="C"/>
                <xs:enumeration value="D"/>
                <xs:enumeration value="E"/>
                <xs:enumeration value="S"/>
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```

```
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                <xs:enumeration value="3"/>
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                <xs:enumeration value="5"/>
                <xs:enumeration value="6"/>
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                <xs:enumeration value="8"/>
            </xs:restriction>
        </xs:simpleType>
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    <xs:attribute name="TTI" use="optional">
        <xs:simpleType>
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        </xs:simpleType>
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                <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="DirectionAmount">
    <xs:complexContent>
        <xs:extension base="BasicAmount">
            <xs:attribute name="direction" type="Direction" 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="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>
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                <xs:enumeration value="0"/>
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                <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"/>
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                    <xs:enumeration value="2015"/>
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                    <xs:enumeration value="2112"/>
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                    <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="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>
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                    <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="Classification">
        <xs:attribute name="MCC" use="required">
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                    <xs:maxLength value="4"/>
                </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>
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                    <xs:maxLength value="500"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
    </xs:complexType>
```

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            <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="CCAAmount">
        <xs:complexContent>
            <xs:extension base="BasicAmount">
                <xs:attribute name="included" type="YesNoString" use="required"/>
            </xs:extension>
        </xs:complexContent>
    </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="SettlementRecapId">
        <xs:attribute name="recapdate" type="xs:string" use="optional"/>
        <xs:attribute name="recapnumber" type="xs:string" use="optional"/>
        <xs:attribute name="sendingiic" type="xs:string" use="optional"/>
        <xs:attribute name="receivingiic" type="xs:string" use="optional"/>
        <xs:attribute name="currencycode" type="xs:string" use="optional"/>
    </xs:complexType>
    <xs:complexType name="MsgSourceCardAuthorisation">
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            <xs:simpleType>
                <xs:restriction base="xs:decimal">
                    <xs:enumeration value="12"/>
                    <xs:enumeration value="17"/>
                    <xs:enumeration value="54"/>
                    <xs:enumeration value="62"/>
                    <xs:enumeration value="66"/>
                    <xs:enumeration value="67"/>
                    <xs:enumeration value="74"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
        <xs:attribute name="domesticMaestro" type="YesNoString" use="required"/>
    </xs:complexType>
    <xs:complexType name="Recon">
        <xs:attribute name="date" use="optional">
            <xs:simpleType>
                <xs:restriction base="xs:string">
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                            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:attribute>
        <xs:attribute name="cycle" use="optional">
            <xs:simpleType>
```

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        </xs:attribute>
    </xs:complexType>
    <xs:complexType name="MasterCardFeeClass">
        <xs:attribute name="interchangeTransaction" use="required">
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        </xs:attribute>
        <xs:attribute name="type" use="required">
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        </xs:attribute>
        <xs:attribute name="memberID" use="required">
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4.11.1 Schema Changes

Refer to the schema changes below.

Version	Description
V1.15	Added *<xs: enumeration value= " "/>* for the *cardholderpresent*, *cardpresent*, and *cardinputmethod* attributes, ensuring support for null values. Added *use="required"* to the *maskedPAN* attribute. This ensures that the maskedPAN is mandatory.
V1.14	Removed *ISOCurrencyCode* and *ISOCountryCode* elements, so that list of currencies and countries no longer exist in the schema.
V1.13	Added *MaskedPAN* element.
V1.12	Added currency codes 531 and 534.
V1.11	Changed *LoadUnloadId* changed to *unsignedLong* Changed *MastercardFeeId* changed to *unsignedLong*
V 1.10	*MVC* token indicator added to the *Card* sub-element. Updated minimum length requirement of PAN in <Card> to 14 digits. Added new ISO currency code: 924. Added a new attribute called *TTI* (Transaction Type Identifier) to the *Txn* element.
V 1.00	Initial version.

Section 5: FAQs

General FAQs

This section provides answers to frequently asked questions.

Types of Reports

What type of reports does Thredd provide?

Thredd provides the following reports to Program Managers:

- Clearing Report (transaction data)
- Non-Clearing Report (transaction data)
- UTC Balance reports

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.

When does Thredd send the reports?

As part of the Global Transaction Reporting capability, Thredd can send the reports at the local time you require.

