Global Clearing Management System Reference Manual

3 June 2025

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Contents

Global Clearing Management System Reference Manual

This document contains technical information and specifications for customers to understand the system functionality and to process transactions through the Dual Message Clearing System.

Audience

This document is intended for parties using the Mastercard Network to process transactions through the Dual Message Clearing System. This includes acquirers, issuers, processors, and Network Enablement Partners.

Product

Table 1: Details

Metadata	Value
Audience	Acquirers, issuers, processors, and Network enablement Partners
Product	
Region	Global
Type	Product Guide
Publish Date	3 June 2025

Table 2: Summary of changes

Description of Change	Source	Where to Look
Minor editorial, grammar, typographic fixes, or formatting changes to accommodate current writing standards.		Throughout
Updated field number in Currency conversion, other acquirer calculations	*GLB 10084 Enhancing Currency Conversion Methodology for Acquirers*	Other acquirer calculation considerations: computed cross rates and fixed interchange
Added chapter for Mastercard Transaction Calculator		Mastercard Transaction Calculator

Chapter 1 Overview of Global Clearing Management System

This section provides the reader with a basic understanding of what Global Clearing Management System is, what message types it uses, and what components compose it or interact with it.

Definition of Global Clearing Management System

The Global Clearing Management System manages the clearing processing of credit transactions and debit transactions (in offline mode). Global Clearing Management System is a centralized clearing facility owned and operated by Mastercard for the daily processing and routing of worldwide financial transactions between Mastercard and its customers.

Clearing is the movement of data from the customer to Mastercard and from Mastercard to the customer.

The Global Clearing Management System processes clearing transactions, using the Integrated Product Messages (IPM) format, by

- editing transactions for adherence to Mastercard processing standards
- performing currency conversion, assessing interchange fees, and calculating settlement values for each transaction
- providing currency conversion rates for customer use
- routing clearing transactions (messages) to the appropriate customer or vendor
- providing acknowledgment messages to advise the originator of the transaction that Global Clearing Management System received the transaction
- providing notification messages to advise the receiver of the transaction that Global Clearing Management System has processed clearing transactions for that receiver
- providing error messages and reports to advise the originator of an invalid transaction that Global Clearing Management System rejected the transaction
- creating reconciliation reports
- providing summarized settlement request information to the Settlement Account Management (S.A.M.) system
- providing clearing information to other Mastercard systems such as the Mastercom electronic imaging system, and the Mastercard Consolidated Billing System (MCBS), and Data Warehouse, and
- providing optional on-behalf services for customers such as Account Level Management, mapping services for both Mastercard® contactless and Mastercard In Control™ Commercialization, Clearing Chip Processing service, and several clearing on-behalf reports.

Who participates in clearing?

Customers participate in clearing. A customer can be an issuer, an acquirer, or both.

The issuer is the customer that maintains the contractual relationship with the cardholder.

The acquirer is the customer that has the contractual relationship with acceptors to process payment account transactions and to reimburse the acceptors for those transactions.

Mastercard allows an acquirer and an issuer involved in a transaction to clear and settle the transaction.

Why do customers perform clearing?

Customers perform clearing to exchange transaction data. From the data provided in clearing, Global Clearing Management System derives the amounts for settlement.

Settlement provides acquirers with the funds to reimburse their acceptors and collects funds from issuers.

Customers also use clearing data for some of their back-office processes, including posting to cardholder accounts.

Customers that issue Mastercard cards and customers contracting with acceptors to accept cards must perform clearing to exchange transaction data.

What is the difference between clearing and settlement?

There are distinct differences between the clearing and settlement processes.

Clearing is the process of exchanging clearing data. For example, clearing includes sending transactions from the acquirer to the issuer for posting to the cardholder account (also called presentment). Global Clearing Management System accepts the data, edits it, assesses the appropriate fees, and routes it to the appropriate receiver. The clearing messages contain data but do not actually exchange or transfer funds.

Settlement is the process by which funds are exchanged. The funds represent the net equivalent of monetary value from clearing processing. These funds are exchanged each day between customers for the net monetary value of the cleared transactions. Mastercard calculates in reconciliation currency the net position of each customer involved in the clearing process and performs the settlement functions of

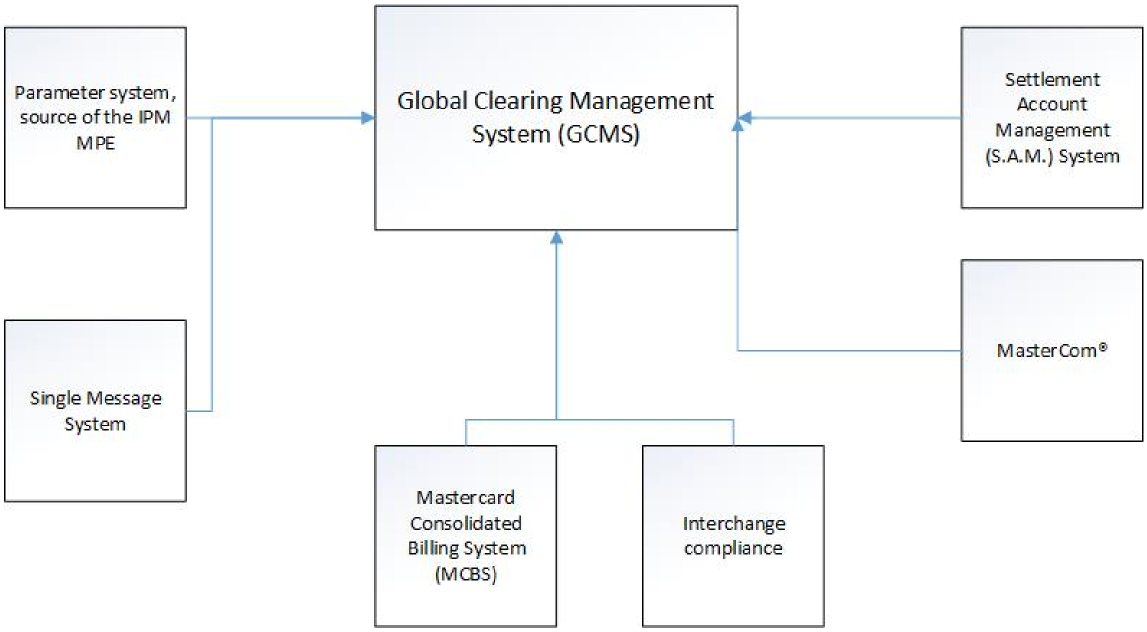
- sending advisements and
- transferring funds (when applicable).

Global Clearing Management System manages clearing. The Mastercard Settlement Account Management (S.A.M.) system supports settlement. Global Clearing Management System feeds clearing data to S.A.M.

NOTE: For more information about settlement, refer to the *Settlement Manual*.

System integration diagram

The system integration diagram shows the systems with which Global Clearing Management System interacts.



Clearing basics

To understand clearing through Global Clearing Management System, customers should understand clearing basics, including

- when clearing can occur
- when settlement occurs
- the Integrated Product Messages (IPM) format (the clearing message format)
- clearing message types
- means of transferring clearing data, and
- processing cycles.

Daily clearing cycle schedule

Acquirers and issuers may submit clearing data to the St. Louis Operations Center (Central Site) 24 hours a day, seven days a week. Customers may create and send clearing files as frequently as they want.

NOTE: In addition to the six primary clearing cycles, a seventh clearing cycle exists exclusively for Mexico domestic switching transactions.

The following table shows the daily schedule for the six primary clearing cycles and the seventh clearing cycle designated for Mexico domestic switching transactions.

Business Day	Clearing Cycle 1	Clearing Cycle 2	Clearing Cycle 3	Clearing Cycle 4	Clearing Cycle 5	Clearing Cycle 6
Sunday	Saturday 18:00	Saturday 21:00	Sunday 00:00	Sunday 03:00	Sunday 06:00	Sunday 08:00
Monday	Sunday 18:00	Sunday 21:00	Monday 00:00	Monday 03:00	Monday 06:00	Monday 08:00
Tuesday	Monday 18:00	Monday 21:00	Tuesday 00:00	Tuesday 03:00	Tuesday 06:00	Tuesday 08:00
Wednesday	Tuesday 18:00	Tuesday 21:00	Wednesday 00:00	Wednesday 03:00	Wednesday 06:00	Wednesday 08:00
Thursday	Wednesday 18:00	Wednesday 21:00	Thursday 00:00	Thursday 03:00	Thursday 06:00	Thursday 08:00
Friday	Thursday 18:00	Thursday 21:00	Friday 00:00	Friday 03:00	Friday 06:00	Friday 08:00
Saturday	Friday 18:00	Friday 21:00	Saturday 00:00	Saturday 03:00	Saturday 06:00	Saturday 08:00

Mastercard recommends that customers submit large files at least 30 minutes before the cycle cutoff to ensure data is processed during the anticipated clearing cycle. Large files submitted close to the cutoff may be deferred to the subsequent cycle, which could impact settlement timing. To avoid file processing delays, customers should dedicate sufficient time to prepare large files for submission at least 30 minutes prior to the cutoff.

For example, regardless of file size, if a clearing file is received at 02:59, the file will align to Clearing Cycle 5, instead of Clearing Cycle 4.

NOTE: A large file is a physical file with a record count greater than 1,000,000.

Mastercard processes the data during one of six daily clearing cycles, Monday through Sunday. Each GCMS business day is comprised of six clearing cycles which span two calendar days. The six cutoff times (cycle closure times) are 18:00 and 21:00 calendar day one, and 00:00, 03:00, 06:00, and 08:00 calendar day two. All times shown are expressed as St. Louis, Missouri, USA time.

Clearing Cycle 6 is the last cycle of the GCMS processing day for all customers, excluding Mexico.

To resolve the processing risks of receiving clearing files immediately prior to Clearing Cycle 6 cutoff, files received after 07:31 St. Louis, Missouri, USA time may be processed with the subsequent clearing cycle 1 of the next processing day. When these files are processed during

Clearing Cycle 1 of the next processing day, it will result in the delay of clearing outbound files, reconciliation files, and settlement.

The following table shows the daily schedule for the seventh clearing cycle designated for Mexico domestic switching transactions.

Business Day	Clearing 7 (Mexico domestic switching transactions)
Sunday	Sunday, 11:00
Monday	Monday, 11:00
Tuesday	Tuesday, 11:00
Wednesday	Wednesday, 11:00
Thursday	Thursday, 11:00
Friday	Friday, 11:00
Saturday	Saturday, 11:00

Refer to the Clearing Processing Details chapter of the *Global Clearing Management System Reference Manual* for clearing file delivery options.

Settlement times

Mastercard settles with most customers Monday through Friday following the sixth clearing cycle cutoff. However, for intracurrency settlement participants, the option to settle after any clearing cycle is available.

Customers receive settlement advisements from the Mastercard Settlement Account Management (S.A.M.) system.

The deadline for U.S. dollar funds transfer is 14:00 St. Louis, Missouri, U.S.A. time.

Transactions processed in the Saturday and Sunday clearing cycles are included in the Monday net settlement totals. Advisements that customers receive on Monday report Saturday, Sunday, and Monday settlement totals. Settlement can occur only after clearing has already occurred.

NOTE: For more information about settlement, refer to the *Settlement Manual*.

Characteristics of the IPM format

Customers send clearing data to Global Clearing Management System using the Integrated Product Messages (IPM) format, which is based on the ISO 8583-1993 format and has the following characteristics.

- Variable-length: A particular element in the message or the entire message can have a different length based on the data it contains.

- Variable-format: The location of a particular element within a message can vary between messages, depending on the other elements that are present in each message.
- Bit map orientation: The bit map indicates whether data elements are present or absent from the message.

Elements of Integrated Product Messages

Integrated Product Messages (IPMs) contain four types of message elements.

- Message Type Identifier (MTI): Identifies the purpose of the message, such as Financial, Administrative, or Fee Billing.
- Two bit-maps: A series of binary digits (bits) that indicate the presence or absence of data elements.
- Data elements: Message elements, defined within the ISO 8583-1993 specification that may contain data.
- Private data subelements: Message elements that Mastercard defined to support data not defined within the ISO 8583-1993 specification.

Customer currency conversion for chargebacks (all cycles)

Customers must meet specific requirements for submission of chargeback amounts (including currency conversion of chargeback amounts) depending on the phase of the chargeback life cycle.

IPM message types

The IPM message uses a combination of two elements to define the message type.

Message Type Identifier (MTI) + Data Element (DE) 24 (Function Code)

The MTI identifies the general ISO message type. Valid MTIs include the following.

MTI	Description
1240	Presentment
1442	Chargeback
1644	Administrative
1740	Fee Collection

The Function Code more specifically defines the message's purpose.

For example, the combination of an MTI value of 1644 plus a DE 24 (Function Code) value of 697 indicates a file header.

Mastercard documentation refers to IPM message types by stating the MTI value and then the function code value, separated by a hyphen, as follows: File Header/1644-697.

NOTE: For more information about the construction of the IPM message, refer to the *IPM Clearing Formats* manual and the Clearing Processing Details chapter of the *Global Clearing Management System Reference Manual*.

Transferring clearing data

Customers can choose from multiple methods of transmitting data.

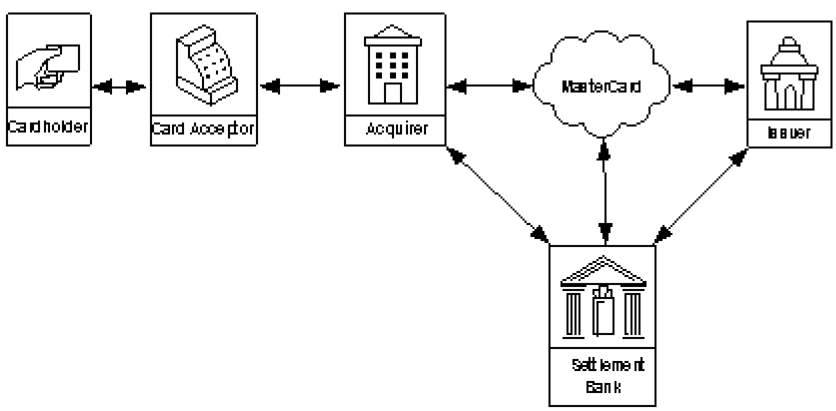
- Mastercard interface processor (MIP): A mid-range central processing unit (CPU) that accesses the customer gateway to the Mastercard Network. The sending customer captures data and transmits it to Global Clearing Management System at Central Site.
- Mastercard File Express: Transfer through dial-up access between remote personal computers and a Central Site-based mainframe using modems and communications software developed and licensed by Mastercard. The *Mastercard File Express Client Users' Guide* contains more information about this transmission method.
- CONNECT:Direct: Mastercard mainframe to customer mainframe using dedicated network communication facilities. This facility supports all bulk data types.

Processing cycles of clearing transactions

There are five processing cycles through which a clearing transaction may travel. Customers can submit clearing transactions from any of these processing cycles in one file.

1. First Presentment
   The acquirer presents transaction data to the issuer.

   The following diagram illustrates the movement of data in processing a first presentment .



2. Retrieval requests and fulfillments
   An issuer can request the transaction slip from the acquirer if there is any question about the transaction that the original document or facsimile may resolve.

   To complete this cycle, the acquirer either fulfills the issuer's request or sends a message documenting the inability to honor the request. Mastercard encourages the use of the Mastercom electronic imaging system to deliver transaction slips and other information concerning the request.

3. Chargeback
   After the initial presentment of the cardholder transaction from the acquirer to the issuer, the issuer may determine that, for a given reason, the transaction may not be valid. The issuer may return the transaction to the acquirer as a chargeback.

   The issuer can submit a chargeback if the issuer or the cardholder disputes the first presentment. The chargeback must be processed within the designated time frames after receiving the first presentment (These time frames vary according to the chargeback reason). This returns the transaction to the acquirer for possible remedy.
4. Second Presentment
   The acquirer may return the transaction with additional information as a second presentment. The acquirer may return the second presentment to correct the original defect or to indicate a disagreement with the issuer's chargeback.
5. Arbitration chargeback
   If the issuer continues to dispute the item, it returns the transaction to the acquirer for the second time as an arbitration chargeback. This cycle is not supported for ATM, Maestro, or Cirrus transactions.

Arbitration

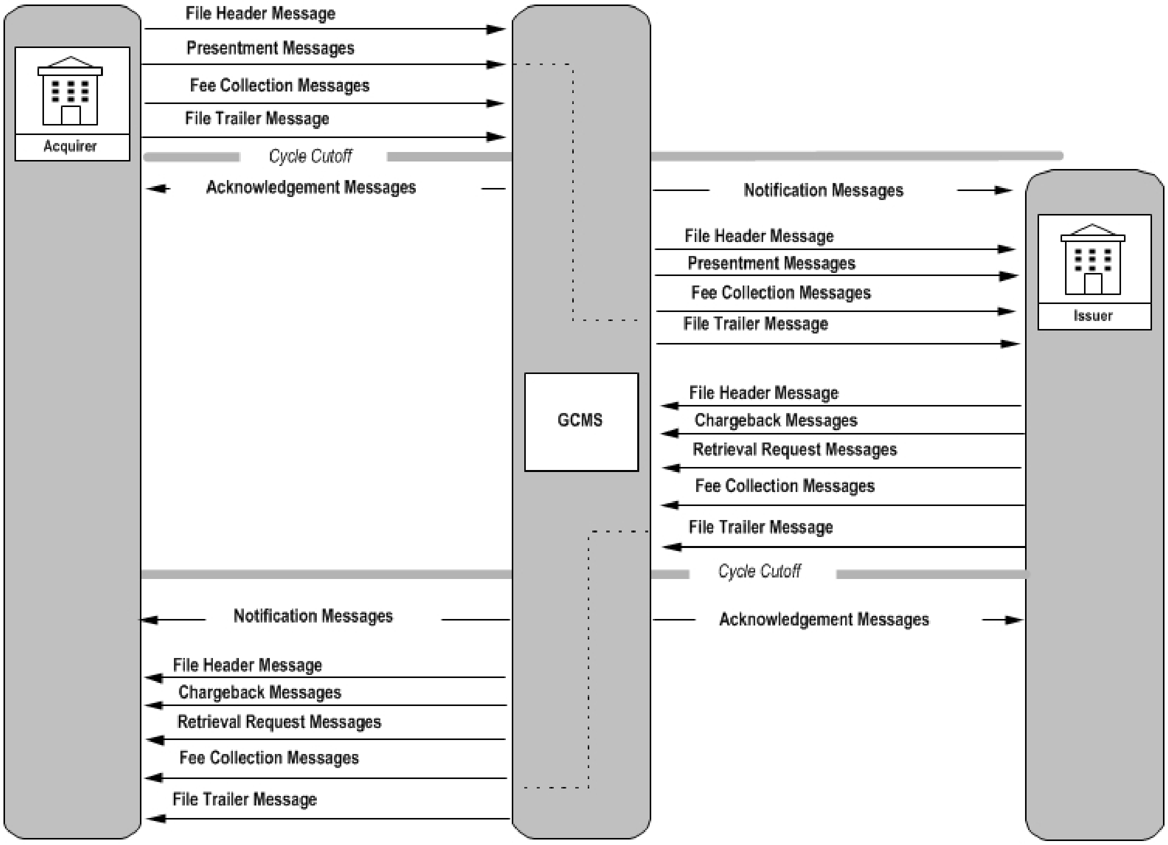
The final phase in the chargeback process is arbitration. A customer may petition Mastercard to determine responsibility for a transaction after unsuccessful dispute resolution through the chargeback process outlined above.

Compliance

The customers request that Mastercard resolve a rules violation or a dispute between the customers when no remedy exists through the chargeback life cycle.

Diagram of the transaction processing cycles

The following diagram shows the relationships of customers during the first three cycles of transaction processing.


Acquirer
GCMS
Issuer
File Header Message
Presentment Messages
Fee Collection Messages
File Trailer Message
Cycle Cutoff
Acknowledgement Messages
Notification Messages
File Header Message
Presentment Messages
Fee Collection Messages
File Trailer Message
File Header Message
Chargeback Messages
Retrieval Request Messages
Fee Collection Messages
File Trailer Message
Cycle Cutoff
Acknowledgement Messages
Notification Messages
File Header Message
Chargeback Messages
Retrieval Request Messages
Fee Collection Messages
File Trailer Message

Protection of cardholder confidential information

Customers are required to protect all data files of and storage methods for cardholder confidential information that is in electronic form and while the information is in storage per the Payment Card Industry Data Security Standard (PCI DSS).

This protection should be performed by encryption or other appropriate compensating controls. In addition, this information must be placed in secure areas with adequate controls (which may include encryption or other appropriate compensating controls) to prevent unauthorized access. Customers will dispose of confidential information in accordance with customer policies, to avoid exposing or compromising cardholder confidential information.

Acquirers and issuers that use either the Clearing Optimizer: Mainframe or Clearing Optimizer: AutoEdit software must ensure that data files of and the storage methods used for cardholder confidential information are protected from unauthorized access using PCI DSS.

Clearing Optimizer software

Mastercard has developed the Clearing Optimizer software package to help customers to interact with IPM formatted messages.

The software

- emulates many of the editing functions performed by Global Clearing Management System at Central Site
- helps the customer to manipulate IPM messages
- parses or rebuilds IPM messages for use by other software tools, and
- provides a file of customer parameters for use in populating IPM messages.

Customers that choose to use this software install it at their sites on their own hardware.

NOTE: For more information about the distributed software, refer to either the *Clearing Optimizer: Mainframe* manual or the *Clearing Optimizer: AutoEdit* manual.

In addition to the distributed software described above, Mastercard will deliver Member Host Preparation Facility (MHPF) communication software upon request. The purpose of the software is to assist in the management of data transfers through a Mastercard Interface Processor (MIP).

The MHPF communication software

- transmits files through the TCP/IP transmission protocol
- provides modules to perform some very basic file structure edits on non-clearing files, and
- provides MIP Bulk File Advisement software to perform queries and reporting of bulk files received and available for unloading from their MIP.

Bulk File Advisement Module (module not specific to clearing format files)

Module	Description
MH410010	MIP Bulk File Advisement

NOTE: For more information about the MHPF software, refer to the *File Transfer Manual* and the *Data Communications Manual*.

NOTE: Mastercard will deliver modules MH590010 and MH700010 solely to support the existing compile and link edit processes for the driver routines that contain them. Customers no longer will run the modules themselves.

Customer requirements and responsibilities in clearing transactions

All customers have certain rights and obligations in the processing and settlement of clearing transactions and must accept such items received in clearing as specified in this manual.

All customers must present (submit) and accept specific messages electronically through Global Clearing Management System. Chapter 2 of this manual and the *IPM Clearing Formats* manual define the specific messages that customers are required to use for the clearing of data.

An issuer receiving a presented transaction that is incomplete, invalid, or otherwise not in conformance with the provisions of this manual or the *IPM Clearing Formats* manual has specific rights to return the transaction to the acquirer (chargeback). The acquirer has specific rights to present the transaction again to the issuer so that the acquirer can remedy the transaction (second presentment). In turn, the issuer may originate another chargeback (an arbitration chargeback) if the acquirer incorrectly presented it a second time.

All customers are responsible for sending, receiving, and balancing Global Clearing Management System messages.

All customers should balance the daily net settlement advisement to their IPM reconciliation messages, Global Clearing Management System reconciliation reports, or both.

NOTE: The daily net settlement advisement is the definitive authority about funds movement. Differences between the Global Clearing Management System reconciliation messages and reports and the settlement advisement may occur from time to time because of risk management edits present in the settlement system.

NOTE: For more information about net settlement procedures, refer to the *Settlement Manual*.

Acquirer responsibilities in clearing transactions

There are a number of tasks for which acquirers are responsible during the processing and settlement of clearing transactions.

Acquirers must

- ensure that presented data is accurate, complete, and in compliance with the Mastercard rules. Further, acquirers are responsible for editing and monitoring all messages sent and received.
- edit and balance the prepared data before submission to Central Site through MIP, Mastercard File Express, or CONNECT:Direct. Make any necessary corrections to the input of data based on the edits, using the Clearing Optimizer software (if supported). Customers using the Clearing Optimizer software must always work with the most current version.
- transmit the prepared data to Global Clearing Management System to await processing by Central Site.
- keep a transmission log or listing of each file sent to Global Clearing Management System.
- verify the incoming acknowledgment messages from Global Clearing Management System against outgoing file data, and resubmit any rejected items or files based on the rejected messages that Global Clearing Management System returns.
- receive all first chargeback and arbitration chargeback messages submitted by issuers. In accordance with the Mastercard rules and procedures outlined in the *Chargeback Guide*, the acquirer may either accept responsibility for the transactions or
  - Second present the transactions on receipt of a first chargeback, or
  - File for arbitration on receipt of an arbitration chargeback.
- capture and process incoming retrieval requests.
- initiate fee collection messages in accordance with the format and details defined in *IPM Clearing Formats*.
- edit and reconcile messages sent and received by balancing the IPM acknowledgment and notification reconciliation messages or reports to their internal system reports of outgoing and incoming data. Acquirers must ensure that they have reconciled all rejected and accepted messages.

Issuer responsibilities in clearing transactions

There are a number of tasks for which issuers are responsible during the processing and settlement of clearing transactions.