Can I configure the details provided in each report?

No, you cannot configure the Thredd reports. If you require bespoke reports, please speak to your Account Manager.

Delivery of Reports

How often are reports provided? Can I change this?

Thredd provides the Non-Clearing Report once a day. You can configure the sending of the Clearing Report, where Thredd can send a report up to 6 times a day, following each clearing file Thredd receives from the card schemes.

How are reports provided to customers?

Thredd provide daily reports to customers via sFTP. This is on a push only basis.

How often do you change the fields in the report?

Thredd adds 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 Thredd's service.

When making changes to the reports, Thredd updates the technical documentation and notifies you of the change.

What report file formats are available?

Thredd currently supports XML and Comma Separated Variable (CSV) formats.

Are reports encrypted?

Yes. Thredd encrypts reports using the PGP standard.

How do I identify the version of the report?

The XML schema version is listed in the comments section of the schema, together with details of what has changed.

How large is a typical report?

The size is based on the number of your transactions and can be anything from 1KB to 2GB. Thredd splits up anything larger than 2GB into smaller files, for example,, *filename.001*, *filenename.002* and *filename.003*.

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

Thredd stores reports for up to 2 calendar days on the sFTP server, after which they are deleted from the server. Thredd archives the historical files for a limited period. For access to historical files, please raise a JIRA request.

Using the Reports

How can I use the reports?

You can use reports to do the following:

- Update your transactions database.
- Manage the transaction reconciliation.

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 provides details of what has changed since the previous document release.

Version	Date	Reason	Revised by
1.5	30/07/2025	Added new NCLR and CLR schemas where maskedPAN is now required. Specified maskedPAN as required in the Card element. See Non-Clearing Report XML Schema and Clearing Report XML Schema and Sub-Elements and Attributes.	KD
	28/07/2025	Added new NCLR and CLR schemas where the cardholderpresent, cardpresent, and cardinput attributes include empty fields to support null values. Updated descriptions for the TXN element where these attributes exist. See Non-Clearing Report XML Schema and Clearing Report XML Schema and Sub-Elements and Attributes.	KD
	12/06/2025	Added NCLR and CLR schemas where country and currency codes are removed (see Non-Clearing Report XML Schema and Clearing Report XML Schema). Removed country and currency codes reference sections.	JB
	01/05/2025	Added the MaskedPAN to the Card sub-element. Changed the NCLR and CLR schemas, and included new examples. See PRN-222	KD
	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
	06/03/2025	Added references to the Discover network. Also included new elements and sub-elements that are used in the Discover network. Indicated elements that are not applicable to the Discover network.	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 Non-Clearing Report and Clearing Report 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 the CardFinancial to indicate that it is the time and date of the matching authorisation. Added LocalDateUTC with examples to Sub-Elements and Attributes.	KD
	09/01/2025	Added descriptions on the REG suffix used in filenames of regenerated reports. See File Naming Convention	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	Updated minimum length of the PAN to be 14 characters. Added ISO currency code 924. Included new CLR and NCLR schemas. See PRN 196 and PRN 197.	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
	10/10/2024	Added the MVC token indicator to the Card sub-element, and included a new schema file, and updated examples. See PRN-192	KD
1.4	26/09/2024	Added descriptions of the Auth_type sub-element, and included a new schema file, and updated examples. See: PRN-185	KD
1.3	19/09/2024	Corrections to schema.	KD
	05/09/2024	New guide version available in HTML.	KD
1.2	23/07/2024	In the CardChrgBackRepRes element, clarified that FIID, RIID, and ChargebackRefNum are populated only for Mastercard chargebacks.	KD WS
	02/07/2024	Updated the company address.	PC
1.1	19/06/2024	Added descriptions of the different types of chargeback records that can be provided in the CardChrgBackRepRes element.	WS
	30/05/2024	Added naming of Global Transaction Reporting.	KD
1.0	21/05/2024	Improved descriptions and standardised naming conventions in File Sending Schedule.	KD
	01/03/2024	Added content for new Clearing Reports and Non-Clearing Reports. Added CardOnlineFinancial element.	KD
	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
	01/04/2023	First draft.	WS

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