Issuers must

- receive all financial records as presented by the acquirer and ensure that all data necessary to identify the transaction is provided to the cardholder or is readily accessible for transaction research and monitoring purposes
- reconcile net settlement figures
- edit and reconcile retrieval, chargeback, and fee collection messages to ensure that the issuer sends complete and accurate detail in compliance with Mastercard operating standards

- edit and reconcile messages received by balancing the IPM notification reconciliation messages or reports to the issuer's internal system reports of incoming data sent from Mastercard
- capture and process retrieval request fulfillments when received, and
- initiate retrieval, chargeback, and fee collection messages in accordance with
  - the formats and details defined in *IPM Clearing Formats* and
  - Mastercard chargeback rules and procedures outlined in the *Chargeback Guide*.

To reconcile messages sent, issuers must balance the IPM acknowledgment reconciliation messages to their internal system reports of outgoing data sent to Mastercard.

Global Clearing Management System responsibilities in clearing transactions

The Global Clearing Management System serves a variety of functions.

Global Clearing Management System

- edits, balances, and distributes clearing data received from each customer
- determines the net amount for each customer's daily incoming and outgoing work (Global Clearing Management System produces a net settlement figure in reconciliation currency that it sends to the Mastercard Settlement Account Management (S.A.M.) system.)
- verifies and adjusts fee calculations when necessary
- rejects individual messages or entire files and then notifies the sending customer of the rejection
- updates accepted file information for each customer sending files
- produces and sends clearing files to participating customers, and
- provides currency conversion rates to customers at their option.

Establishing Global Clearing Management System services

Customers must provide Mastercard with various information, including

- current processing procedures
- testing preferences
- contacts, and
- requested Global Clearing Management System clearing options.

Customers provide this data by contacting their account manager or Mastercard Customer Implementation Specialist.

Documents related to Global Clearing Management System

These documents and resources provide information related to the subjects discussed in the *Global Clearing Management System Reference Manual*.

- Authorization and clearing release announcements
- *Authorization Manual*
- *Chargeback Guide*
- *Clearing Optimizer Mainframe*
- *Clearing Optimizer AutoEdit*
- *Customer Interface Specification*
- *Data Communications Manual*
- *File Transfer Manual*
- *Global Clearing Management System Parameter Table Layouts*
- *Interchange Manual*
- *IPM Clearing Format Error Numbers and Messages*
- *IPM Clearing Formats*
- *Mastercard Clearing Presentment Simulator Guide*
- *Mastercard MoneySend and Funding Transactions Program Standards*
- *Mastercard Rules*
- *Quick Reference Booklet*
- *Security Rules and Procedures*
- *Transaction Processing Rules*

Chapter 2 Clearing processing details

This section presents details about the functionality and support that Global Clearing Management System provides. It addresses how to send and receive messages and how the system edits certain transactions.

Creating IPM messages

The Global Clearing Management System processes the Integrated Product Messages (IPM) format. IPM messages contain various data elements.

Element	Element Number	Description
Message Type Identifier (MTI)	----	Describes the message class.
Primary Bit Map	----	A series of binary digits (bits) that indicate the presence or absence of DE 1-DE 64.
Secondary Bit Map	DE 1	A series of binary digits (bits) that indicate the presence or absence of DE 65-DE 128.
Function Code	DE 24	A three-position data element indicating the specific purpose of a message within the message class. The function code provides additional information about the MTI or message class (such as first presentment, second presentment partial, or first chargeback full).
Message Reason Code	DE 25	A four-position data element indicating the reason for sending the message. Most, but not all, IPM messages require the message reason code.
Message Number	DE 71	An eight-position data element that monitors the integrity and continuity of the files being exchanged.

The *IPM Clearing Formats* manual documents the specifications for each data element and private data subelement.

IPM message construction requirements

Users must meet various requirements when constructing Integrated Product Messages (IPM) messages.

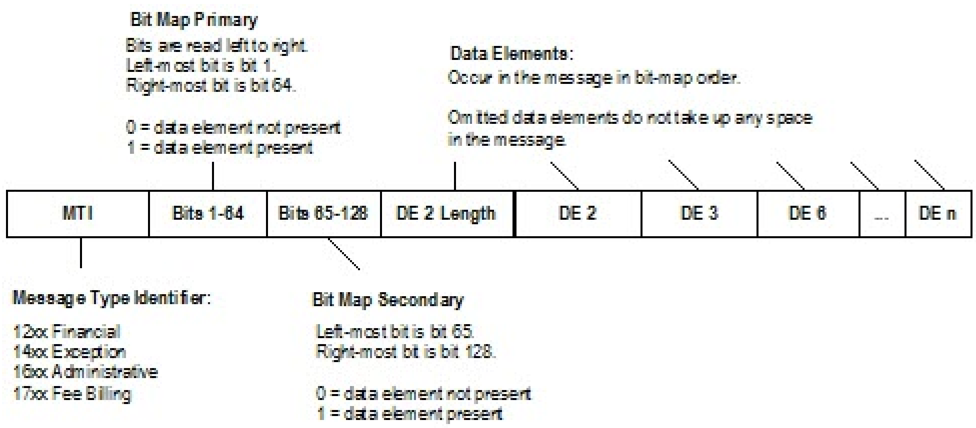
- The file header and file trailer for each logical file must contain the same value in PDS 0105 (File ID).
- Every message must contain the message type identifier (MTI) in positions 1-4, followed by both bit maps in positions 5-20, followed by the International Organization for Standardization (ISO)-defined data elements (DE 1-DE 128) in ascending sequence.
- DE 24 (Function Code) and DE 71 (Message Number) must be present in every IPM message.
- DE 71 must always contain 00000001 in the file header. For each subsequent message in the logical file, the value in DE 71 must be greater than the value in the previous message (The only exception to this occurs when Global Clearing Management System rejects a message,

in which case Global Clearing Management System returns the message to the customer with the original DE 71 value).

NOTE: Customers must not populate an element with all high values, such as hexadecimal FF, or all low values, such as hexadecimal 00, within clearing messages. Global Clearing Management System edits for all low and high values and will reject messages that contain them.

IPM structure

The structure of an IPM message has several identifying components.



Supported and unsupported data elements of IPM format messages

Within the IPM ISO 8583-1993 format, there are data elements supported by Mastercard and data elements not supported by Mastercard. There are also data elements that Mastercard may support for future use.

Customers should refer to the *IPM Clearing Formats* manual for a description of the supported data elements and private data subelements that customers may submit in IPM format messages.

Mastercard does not reject customer-generated messages for including extraneous data or unsupported elements. Global Clearing Management System simply drops the undefined elements before sending such messages to the receiving customer. This protects the data integrity and validity of files generated by Mastercard.

Customers managing their inbound clearing files should know that Mastercard limits the data sent to customers to the data elements and private data subelements defined for use in the *IPM Clearing Formats* manual.

Handling of unsupported elements

A message containing unsupported data elements or private data subelements results may not be accepted by Global Clearing Management System.

Global Clearing Management System does not edit and does not include, in any accepted message to the transaction destination, unsupported data elements or private data subelements, nor any data elements not supported for specific message type identifier (MTI) and DE 24 (Function Code) combinations. This includes elements and subelements that Mastercard will support in the future.

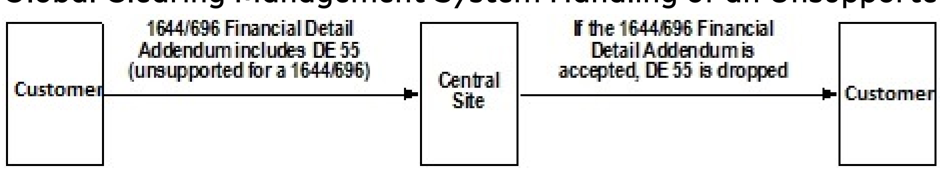
For example, the *IPM Clearing Formats* manual defines DE 17 (Capture Date) as an element that Mastercard does not currently support and does not plan to support in the future. Global Clearing Management System does not edit DE 17 or include it in any accepted message to the transaction destination.

In addition to the above examples, some data elements are not valid for specific MTI and DE 24 combinations. For example, DE 55 (Integrated Circuit Card System Related Data) is a valid data element for first presentment, second presentment, first chargeback, and arbitration chargeback messages. However, it is not a valid data element for financial detail addendum messages. Therefore, Global Clearing Management System would not forward it to the transaction destination if it were included in a financial detail addendum message by the sender of the message.

Mastercard follows the *IPM Clearing Formats* manual data element and private data subelement specifications.

As shown in the following figure, Global Clearing Management System drops an unsupported data element or private data subelement if Global Clearing Management System accepts the message. An accepted message is one that Global Clearing Management System processes because it does not fail format, syntax, content, or context edits.

Global Clearing Management System Handling of an Unsupported Element

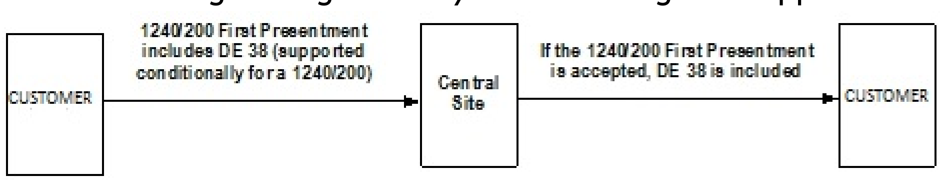


Handling of supported elements

Global Clearing Management System accepts a message if it contains supported elements.

Global Clearing Management System includes a supported data element or private data subelement if Global Clearing Management System accepts the message. For example, Mastercard considers PDS 1000-1099, which contain customer-to-customer proprietary data, to be supported elements. Global Clearing Management System always forwards proprietary elements to the destination for accepted messages, and always returns them to the sender for rejected messages. As shown in the following figure, Global Clearing Management System forwards DE 38 (Approval Code) if the First Presentment/1240-200 is accepted.

Global Clearing Management System handling of a supported element



Global Clearing Management System accepts a particular data element or private data subelement if the element is

- valid
- parseable, and
- identified as a recognized element for the transaction function (message type identifier (MTI) and DE 24 [Function Code]), regardless of whether the field is mandatory, optional, or conditional.

Valid means that the data element or private data subelement passes any format, syntax, content, or context edits applied during the edit process. For example, a private data subelement that the *IPM Clearing Formats* manual defines as containing only numeric digits must contain only numeric digits to be considered valid. Chapters 7, 8, 9, and 10 of the *IPM Clearing Formats* manual document the specifications for each data element and private data subelement.

For example, within a first presentment, the *IPM Clearing Formats* manual defines

- PDS 0165 (Settlement Indicator) as a mandatory field for a first presentment, and
- PDS 0171 (Alternate Acceptor Description Data) as optional (that is, the transaction originator may or may not include it) in a first presentment.

IF the transaction originator includes…	AND…	THEN Global Clearing Management System will…
Both fields described above	Both are valid	Forward the fields to the transaction destination.
Both fields described above	Any field is invalid	Reject the message and return both fields.

Customer-to-customer proprietary data in the IPM format

Mastercard has allocated 100 private data subelement within the range of 1000 through 1099 for customer proprietary use. This enables customers to exchange customer-defined proprietary data with other customers who process in the Integrated Product Message (IPM) format.

Customers can use these private data subelements to exchange information that the IPM format does not define and capture in other elements. Customers can present up to 999 bytes of non-binary data (including tags, lengths, and data for all PDS in the 1000-1099 range) within a single IPM message.

To accommodate varying global business requirements, customers have two options for presenting their data:

- Customers who want to use their own parsing routines to parse the proprietary data may provide one string of up to 992 characters of data within a single private data subelement in the 1000-1099 range. With this option, customers would provide a single private data subelement tag (ID) and one length definition, followed by the desired data string. Global Clearing Management System will leave this customer data intact.

- Customers who would like Mastercard to parse the proprietary data may use up to 100 individual private data subelement in the 1000-1099 range to define their data. With this option, customers must use the normal tag-length-data private data subelement encoding structure to define as many private data subelements as they choose to use. Customers may provide up to 999 positions total (including tags, lengths, and data for all private data subelements within the range) per message.

Customers may present proprietary data in private data subelements 1000-1099 in any of the IPM message types for which the customer is the originator. They may include the customer-to-customer proprietary private data subelements in any of the Additional Data DEs (DE 48, DE 62, DE 123, DE 124, and DE 125), which are the carrier data elements for private data subelements. Customers also should be prepared to receive private data subelements 1000-1099 in any of the carrier data elements.

The contents of PDSs 1000-1099 must be in display format. The Global Clearing Management System does not accommodate binary data in the private data subelements dedicated for customer-to-customer proprietary data.

Customers must treat the data in the Customer-to-Customer Proprietary private data subelements as confidential. Customers may disregard unsolicited Customer-to-Customer Proprietary private data subelement data, and may discard it, provided this is done in a manner, which preserves the confidentiality of the data.

Customer-generated files in the IPM format

The Integrated Product Message (IPM) format provides a flexible structure for customer-generated logical and physical files.

Logical file

logical file is an offline file that contains a single file header, followed by various IPM clearing messages, followed by a single file trailer.

Physical file

A physical file is an offline transmission that is a single dataset or bulk file and that contains one or more logical files. There is no transmission header or transmission trailer to enclose an offline transmission.

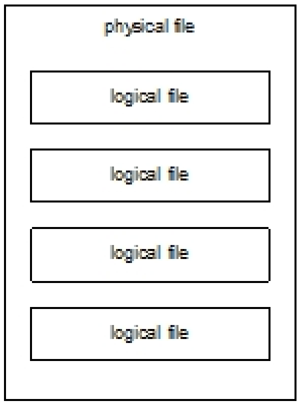
A GCMS limitation requires that the number of logical files within a physical file must not exceed 20,000. If the allowed limit is exceeded, then customers will be impacted by Mastercard actions to split the logical files between multiple physical files, not receiving reconciliation as expected, and could miss the preferred settlement cycle.

Offline

As used above, offline refers to an operating mode in which current active files are not being viewed during the time the transaction is conducted.

Global Clearing Management System processes each logical file within a physical file independently. The transmission originator determines whether to submit a single logical file or multiple logical files within a physical file.

Logical files within a physical file



There are no requirements related to the grouping of IPM messages into logical files. For example, one transmission originator may choose to create a separate logical file for each ending customer ID. Another transmission originator may choose to create one logical file for chargebacks and retrievals and another for presentments.

Sequence of the customer-generated IPM file

Customers must adhere to certain rules when constructing IPM files.

There are relatively few sequencing rules for customer-generated logical files. The customer may construct its IPM outbound logical file using any message sequence, with the following exceptions:

- A file must begin with a file header message and end with a file trailer message.
- The file ID in the header must match the file ID in the trailer.
- DE 71 (Message Number) in the file header message always must contain 00000001. Subsequent DE 71 values must be incremented, so that each succeeding DE 71 value is greater than the previous.
- Financial detail addendum messages must immediately follow the associated first presentment messages.

IPM files may contain data from multiple customer IDs and may mix Global Collection Only data with other clearing data.

For example, customer 004444 processes clearing data for customer IDs 002222 and 003333.

The following table specifies the contents of a possible clearing file that customer 004444 could send.

MTI-Function Code	Description	Endpoint, From:
1644-697	File Header	004444

MTI-Function Code	Description	Endpoint, From:
1644-603	Retrieval Request	002222
1240-205	Second Presentment (Full)	003333
1240-200	First Presentment: Non-Global Collection Only	002222
1644-696	Financial Detail Addendum	002222
1740-700	Fee Collection	003333
1240-200	First Presentment: Global Collection Only	002222
1240-282	Second Presentment (Partial)	002222
1240-200	First Presentment: Global Collection Only	003333
1442-450	First Chargeback (Full)	003333
1442-451	Arbitration Chargeback (Full)	003333
1240-200	First Presentment	003333
1644-695	File Trailer	004444

Files generated by Mastercard

Files generated by Mastercard (incoming to customers) have unique options, requirements, and structure.

Customer clearing file delivery options

Customers have multiple options from which they may choose to receive clearing files.

Each customer must receive data from all six cycles per day. In addition to the six primary clearing cycles, a seventh clearing cycle exists exclusively for Mexico domestic switching transactions. If a customer participates in the seventh cycle for the Mexico domestic service, they must receive clearing files in the seventh clearing. All customers will continue to receive the outbound from the sixth clearing including customers under the Mexico domestic processing.

Default delivery cycles

Cycle Number	Cutoff Time (Central time)	File Delivery Default Cycle
1	18:00	Yes
2	21:00	Yes
3	00:00	Yes
4	03:00	Yes

Cycle Number	Cutoff Time (Central time)	File Delivery Default Cycle
5	06:00	Yes
6 (Final)	08:00	Yes
7 (Mexico domestic switching transactions)	11:00	Yes

Customers automatically receive clearing files at these default times, unless they contact Mastercard. Customers that want to change their clearing cycle cutoff times should contact their account manager or Mastercard Customer Implementation Specialist.

NOTE: The outbound delivery of the files of cycles one and two is extended by 1-3 hours on release implementation dates only. The files from cycles three through six will be delivered at the usual times. Release implementation dates occur four times a year and occur on a Friday of the release implementation month. Although the files of cycles one and two are delivered on a different calendar day from cycles three through six, Mastercard considers the delivery of all six cycles of files to occur in one processing day.

Clearing file delivery options

Customers have multiple options to choose from when receiving clearing data from Global Clearing Management System.

Global Clearing Management System provides several options for organizing into separate files incoming clearing data generated by Mastercard. Global Clearing Management System will assign different endpoints to different categories of data. An endpoint is a numeric, seven-digit identifier that is linked to a physical file delivery location defined to Mastercard.

Global Clearing Management System delivers one file to each endpoint after each clearing cycle in which a customer chooses to receive data.

File delivery options include

- Customer ID
- Acquirer Reference ID
- Acquirer Reference ID plus card program identifier
- issuer account range
- issuer account range plus card program identifier, and
- ssuer account range plus card program identifier plus ATM versus POS.

Option 1: Customer ID

With this option, customers can specify different endpoints according to customer ID. The following table is an example.

Customer ID	Endpoint
001234	0000001
005678	0000002
002222	0000001

In this example, Global Clearing Management System will create one file for endpoint 0000001 and one file for endpoint 0000002 after each specified clearing cycle cutoff.

The file created for endpoint 0000001 will contain transactions destined for customer IDs 001234 and 002222. The file created for endpoint 0000002 will contain transactions destined for customer ID 005678.

A processor might choose to use this arrangement to group its customers into different files.

Option 2: Acquirer Reference ID

With this option, a customer can specify different endpoints according to acquirer bank identification number (BIN). The following table is an example.

Acquirer Reference ID	Endpoint
541234	0000001
543333	0000002

In this example, Global Clearing Management System will create one file for endpoint 0000001 and one file for endpoint 0000002 after each specified clearing cycle cutoff.

The file created for endpoint 0000001 will contain transactions destined for Acquirer Reference ID 541234. The file created for endpoint 0000002 will contain transactions destined for Acquirer Reference ID 543333.

Option 3: Acquirer Reference ID plus card program identifier

With this option, a customer can specify different endpoints according to the combination of Acquirer Reference ID plus card program identifier. The following table is an example.

Acquirer Reference ID	Card Program Identifier	Endpoint
544444	Maestro (MSI)	0000001
544444	Mastercard (MCC)	0000002

In this example, Global Clearing Management System will create one file for endpoint 0000001 and one file for endpoint 0000002 after each specified clearing cycle cutoff.

The file created for endpoint 0000001 will contain Maestro transactions destined for Acquirer Reference ID 544444. The file created for endpoint 0000002 will contain Mastercard transactions destined for Acquirer Reference ID 544444.

An acquirer might choose to use this arrangement to separate debit and credit activity.

Option 4: issuer account range

With this option, a customer can specify different endpoints according to issuer account range. The following table is an example.

Issuer Account Range	Endpoint
541111	0000001
542222	0000002

In this example, Global Clearing Management System will create one file for endpoint 0000001 and one file for endpoint 0000002 after each specified clearing cycle cutoff.

The file created for endpoint 0000001 will contain transactions destined for issuer account range 541111. The file created for endpoint 0000002 will contain Mastercard transactions destined for issuer account range 542222.

An issuer might choose to use this arrangement to separate consumer and corporate activity, by assigning consumer account ranges to one endpoint and corporate account ranges to another endpoint.

An issuer might also choose to use this arrangement to separate debit and credit activity, by assigning one endpoint to Maestro or Cirrus account ranges and another endpoint to Mastercard account ranges.

Option 5: Issuer account range plus card program identifier

With this option, a customer can specify different endpoints based on the combination of issuer account range plus card program identifier. The following table is an example.

Issuer Account Range	Card Program Identifier	Endpoint
545555	Cirrus (CIR)	0000001
545555	Mastercard (MCC)	0000002

In this example, Global Clearing Management System will create one file for endpoint 0000001 and one file for endpoint 0000002 after each specified clearing cycle cutoff.

The file created for endpoint 0000001 will contain Cirrus transactions destined for issuer account range 545555. The file created for endpoint 0000002 will contain Mastercard transactions destined for issuer account range 545555.

An issuer might choose to use this arrangement to separate Cirrus and Mastercard activity for each account range.

Option 6: Issuer account range plus card program identifier plus ATM versus POS

With this option, a customer can specify different endpoints according to the combination of issuer account range, card program identifier, and whether the transaction is an ATM transaction. The following table is an example.

Issuer Account Range	Card Program Identifier	ATM/POS	Endpoint
545555	Cirrus (CIR)	ATM	0000001
545555	Mastercard (MCC)	Not specified	0000002
547777	Maestro (MSI)	ATM	0000001
547777	Maestro (MSI)	POS	0000003

In this example, Global Clearing Management System will create one file for endpoint 0000001, one file for endpoint 0000002, and one file for endpoint 0000003 after each specified clearing cycle cutoff.

The file created for endpoint 0000001 will contain Maestro and Cirrus ATM transactions destined for issuer account ranges 545555 and 547777. The file created for endpoint 0000002 will contain all Mastercard transactions destined for issuer account range 545555. The file created for endpoint 0000003 will contain Maestro point-of-sale (POS) transactions destined for issuer account range 547777.

An issuer could use this option to simulate the processing class concept by assigning one endpoint to Maestro and Cirrus ATM transactions, one endpoint to Maestro POS transactions, and one endpoint to Mastercard transactions, for each issuing account range.

Global Clearing Management System sequence of the file generated by Mastercard

Within a given Mastercard destination (a combination of endpoint and DE 93 [Destination ID]), Global Clearing Management System sequences files generated by Mastercard as shown in the Sequence of Files Generated by Mastercard table.

Table 3: Sequence of files generated by Mastercard

	IPM Inbound Message Type	IPM MTI-Function Code Combination
1.	File Header	1644-697
2.	Text Messages	1644-693
3.	Currency Updates	1644-640
4.	First Presentments	1240-200
5.	Financial Detail Addendum (if required)	1644-696
6.	Retrieval Requests	1644-603
7.	Fee Collections (Retrieval Fee Billing)	1740-700
8.	First Chargebacks, Full and Partial	1442-450 1442-453
9.	Second Presentments, Full and Partial	1240-205 1240-282
10.	Arbitration Chargebacks, Full and Partial	1442-451 1442-454
11.	Fee Collections (non–Retrieval Fee Billing): DDDD-generated, Returns, Resubmissions, Arbitration Returns, and Clearing System-Generated	1740-700 1740-780 1740-781 1740-782 1740-783
12.	Message Exception and File Reject	1644-691 1644-699

	IPM Inbound Message Type	IPM MTI-Function Code Combination
13.	File Currency Summary, Financial Position Details, and Settlement Position Details	1644-680 1644-685 1644-688 1644-698
14.	File Trailer	1644-695

When there are multiple message types (for example, multiple first presentments) for multiple receiving customer IDs, the Global Clearing Management System sequences them as follows:

- All message types except 1644-693 (Text Message) and 1644-640 (Currency Update): first by receiving customer ID and then by message type
- 1644-693 (Text Message) and 1644-640 (Currency Update) messages: once per processor by the first occurring (lowest) customer ID and then by message type

If a customer or processor processes for multiple customer IDs, Global Clearing Management System constructs files generated by Mastercard as shown in the following table. For example, suppose that customer ID 004444, endpoint 1, processes for customer ID 002222 and customer ID 003333. When processing for multiple customer IDs, Global Clearing Management System would construct the receiver's inbound file as shown in the following table.

Example of sequencing of files generated by Mastercard

MTI-Function Code	Description	Endpoint 1, to Customer ID (ICA)
1644-697	File Header	004444
1644-693	Text Message	002222
1644-640	Currency Update	002222
1240-200	First Presentment	002222
1644-696	Financial Detail Addendum	002222
1240-282	Second Presentment (Partial)	002222
1644-685	Financial Position Detail	002222
1644-698	Settlement Position Detail	002222
1240-200	First Presentment	003333
1644-603	Retrieval Request	003333

MTI-Function Code	Description	Endpoint 1, to Customer ID (ICA)
1740-700	Fee Collection (Retrieval Fee Billing)	003333
1442-450	First Chargeback: Full Amount	003333
1240-205	Second Presentment	003333
1442-451	Arbitration Chargeback: Full Amount	003333
1740-700	Fee Collection (non-Retrieval Fee Billing)	003333
1644-685	Financial Position Detail	003333
1644-695	File Trailer	004444

Merging of clearing information between cycles

New customers must participate in all clearing cycles. Existing customers and processors may choose to receive clearing data less than six times per day. This results in the merging of their clearing activity across cycle boundaries.

When the customer's or processor's next delivery cycle is completed, the clearing file delivered will actually represent activity from two cycles, or even three cycles, if two consecutive cycles have been skipped. In the following example, if a customer receives clearing data after cycles 1, 2, 5, and 6, the file delivered after cycle 5 will contain data from clearing cycles 3, 4, and 5.

NOTE: In addition to the six primary clearing cycles, a seventh clearing cycle exists exclusively for Mexico domestic switching transactions.

NOTE: Within the MTI-Function Code category, data will not necessarily be in ascending clearing cycle sequence. For example, cycle 5 First Presentments might precede cycle 4 First Presentments.

Example illustrating delivery cycle 5 with clearing cycles 3, 4, and 5

MTI-Function Code	Description	Clearing Cycle	Delivery Cycle
1644-697	File Header	5	5
1644-693	Text Message	5	5
1644-640	Currency Update	5	5
1240-200	First Presentment	3, 4, 5	5
1644-696	Financial Detail Addendum (when present)	3, 4, 5	5
1644-603	Retrieval Request	3, 4, 5	5

MTI-Function Code	Description	Clearing Cycle	Delivery Cycle
1740-700	Fee Collection/Retrieval Fee Billing (DE 25 = 7614)	3, 4, 5	5
1442-450/453	First Chargeback, Full or Partial	3, 4, 5	5
1240-205/282	Second Presentment, Full or Partial	3, 4, 5	5
1442-451/454	Arbitration Chargeback, Full or Partial	3, 4, 5	5
1740-700/780/781/782/783	Fee Collections/Other (other then DE 25 = 7614)	3, 4, 5	5
1644-691	Message Exception	3, 4, 5	5
1644-699	File Reject	3, 4, 5	5
1644-680	File Currency Summary	3, 4, 5	5
1644-685	Financial Position Detail	3, 4, 5	5
1644-688	Settlement Position Detail	3, 4, 5	5
1644-695	File Trailer	5	5

The individual messages in a specific MTI-Function Code will continue to be sequenced as they are today.

Delivery of administrative messages following clearing cycles

Customers and processors that receive early reconciliation files will receive their early reconciliation files as soon as Global Clearing Management System has processed their outgoing files. They will receive their administrative messages, such as those from Mastercard to customers, after the next available delivery cycle.

NOTE: In addition to the six primary clearing cycles, a seventh clearing cycle exists exclusively for Mexico domestic switching transactions.

Customers and processors that elect to receive early reconciliation files will receive information after all six cycles.

Customers and processors that choose to not receive early reconciliation will receive all of their reconciliation messages, error messages, and messages from Mastercard to customers after the next available delivery cycle.

Global Clearing Management System will not recalculate or merge totals of reconciliation messages that are held until the next available delivery cycle.

For example, if an existing customer or processor participates in cycles 1, 3, 4, and 6 as its delivery cycles and has elected to not receive early reconciliation files, the following will apply:

- Reconciliation and error messages, if any, from cycle 1 will be delivered after cycle 1 processing.
- Reconciliation and error messages generated in clearing cycle 2 will be held, combined with any reconciliation and error messages reconciliation and error messages generated during cycle 3, and delivered after cycle 3 processing.
- Reconciliation and error messages generated in clearing cycle 4 will be delivered after cycle 4 processing.
- Reconciliation and error messages generated in clearing cycle 5 will be held, combined with any generated during cycle 6, and delivered after cycle 6 processing.

The following table illustrates the differences of selecting receipt of early reconciliation messages when both processors have chosen cycles 1, 3, 4, and 6 as their delivery cycles.

Early reconciliation customer and non-early reconciliation processor example

IF the current cycle is...	AND both processors send in...	Processors that choose early reconciliation files will receive...	Processors that do not choose early reconciliation files will receive...
Cycle 1	First Presentment messages totaling USD 1,000	Acknowledgment messages for the USD 1,000 in First Presentments when Global Clearing Management System processes the file	Acknowledgment messages for the USD 1,000 in First Presentments from cycle 1
Cycle 2	First Presentment messages totaling USD 2,000	Acknowledgment messages for the USD 2,000 in First Presentments when Global Clearing Management System processes the file	Acknowledgment held for the next delivery cycle
Cycle 3	First Presentment messages totaling USD 3,000	Acknowledgment messages for the USD 3,000 in First Presentments when Global Clearing Management System processes the file	Acknowledgment messages for the USD 2,000 in First Presentments from cycle 2 Acknowledgment messages for the USD 3,000 in First Presentments from cycle 3
Cycle 4	First Presentment messages totaling USD 4,000	Acknowledgment messages for the USD 4,000 in First Presentments when Global Clearing Management System processes the file	Acknowledgment messages for the USD 4,000 in First Presentments from cycle 4
Cycle 5	First Presentment messages totaling USD 5,000	Acknowledgment messages for the USD 5,000 in First Presentments when Global Clearing Management System processes the file	Acknowledgment held for the next delivery cycle

IF the current cycle is...	AND both processors send in...	Processors that choose early reconciliation files will receive...	Processors that do not choose early reconciliation files will receive...
Cycle 6	First Presentment messages totaling USD 6,000	Acknowledgment messages for the USD 6,000 in First Presentments when Global Clearing Management System processes the file	Acknowledgment messages for the USD 5,000 in First Presentments from cycle 5 Acknowledgment messages for the USD 6,000 in First Presentments from cycle 6

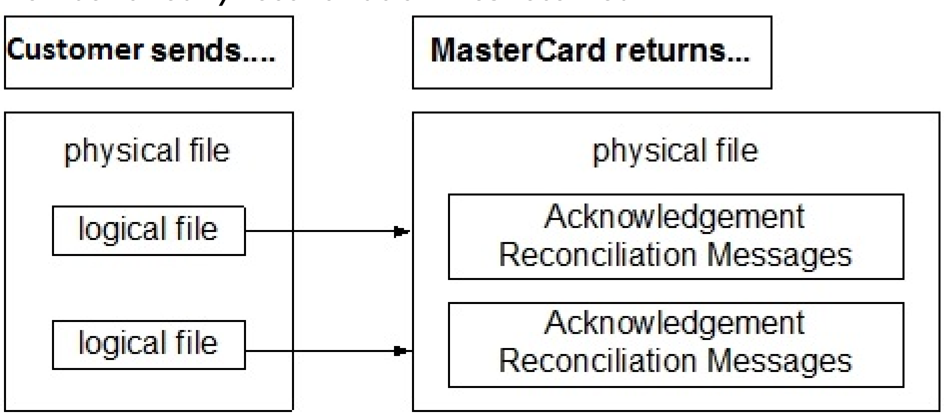
Sequence of the early reconciliation file

Guidelines and processes exist for the generation and exchange of early reconciliation files between Mastercard, Global Clearing Management System, and customers.

Customers electing to receive early reconciliation files generated by Mastercard will receive one physical file for each physical file sent to Mastercard for processing. If the customer sends a physical file containing two logical files, Global Clearing Management System will return one early reconciliation Message file. The acknowledgment reconciliation messages for the two logical files contained in the file sent to Mastercard will be contained in the single early reconciliation message physical file.

For example, if the customer sends two logical files within a physical file, Global Clearing Management System will send the acknowledgment reconciliation messages for the two logical files within one physical file. Refer to the following figure for an illustration of this example.

Number of early reconciliation files returned



The sequence number returned by Global Clearing Management System in the T113 early reconciliation bulk file generated by Mastercard will match the sequence number sent by the customer in the corresponding customer-generated R111 Global Clearing Management System Data bulk file for those customers electing receipt of the early reconciliation files. Mexico Domestic transactions for the seventh clearing is sent by customers under bulk type RSP1 and Global Clearing Management System will use the sequence number from the RSP1 bulk file for early reconciliation and sent under the Bulk File T113 bulk to customers.

The sequence of an IPM early reconciliation message physical file generated by Mastercard is similar to the sequence in the following table. Suppose that customer ID 004444, endpoint 1, processes for customer IDs 002222, 003333, 005555, and 006666. When processing for multiple customer IDs, Global Clearing Management System would construct the receiver's inbound file as shown in the following table.

Customers participating in GCMS early reconciliation experience duplicate file sequence numbers in acknowledgment reconciliation messages when a physical file contains more than 99 logical files. Because PDS 0300 (Reconciled, File), subfield 4 (File Sequence Number), positions 24-25 (Sequence Number) is a two-position value, submitting over 99 logical files causes the sequence to repeat. Furthermore, if a physical file exceeds 999 logical files, the customer will not receive early reconciliation for the physical file, and could miss the preferred settlement cycle. To avoid undesired processing of early reconciliation files Mastercard advises customers to limit the number of logical files to 99.

Sequencing of files generated by Mastercard early reconciliation

MTI-Function Code	Description	Endpoint 1, to Customer ID (ICA)
1644-697	File Header	004444
1644-680	File Currency Summary	002222
1644-685	Financial Position Detail	003333
1644-691	Message Exception	005555
1644-685	Financial Position Detail	005555
1644-691	Message Exception	006666
1644-685	Financial Position Detail	006666
1644-695	File Trailer	004444

NOTE: This example assumes that data for all customers was received in two logical files. Each logical file contains a file header, followed by various IPM clearing messages, followed by a file trailer.

Customers can match the physical file sent to Mastercard with the early reconciliation file shown below by the T113 Global Clearing Management System early reconciliation file. The following table identifies the pairing of the early reconciliation files with the file sent by the customer.

The customer should match the...	With the...
T113 Global Clearing Management System Early Reconciliation File received from Mastercard	R111 (or RSP1 for Mexico Domestico transactions under the seventh clearing cycle) Global Clearing Management System Data sent by the customer.
T121 Test: Global Clearing Management System Early Reconciliation File received from Mastercard	R119 (or RSP3 for Mexico Domestico transactions under the seventh clearing cycle) Test: Global Clearing Management System Data sent by the customer.

Administrative IPM text messages used by Global Clearing Management System

Global Clearing Management System uses IPM text messages to

- transmit broadcast messages from the Global Clearing Management System to all customers, and
- transmit text messages (such as No Data messages) from the Global Clearing Management System to a customer.

This message type contains 1644 in the MTI and 693 in DE 24 (Function Code) to identify it as a text message.

Broadcast text messages used by Global Clearing Management System

Global Clearing Management System distributes broadcast text messages in every clearing cycle for the applicable period by the combination of customer or processor, endpoint, and card program identifier.

Because broadcast text messages may contain time-critical information, these text messages are not optional. Global Clearing Management System distributes them whether or not customers have financial activity or other clearing data in the next available delivery cycle based on options for the destination endpoint. If Global Clearing Management System has acknowledgment, notification, or error messages ready to send at the time of the broadcast message, Global Clearing Management System may include them in the same file as the broadcast message. However, even if no such messages are ready to be sent, Global Clearing Management System will send the broadcast message after the clearing cycle cutoff is complete.

No Data text messages used by Global Clearing Management System

If selected by the customer, Global Clearing Management System generates a No Data message when there is no clearing data activity for the specified customer ID for an entire clearing cycle.

The message text in DE 72 (Data Record) will appear as follows: NO DATA FOR THIS MEMBER AND/OR ENDPOINT FOR THIS CLEARING.

The Global Clearing Management System distributes No Data text messages by the combination of customer or processor endpoint and clearing cycle. The Global Clearing

Management System generates these messages only if the customer or processor chooses to receive them.

If the customer or processor does not choose to receive this No Data message and there is no data for that customer or endpoint, the customer or processor will not receive an empty dataset for specified clearing cycles. This No Data message also applies to the seventh clearing cycle for Mexico domestic switching transactions.

NOTE: Mastercard recommends that customers using CONNECT:Direct choose to receive the No Data file.

Processing and delivery of clearing files

Clearing times

The sending customer can submit transaction data for clearing to the St. Louis Operations Center (Central Site) seven days a week, 24 hours a day.

Mastercard processes the data during one of six clearing periods Monday through Sunday. The six cutoff times per processing day are 18:00 and 21:00 the day before the processing day, and 00:00, 03:00, 06:00, and 08:00 of the processing day (All times shown are expressed as St. Louis time) central time.

Customers may create and send clearing files as frequently as they want. Sending clearing files earlier allows customers to have more transactions processed in earlier clearing cycle cutoffs, thus ensuring the next available settlement of their accepted transactions.

Mastercard recommends that customers submit large files at least 30 minutes before the cutoff to ensure data is processed during the clearing period. Large files submitted close to the cutoff period may be deferred to the subsequent cycle, which could impact settlement timing. To avoid file processing delays, customers should dedicate sufficient time to prepare large files for submission 30 minutes prior to the cutoff.

NOTE: A large file is a physical file with a record count greater than 1,000,000.

NOTE: Mastercard does not recommend that customers send multiple single-record logical files on a physical file. For alternative options, contact Global Customer Service. Sending in multiple single-record logical files could cause processing of files to be significantly delayed.

Julian date refers to the day of the year expressed as a three-position number, with a range of 001 through 366 (for example, 001 on 1 January).

The file sequence subfield within PDS 0105 (File ID), a five-position file sequence number, supports the frequent submission of files. It allows customers to have up to 99,999 files per unique combination of PDS 0105, subfields one through three. PDS 0105 in the IPM format consists of the subfields shown in the following table.

File ID format for PDS 0105

Subfield	Description	Format
1	File Type	n-3 File type 001 = Clearing system to customer File type 002 = Customer Generated File type 003 = Early Reconciliation
2	File Reference Date	n-6
3	Processor ID	n-11
4	File Sequence Number	n-5 For customer-generated files: Number assigned by customer or processor. Must be unique for each Processor ID and File Reference Date combination. For files generated by Mastercard: Positions 1-2 = Clearing Cycle **NOTE: This will be 99 if the customer receives clearing files containing data from two or more clearings.** Position 3 = Delivery Cycle (Values = 1–6) Positions 4-5 = Sequence Number

NOTE: For additional information about customer delivery cycle options, refer to the Files Generated by Mastercard section.

Methods of transmitting data to Global Clearing Management System

Customers transmit clearing data to Global Clearing Management System through certain media and under certain conditions.

Mastercard supports several file transfer methods within Global Clearing Management System. Refer to the *File Transfer Manual* for information about the specific methods.

For each transmission method, Global Clearing Management System performs edits to ensure that the system does not process test files in the production environment. Therefore, if a customer inadvertently sends a test file to the production environment, Global Clearing Management System does not process it as production data.

Customers use the PDS 0122 (Processing Mode) to designate their outbound clearing files as production (value P) or test (value T). All files generated by Mastercard will specify whether Mastercard created them in production or in test mode, so that the customer can perform checks for verifying that it does not process test files in the production environment.

Bulk IDs for clearing data

Customers transmitting IPM clearing data through the MIP should use PDS 0122 (Processing Mode) and IPM bulk ID values.

Bulk Type	Description	Value in PDS 0122 (Processing Mode)
R111	Customer-generated production outbound IPM data to Central Site	P
RSP1	Customer-generated production outbound IPM data to Central Site	P
T112	Production IPM data generated by Mastercard from Central Site	P
T113	Early Reconciliation Message file generated by Mastercard: If the customer chooses to receive this file, it provides early reconciliation and error message details after each logical file from a customer is processed	P
T121	Test bulk ID for the Early Reconciliation Message file generated by Mastercard	T
R119	Customer-generated test IPM data to Central Site	T
RSP3	Customer-generated test IPM data to Central Site	T
T120	Test IPM data generated by Mastercard from Central Site	T

Bulk IDs for the MPE

Customers receiving the IPM MPE via the Mastercard interface processor (MIP) will receive IPM bulk ID values.

Bulk Type	Description	Value in (PDS 0122 (Processing Mode)
T067	Production IPM MPE generated by Mastercard from Central Site (daily updates)	P
T068	Production IPM MPE generated by Mastercard from Central Site (full file replacement)	P
T167	Test IPM MPE generated by Mastercard from Central Site (daily updates)	T
T168	Test IPM MPE generated by Mastercard from Central Site (full file replacement)	T

Acknowledgment bulk files

After having applied the bank identification number (BIN) updates from the IPM MPE bulk files listed above, acquirers must submit corresponding acknowledgment bulk files with these IPM bulk ID values to Mastercard.

- RMF5: Acknowledgment GCMS Parameter Extract Data-Daily Updates
- RMF7: Acknowledgment GCMS Parameter Extract Data Full File Replace
- RMG5: Test-Acknowledgment GCMS Parameter Extract File Daily Update
- RMG7: Test-Acknowledgment GCMS Parameter Extract Full File Replace

The acknowledgment bulk files will contain header information from the MPE file being acknowledged so that the two may be matched.

Layout of acknowledgment files: daily update MPE files

Field Name	Positions	Attribute	Comments and Values
IPM MPE File Identifier	1-15	an-15	Constant value: UPDATE FILE followed by four spaces.
Date created	16-23	n-8	Date the IPM MPE Daily Update file was generated. Format: YYYYMMDD.
Time created	24-27	n-4	Time the IPM MPE Daily Update file was generated. Format: HHMM.
Filler	28-125	an-98	Spaces.

Layout of acknowledgment files: full file replace MPE files

Field Name	Positions	Attribute	Comments and Values
IPM MPE File Identifier	1-17	an-17	Constant value: REPLACEMENT FILE followed by one space.
Module Identifier	18-31	an-14	Module that generated the IPM MPE.
Filler	32-45	an-14	Constant value: CURRENT-DATE= followed by one space.
Date created	46-54	an-9	Date the IPM MPE Full File Replacement was generated. Format: MM DD YY followed by one space.

Field Name	Positions	Attribute	Comments and Values
Filler	55-61	an-7	Constant value: TIME = followed by one space.
Time created	62-69	an-8	Time the IPM MPE Full File Replacement was generated. Format: HH:MM:SS
Filler	70-125	an-56	Spaces.

Record Descriptor Word at the beginning of IPM messages

A Record Descriptor Word (RDW) field appears before each IPM message.

The format of the data in both IPM clearing messages and IPM MPE messages (both full file and updates) is Variable Blocked Spanned (VBS). Therefore, messages may be longer than the Mastercard Network constraint of 1014 bytes. To accommodate customers delivering and receiving these messages over the Network and through Mastercard File Express, a four-byte Record Descriptor Word field immediately preceding each IPM message holds the length of the data in each message.

Clearing Optimizer AutoEdit Software

The Clearing Optimizer AutoEdit software handles the Record Descriptor Word (RDW) in the IPM clearing messages and in the IPM MPE messages correctly.

An RDW is present in all Variable Block Spanned (VBS) clearing files that Mastercard delivers to customers or receives from customers. The customer's method of file transfer determines how the customer must handle the files.

MHPF MIP load and unload modules

The Member Host Preparation Facility (MHPF) MIP load and unload modules handle the RDW in the IPM clearing messages and in the IPM MPE messages correctly.

Additional information may be found in the *File Transfer Manual*.

CONNECT:Direct

The Record Descriptor Word (RDW) does not affect customers that send or receive IPM clearing files, the IPM MPE file, or both through CONNECT:Direct.

Mastercard network through a MIP

This table defines what to do with the Record Descriptor Word (RDW) based on the communications software they use.

IF a customer...	AND the customer...	THEN the customer...
Sends IPM clearing files through the Mastercard Network through a MIP	Uses Mastercard MHPF communications software	Can handle the RDW by installing the optional JCL. Job SMH1003R is the Customer Host Bulk Load for Variable Length Data Files.
	Does not use Mastercard MHPF communications software	Must delete then insert the RDW at the beginning of each IPM clearing message before loading the IPM clearing file to the MIP for delivery to Mastercard.
Receives IPM clearing files, the IPM MPE, or both through the Mastercard Network through a MIP	Uses Mastercard MHPF communications software	Can handle the RDW by installing the optional JCL. Job SMH2003R is the Customer Host Bulk Unload for Variable Length Data Files.
	Does not use Mastercard MHPF communications software	Must remove the RDW from the beginning of each IPM clearing message, as the file is unloaded from the MIP.

Processing cards that have converted from Cirrus to the Visa/PLUS ATM Network

Once cards are converted from Cirrus® to the Visa/PLUS ATM Network, customers must be aware of the processing changes that occur.

In instances where an issuing account range has been converted from Cirrus to the Visa/PLUS ATM Network, new transactions occurring after the conversion must be authorized and processed by the Visa/PLUS ATM Network, not by the Single Message System. However, transactions that were authorized by the Single Message System before the conversion to the Visa/PLUS ATM Network must be cleared and settled by both Global Clearing Management System and the Single Message System.

To accommodate customers that use the IPM MPE file for both authorization routing decisions and clearing processing, when an issuer account range converts to the Visa/PLUS ATM Network, Mastercard removes the account range from table IP0040T1 (Issuer Account Range) in the IPM MPE file sent to customers, but still retains it in table IP0040T1 in the IPM MPE file used by Global Clearing Management System. This procedure allows acquirers to stop sending new authorization requests for the issuer account range to the Single Message System, but still process clearing messages for previously authorized transactions by sending them to Global Clearing Management System.

Acquirers that use the Clearing Optimizer software to process production clearing messages before sending their files to Global Clearing Management System may receive error messages from the Clearing Optimizer software for these transactions, even though they are accepted when processed by Global Clearing Management System. To account for this condition, Mastercard enhanced the Clearing Optimizer software to prevent customers from receiving error messages when processing clearing messages for transactions authorized before an issuer account range is converted from Cirrus to the Visa/PLUS ATM Network. This enhancement consisted of adding the issuer account ranges that had been converted from Cirrus to the Visa/PLUS ATM Network, to a Mastercard private use IPM MPE table IP9000T1. The Clearing Optimizer software will use this table in its optimized table processing, to allow Clearing Optimizer to accept clearing transactions involving these converted account ranges. The following table describes distinctions between the two versions of the IPM MPE file in this context.

File	Change
IPM MPE file sent to customers	• Mastercard private use table IP9000T1: contains issuer account ranges that have converted from Cirrus to the Visa/PLUS ATM Network • Table IP0090T1 (Issuer Account Range Card Program Identifier and Business Service Arrangement Participation): contains issuer account ranges that have converted from Cirrus to the Visa/PLUS ATM Network. • Table IP0040T1 (Issuer Account Range): omits issuer account ranges that have converted from Cirrus to the Visa/PLUS ATM Network, so that acquirers can continue to understand that new authorizations for these account ranges must be authorized and processed through the Visa/PLUS ATM Network, and not by Single Message System.
Optimized version of the IPM MPE (created by the Clearing Optimizer software)	• Table IP0090T1 (optimized version): contains issuer account ranges that have converted from Cirrus to the Visa/PLUS ATM Network. • Table IP0040T1 (optimized version): contains issuer account ranges that have converted from Cirrus to the Visa/PLUS ATM Network so that the Clearing Optimizer software will no longer reject clearing transactions for these issuer account ranges.

These changes are provided here to customers as a courtesy reminder of this feature; therefore, no action is required.

Automated Fuel Dispenser processing

This section describes the clearing impact for Automated Fuel Dispenser (AFD) processing.

Guiding principles

Unless otherwise specified, these are suggested best practices for AFD processing and are not mandatory.

- AFD transactions often clear for an amount that is different from the authorized amount. Mastercard recommends (required in the Europe region) that AFD transactions be submitted as preauthorizations (DE 61, subfield 7, [POS Transaction Status = 4]). Mastercard recommends (required in the Canada, Europe, and U.S. regions) that acquirers submit an AFD completion advice message to the issuer with the final transaction amount after fueling is completed, regardless of the method used (1.00 AFD or maximum amount), even when the final purchase equals the authorized amount.
- If DE 38 (Approval Code) is contained in Authorization Request Response/0110 or Authorization Advice Response/0130 message, the Mastercard also recommends that the Trace ID (DE 15 [Settlement Date] and DE 63 [Network Data]) of the completion advice response be used within the clearing presentment (Refer to the Automated Fuel Dispenser Clearing Processing in the following section).
  As an alternative, the Trace ID (DE 15 [Settlement Date] and DE 63 [Network Data]) of the original preauthorization may be used for clearing presentment if that same Trace ID is included in the AFD completion advice message within DE 48, subelement 63 (Trace ID).

Multi-clearing presentments for authorization transactions

Mastercard provides a multi-clearing indicator that is used when an authorized transaction will have multiple presentments with partial amounts.

Multi-clearing, single authorization transactions in a First Presentment/1240 message use two values with DE 25.

DE 25 (Message Reason Code) provides the message receiver with the reason for sending the message.

Values

The following values will be valid for First Presentment/1240 messages.

Value	Description
1403	Previously approved authorization: partial amount, multi-clearing
1404	Previously approved authorization: partial amount, final clearing

Guiding principles

- Multi-clearing is intended for improved open-to-buy (OTB) management of e-commerce split shipments, but not limited to card-not-present merchants. Issuers should manage OTB holds using the new multi-clearing reason codes and their own balance management policies.

- Multi-clearing must include proper authorization matching data (DE 38 Approval Code, DE 63 Trace ID) or the presentment will be rejected. If the split shipment sequence is not deterministic, e-commerce processors may not be able to identify which presentment is final.
- Multi-presentment airline ticket and installment purchases are unaffected and will process business as usual. Multi-clearing only applies to Mastercard credit and Debit Mastercard transactions.

Confirmation of successful receipt and processing of Global Clearing Management System transmission files

Customers that send an inbound Global Clearing Management System transmission data file to Mastercard will receive an automated corresponding outbound confirmation file from Mastercard.

Customers that do not receive a confirmation file must contact the Global Customer Service team to verify that their inbound file was received and processed successfully by Mastercard.

Penalty for late Global Clearing Management System retransmission requests

Customers that submit late Global Clearing Management System retransmissions requests will be subject to an administrative fee.

If a customer is unable to process a Global Clearing Management System transmission and is connected to the Mastercard Network, the customer must restage the data and unload it again. If the customer is not connected to the Mastercard Network, the customer must immediately request a recreate of the transmission.

Because satisfying late requests requires reprocessing in Global Clearing Management System, Mastercard will charge each customer that requests the transmission of data no longer available on the MIP. An administrative fee is charged per file of data requested. Refer to 2GC0001: Clearing Data Recreation fee in the *Mastercard Consolidated Billing System* manual.

Global Clearing Management system rejection of messages

Global Clearing Management System will reject transactions containing inadequate message elements.

In general, all transactions submitted to Global Clearing Management System for clearing must pass specific Global Clearing Management System edits. The sending customer must present all message elements with correct contents (for example, a numeric element must contain only digits) and ensure that all required elements are present. If the sending customer does not have an accurate description of required information, the customer should not provide the element in the IPM message.

NOTE: Global Clearing Management System will reject the message if edits reveal that required information is missing. In most cases, Global Clearing Management System will also reject a message if an element contains all low values, all high values, all spaces, or all zeros.

Refer to the *IPM Clearing Formats* manual for specific exceptions to this policy. One such exception is for Mexico Domestic transactions where, under certain conditions, the transaction is not rejected but flagged for error and the transaction settles. This is referred to as syntax error condition.

NOTE: For information about the edits that apply to individual IPM messages, refer to the *IPM Clearing Formats* manual.

When Global Clearing Management System encounters exception conditions at the single message or file level, it generates appropriate error messages. Global Clearing Management System creates IPM error message types

- full file rejection messages and
- single message rejection messages.

NOTE: IPM reject messages contain no warning or adjustment conditions, only reject conditions.

Global Clearing Management System can reject both a first presentment message and its associated financial detail addendum messages, or it can reject just the associated financial detail addendum messages.

- If Global Clearing Management System rejects an IPM first presentment message, it also rejects and returns to the transaction originator all associated financial detail addendum messages.
- If Global Clearing Management System rejects financial detail addendum messages, it does not necessarily reject the associated first presentment message.

Full IPM file rejection by Global Clearing Management System

If Global Clearing Management System rejects an entire IPM file, it does not forward the file or any of its messages for further processing. Global Clearing Management System generates the file reject messages to indicate that it has rejected the entire file.

The full file reject message provides

- up to 10 error codes describing the errors that caused the file to reject,
- the file ID of the rejected file, if it is present and the Global Clearing Management System is able to parse it, and
- up to 200 positions of the rejected file's first message.

NOTE: Global Clearing Management System does not return the IPM file reject message if the header message of the rejected file is unparseable, nor if PDS 0105 (File ID), subfield 3 (Processor ID) is invalid. In these cases, Global Clearing Management System cannot determine the receiver of the file reject message and therefore cannot notify the appropriate customer of the file reject.

Example 1

Suppose that the transaction originator omits IPM messages between the file header and file trailer messages. Because Global Clearing Management System requires data between the file header and file trailer messages in a customer-submitted logical file, the absence of data results in a file reject. The Global Clearing Management System would return a file reject message to the transaction originator indicating

- the file ID of the rejected file
- the appropriate error code, and
- up to 200 positions of the first message (the header) in the rejected file.

The Global Clearing Management System would not forward any of the messages to the intended transaction destinations because it rejected the entire file.

Example 2

Suppose that the transaction originator includes a file ID in the file trailer message that does not match the file ID in the file header message. The Global Clearing Management System would return a file reject message to the transaction originator indicating

- the file ID of the rejected file
- the field in error, with the appropriate error code, and
- up to 200 positions of the first message in the rejected file.

The Global Clearing Management System would not forward any of the messages to the intended transaction destinations because it rejected the entire file.

Example 3

Suppose that the transaction originator includes PDS 0105 on a file header message that has a duplicate file ID, where the file ID duplicates the ID of another clearing file submitted within the previous 180 days. The Global Clearing Management System would return a file reject message to the transaction originator indicating

- the file ID of the rejected file
- the field in error, with the appropriate error code, and
- up to 200 positions of the rejected file's first message.

The Global Clearing Management System would not forward any of the messages to the intended transaction destinations because it rejected the entire file.

Full clearing file rejections delivered with early reconciliation

If a customer receives the Early Reconciliation file, and Global Clearing Management System rejects their entire clearing file, Global Clearing Management System sends the file reject between a file header and a file trailer.

MTI-Function Code	Description	Endpoint 1, To:
1644-697	File Header	001111
1644-699	File Reject	001111
1644-695	File Trailer	001111

If a customer processes for multiple customer IDs, Global Clearing Management System sends a single file reject for that customer processor surrounded by a file header and a file trailer. For example, if customer 004444, endpoint 1,

- processes for customer IDs 001111, 002222, and 003333
- sends a file with transactions for customer IDs 001111, 002222, and 003333, which Global Clearing Management System rejects with a full file reject, and
- receives the Early Reconciliation File,

Global Clearing Management System would construct the file generated by Mastercard as follows.

MTI-Function Code	Description	Endpoint 1, To
1644-697	File Header	004444
1644-699	File Reject	004444
1644-695	File Trailer	004444

Single message rejection

Global Clearing Management System generates IPM message exception messages when the system encounters an exception condition as it is processing single messages.

- Up to 10 codes identifying the errors within the message being rejected and the associated data elements, private data subelements, or both that caused the exception conditions.
- The file ID of the file containing the rejected message, if it is present and the Global Clearing Management System can parse the data.
- The Acceptance Brand and Business Service ID being evaluated at the time of the reject.

The entire original message that the Global Clearing Management System rejected follows the single message reject, if the message is parseable.

IF the message is rejected by...	THEN...
Global Clearing Management System	Global Clearing Management System provides the entire original message unaltered.
The Clearing Optimizer software	The Clearing Optimizer software provides the entire original message, unaltered except for DE 71 (Message Number) (Refer to the following information).

The Clearing Optimizer software assigns a new DE 71 value to the rejected original message when returning it to the sending customer, although Global Clearing Management System retains the DE 71 value from the original message. Customers also may use PDS 0138 (Source Message Number ID) of the message exception message to identify the input source message number. PDS 0138 will not be present if the original message is unparseable and Global Clearing Management System cannot determine the DE 71 value from the original message.

If all detail messages in a logical file are rejected, the Global Clearing Management System generates a Message Exception/1644-691 for each rejected detail message. Additionally, the Global Clearing Management System generates a File Reject/1644-699 because none of the individual messages were accepted.

Single message rejections delivered with early reconciliation

If a customer receives the Early Reconciliation File and Global Clearing Management System rejects individual messages in the customer's clearing file, Global Clearing Management System sends the message exception messages between a file header and a file trailer.

The rejected message follows its associated message exception message, as shown in the following table.

MTI-Function Code	Description	Endpoint 1, to:
1644-697	File Header	001111
1644-691	Message Exception	001111
1240-200	Rejected First Presentment	001111
1644-691	Message Exception	001111
1644-696	Rejected Financial Detail Addendum	001111
1644-691	Message Exception	001111
1442-450	Rejected First Chargeback	001111
1644-685	Financial Position Detail	001111

MTI-Function Code	Description	Endpoint 1, to:
1644-695	File Trailer	001111

If a customer processes for multiple customer IDs, Global Clearing Management System sends all the message rejects for that customer surrounded by a file header and a file trailer. For example, if customer 4444, endpoint 1, processes for customer IDs 1111 and 2222 and receives the Early Reconciliation File, Global Clearing Management System would construct the file generated by Mastercard as follows.

MTI-Function Code	Description	Endpoint 1, to
1644-697	File Header	004444
1644-691	Message Exception	001111
1240-200	Rejected First Presentment	001111
1644-691	Message Exception	001111
1240-205	Rejected Second Presentment	001111
1644-685	Financial Position Detail	001111
1644-691	Message Exception	002222
1644-603	Rejected Retrieval Request	002222
1644-680	File Currency Summary	002222
1644-695	File Trailer	004444

Reconciling single message rejections

Customers should be prepared to administer the appropriate accounting procedures to handle single message rejections and to reconcile incoming acknowledgment reconciliation data with the previous outgoing data.

The customer may resubmit the rejected (corrected) messages mixed within a new file that contains other messages or as a separate file. The customer may resubmit a rejected file with the old file ID number only if the entire transmission is rejected.

Messages supported by Mastercard for Mexico domestic transactions

Mastercard supports syntax errors, syntax error returns, retrieval request acknowledgment messages, and late presentments for Mexico domestic transactions.

Syntax errors for Mexico domestic transactions

Mexico domestic rules allow for transactions that meet certain conditions to be cleared and settled. Under these conditions, transactions are not rejected, but are flagged as containing one or more syntax errors.

When a transaction is flagged with a syntax error, the receiver of the transaction has the right to return the transaction to the sender.

Mastercard will identify syntax errors in the following PDS 0005 (Message Error Indicator) messages for all Mexico domestic point-of-sale (POS) and credit card payment transactions.

- First and Second Presentment/1240
- First and Arbitration Chargeback/1442
- Retrieval Request/1644
- Miscellaneous Fee Collection/1740

PDS 0005 will contain both the Mastercard-defined syntax error number and the local reason code. For details about the syntax error identification, refer to PDS 0005 in the *IPM Clearing Formats* manual.

Transactions that are flagged only with syntax errors are not rejected, but will be cleared and settled business as usual. However, transactions that are flagged with syntax errors and also have other errors resulting from Clearing Platform edits will be rejected.

Syntax error returns for Mexico domestic transactions

The Clearing Platform will support the ability for the receiver of a Mexico domestic transaction with a syntax error to return the syntax error to the sender within a given timeframe using the same message format as used for the original transaction.

For example, an issuer may return a syntax error for a First Presentment/1240 message to the acquirer using a First Presentment/1240 message. Likewise, an acquirer may return a syntax error for a First Chargeback/1442 message to the issuer using a First Chargeback/1442 message.

When sending a syntax error return, the receiver must ensure that the message contains the following values:

- DE 25 (Message Reason Code) containing one of these reason codes that identifies a syntax error return.
  - 1500 (for presentment messages only)
  - 4890 (for chargeback messages only)
  - 6380 (for retrieval request messages only)
  - 6390 (for retrieval request messages only)
  - 6391 (for retrieval request messages only)
  - 7615 (for fee collection messages only)
  - 7690 (for fee collection messages only)
  - 7715 (for miscellaneous fee collection messages only)

- PDS 0005 (Message Error Indicator) containing the syntax error. While a transaction may have multiple syntax errors, for syntax error return PDS 0005 will only identify a single condition as the reason for the return.
- PDS 0225 (Syntax Return, Original Message Reason Code) containing the original message reason code value from DE 25.

NOTE: Interchange and fees will be reversed on syntax error return messages. The receiver of the returned syntax error can return the message and collect funds using a Miscellaneous Fee Collection/ 1740 message, if applicable.

Error Detail: Input Sequence report and Global Collection Only Error Detail: Input Sequence report

Global Clearing Management System reports rejected transaction data through the Error Detail: Input Sequence report and the Global Collection Only Error Detail: Input Sequence report. These reports provide all data elements of a rejected message, including data that fails edits and data that passes edits, highlighting the data elements in error.

These reports include rejected transaction details at levels

- Logical file to Mastercard
- Processing Mode (Test or Production)
- Source Message Number
- Source Currency
- Source Amount
- Transaction Function, and
- Global Collection Only separated from non-Global Collection Only rejected transactions.

The reports are billed through the Mastercard Consolidated Billing System (MCBS). Current rates are listed in the Pricing Guide on the Pricing and Billing Resource Center. The billing event numbers are as follows.

Report Number	Description	Billing Event Number
IP857010-AA	Error Detail Report	2RP2219
IP857010-BB	Global Collection Only Error Detail Report	2RP2220

The Error Detail: Input Sequence reports are optional. The Global Clearing Management System transmits this report using bulk type T140 for production and bulk type T150 for test reports.

NOTE: Customers that request these reports will receive them after each clearing cycle.

Figure 1: Figure: Error Detail: Input Sequence Report (IP857010-AA), Banner Page, page 1

```
1-------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+---100----+--110----+--120----+--130--
  IP857010-AA                                               MASTERCARD WORLDWIDE                                     RUN DATE YYYY-MM-DD
                                                         ERROR DETAIL - INPUT SEQUENCE                                          PAGE 01
                                                           MESSAGE LEVEL REJECT
                                                                 YYYY-MM-DD

FILE ID: XXX/YY-MM-DD/XXXXXXXXXXX/99999
PROCESSING MODE: X

                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
```

Table 4: Error Detail: Input Sequence Report (IP857010-AA), banner page field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
File ID	The logical file ID of the customer-generated file to which the data in this report pertains.
Processing Mode	Type of processing (Production or Test) to be performed on this file.
Description	A detailed description of the error encountered, or if no errors are encountered, the literal FILE PROCESSED: NO ERRORS ENCOUNTERED.

Figure 2: Figure: Error Detail: Input Sequence Report (IP857010-AA), File Level Reject, page 2

```
------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
IP857010-AA                                         MASTERCARD WORLDWIDE                                     RUN DATE YYYY-MM-DD
                                                 ERROR DETAIL - INPUT SEQUENCE                                         PAGE 02
                                                       FILE LEVEL REJECT
                                                         YYYY-MM-DD

ILE ID: XXX/YYYY-MM-DD/XXXXXXXXXXX/99999
ROCESSING MODE: X

RROR                                                          SOURCE
ODE    DESCRIPTION                                      MESSAGE #    ELEMENT ID    INVALID DATA
999    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  999999999    PDS9999       XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
       XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                             XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
       XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

999    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  999999999    PDS9999       XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
       XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                             XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

999    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  999999999    PDS9999       XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
       XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                             XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

ILE INFORMATION
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

Table 5: Error Detail: Input Sequence Report (IP857010-AA), File Level Reject, page 2 field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
File ID	The logical file ID of the customer-generated file to which the data in this report pertains.
Processing Mode	Type of processing (Production or Test) to be performed on this file.
Error Code	A unique code (established by Mastercard) that identifies the type of error encountered. Refer to the *IPM Clearing Format Error Numbers and Messages* manual for a list of the error codes established by Mastercard and their corresponding descriptions.
Description	A detailed description of the error encountered.
Source Message Number	Number of the original message that contains the error, from DE 71 (Message Number).
Element ID	The number of the data element or private data subelement causing the error condition.
Invalid Data	(Does not print for file level rejects).
File Information	If parseable, contains up to the first 200 positions of data in a reject of an entire file (This information prints only for file-level rejects).

Figure 3: Figure: Error Detail: Input Sequence Report (IP857010-AA), Message Level Reject, page 3

```
1-------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
IP857010-AA                                                          MASTERCARD WORLDWIDE                                 RUN DATE YYYY-MM-DD
                                                                   ERROR DETAIL - INPUT SEQUENCE                                   PAGE 03
                                                                      MESSAGE LEVEL REJECT
                                                                           YYYY-MM-DD

FILE ID: XXX/YYYY-MM-DD/XXXXXXXXXXX/99999
PROCESSING MODE: X

SOURCE MESSAGE #: 999999999  SOURCE AMOUNT:            999,999,999,999
MTI-FUNCTION CODE: 9999-999  SOURCE CURRENCY:          XXX

ERROR                                                               SOURCE
CODE    DESCRIPTION                                               MESSAGE #    ELEMENT ID    INVALID DATA

9999    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  999999999    PDS9999       XXXXXXXXXXXXXXXXXXXXXXXX


MESSAGE DETAILS

                MTI            1442
                D0002          5999999999999999
                D0003 S01      00
                D0003 S02      00
                D0003 S03      00
                D0004          000000046901
                D0012 S01      011015
                D0012 S02      000000
                D0024          450
               *D0025          4801
                D0026          5947
                D0030 S01      000000368000
                D0030 S02      000000000000
                D0031 S01      75
                D0031 S02      99999
                D0031 S03      9999
                D0031 S04      99999999999
                D0031 S05      9
                D0033          009999
                D0038          033928
                D0042          53025341007
                D0043 S01      INDUSTRIAS COBAR
                D0043 S02
                D0043 S03      GUATEMALA
                D0043 S04
                D0043 S05
                D0043 S06      GTM
                D0049          840
                D0063 S01
                D0063 S02      9999999991015
                D0071          00000406
                D0072          NO RECEIVE DOCTOS
```

Figure 4: Figure: Error Detail: Input Sequence Report (IP857010-AA), continuation of page 3

```
1-------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
                 D0093         009999
                 D0094         009999
                 D0095         9999999999
                 P0023         NA
                 P0148 S01     840
                 P0148 S02     2
                 P0149 S01     320
                 P0149 S02     000
                 P0158 S01
                 P0158 S02
                 P0158 S03
                 P0158 S04     75
                 P0165 S01     M
                 P0191         1
                 P0262         1
                 P0800 S01     661
                 P0800 S02     001409
                 P0805 S01     1
                 P0805 S02     01
                 P0805 S03     1
```

Table 6: Error Detail: Input Sequence Report (IP857010-AA), Message Level Reject, page 3 field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.

Field	Description
File ID	The logical file ID of the customer-generated file to which the data in this report pertains.
Processing Mode	Type of processing (Production or Test) to be performed on this file.
Source Message Number	Number of the original message that contains the error, from DE 71 (Message Number).
Source Amount	Monetary amount of the rejected message. For messages without a DE 4 (Amount, Transaction) value (for example, retrieval fee billing or financial detail addendum messages), the field will be zero.
MTI-Function Code	The Message Type Identifier and the DE 24 (Function Code) value associated with the rejected message.
Source Currency	The alphabetic currency code associated with the monetary amount.
Error Code	A unique code (established by Mastercard) that identifies the type of error encountered. Refer to the *IPM Clearing Format Error Numbers and Messages* manual for a list of the error codes established by Mastercard and their corresponding descriptions.
Description	A detailed description of the error encountered.
Source Message Number	Number of the original message that contains the error, from DE 71 (Message Number).
Element ID	The number of the data element or private data subelement causing the error condition.
Invalid Data	Listing of the contents of the data element or private data subelement in error, within the rejected message (This information prints only for message level rejects).
Message Details	Details about the message.

Figure 5: Figure: Error Detail: Input Sequence Report (IP857010-AA), Message Level Reject, page 3 (alternate)

```
------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
IP857010-AA                                          MASTERCARD WORLDWIDE                                        RUN DATE YYYY-MM-DD
                                                  ERROR DETAIL - INPUT SEQUENCE                                          PAGE 03 (ALT)
                                                     MESSAGE LEVEL REJECT
                                                          YYYY-MM-DD

.E ID: XXX/YYYY-MM-DD/XXXXXXXXXXX/99999
)CESSING MODE: X

ROR                                                                 SOURCE
DE    DESCRIPTION                                            MESSAGE #     ELEMENT ID     INVALID DATA
99    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   999999999     PDS9999        XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

99    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   999999999     PDS9999        XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

99    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   999999999     PDS9999        XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX


SSAGE UNPARSEABLE
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
```

Table 7: Error Detail: Input Sequence Report (IP857010-AA), Message Level Reject, page 3 (alternate) field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
File ID	The logical file ID of the customer-generated file to which the data in this report pertains.
Processing Mode	Type of processing (Production or Test) to be performed on this file.
Error Code	A unique code (established by Mastercard) that identifies the type of error encountered. Refer to the *IPM Clearing Format Error Numbers and Messages* manual for a list of the error codes established by Mastercard and their corresponding descriptions.
Description	A detailed description of the error encountered.
Source Message Number	Number of the original message that contains the error, from DE 71 (Message Number).
Element ID	The number of the data element or private data subelement causing the error condition.
Invalid Data	Listing of the contents of the data element or private data subelement in error, within the rejected message (This information prints only for message level rejects).
Message Unparseable	Contains up to the first 200 positions of the rejected message when Global Clearing Management System cannot parse the message into elements.

Figure 6: Figure: Error Detail: Input Sequence Report (IP857010-AA), Message Level Reject, page 4

```
-------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
 IP857010-AA                                                  MASTERCARD WORLDWIDE                                 RUN DATE YYYY-MM-DD
                                                           ERROR DETAIL - INPUT SEQUENCE                                       PAGE 04
                                                              MESSAGE LEVEL REJECT
                                                                   YYYY-MM-DD

ILE ID: XXX/YYYY-MM-DD/XXXXXXXXXXX/99999
ROCESSING MODE: X

ESSAGE TYPE
EGULAR                                                       CURRENCY       AMOUNT                     COUNT
           FINANCIAL DETAIL                                    XXX     XXXXXXXXXXXXXXXX               XXXXXXXX
                                                               XXX     XXXXXXXXXXXXXXXX               XXXXXXXX

           NON-FINANCIAL DETAIL                                                                       XXXXXXXX

           UNRECOGNIZABLE DETAIL                                                                      XXXXXXXX

                                                           ***END OF REPORT***
```

Table 8: Error Detail: Input Sequence Report (IP857010-AA), Message Level Reject, page 4 field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
File ID	The logical file ID of the customer-generated file to which the data in this report pertains.
Processing Mode	Type of processing (Production or Test) to be performed on this file.
Message Type	Identifies whether the message has a settlement indicator of settled by Mastercard, bilateral (not settled by Mastercard), or Global Collection Only.
Financial Detail	Identifies messages that have monetary impact.
Non-Financial Detail	Identifies messages that do not have monetary impact.
Unrecognizable Detail	Identifies messages that cannot be parsed.
Currency	The alphabetic currency code of the source currency.
Amount	The net total of the source monetary amount of the messages. Messages that do not include a DE 4 (Amount, Transaction) value are not included in this field.
Count	The total number of messages.

Figure 7: Figure: Global Collection Only Error Detail: Input Sequence Report (IP857010-BB), banner page (page 1)

```
1-------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
IP857010-BB                                           MASTERCARD WORLDWIDE                                          RUN DATE YYYY-MM-DD
                                             COLLECTION ONLY-ERROR DETAIL - INPUT SEQUENCE                                    PAGE 01
                                                       MESSAGE LEVEL REJECT
                                                             YYYY-MM-DD

FILE ID: XXX/YY-MM-DD/XXXXXXXXXX/99999
PROCESSING MODE: X

                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
                                      *** FILE PROCESSED - MESSAGE LEVEL ERRORS ENCOUNTERED ***
```

Table 9: Global Collection Only Error Detail: Input Sequence Report (IP857010-BB), banner page field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
File ID	The logical file ID of the customer-generated file to which the data in this report pertains.
Processing Mode	Type of processing (Production or Test) to be performed on this file.
Description	A detailed description of the error encountered, or if no errors are encountered, the literal FILE PROCESSED: NO ERRORS ENCOUNTERED.

Figure 8: Figure: Global Collection Only Error Detail: Input Sequence Report (IP857010-BB), Message Level Reject

```
1-------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
IP857010-BB                                                   MASTERCARD WORLDWIDE                                RUN DATE: YYYY-MM-DD
                                                     COLLECTION-ONLY ERROR DETAIL - INPUT SEQUENCE                PAGE NO:          01
                                                            MESSAGE LEVEL REJECT
                                                                YYYY-MM-DD

FILE ID: XXX/YYYY-MM-DD/XXXXXXXXXXX/99999
PROCESSING MODE: X

SOURCE MESSAGE #: 999999999  SOURCE AMOUNT:             999,999,999,999
MTI-FUNCTION CODE: 9999-999  SOURCE CURRENCY:           XXX

ERROR                                                             SOURCE
CODE    DESCRIPTION                                              MESSAGE #    ELEMENT ID    INVALID DATA

9999    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  999999999    PDS9999       XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

MESSAGE DETAILS

                MTI           1442
                D0002         5999999999999999
                D0003 S01     00
                D0003 S02     00
                D0003 S03     00
                D0004         000000001326
                D0012 S01     011105
                D0012 S02     000000
                D0024         450
               *D0025         4801
                D0026         5541
                D0030 S01     000000001300
                D0030 S02     000000000000
                D0031 S01     99
                D0031 S02     99999
                D0031 S03     9999
                D0031 S04     99999999999
                D0031 S05     9
                D0033         009999
                D0038         385549
                D0041         09140069
                D0042         02807926
                D0043 S01     YPF AVALOS
                D0043 S02
                D0043 S03     VILLA URQUIZA
                D0043 S04
                D0043 S05
                D0043 S06     ARG
                D0049         840
                D0063 S01
                D0063 S02     XXXXXXXXX9999
                D0071         00000411
                D0072         NO RECEIVE DOCTOS
```

Figure 9: Figure: Global Collection Only Error Detail: Input Sequence Report (IP857010-BB), continuation

```
1-------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
                  D0093                009999
                  D0094                009999
                  D0095                9999999999
                  P0023                CT2
                  P0148  301           840
                  P0148  302           2
                  P0149  301           032
                  P0149  302           000
                  P0158  301
                  P0158  302
                  P0158  303
                  P0158  304           75
                  P0165  301           C
                  P0191                1
                  P0262                1
                  P0800  301           661
                  P0800  302           001417
                  P0805  301           1
                  P0805  302           01
                  P0805  303           1
```

Table 10: Global Collection Only Error Detail: Input Sequence Report (IP857010-BB), Message Level Reject field descriptions

Field	Description
Run Date	The date on which this report was produced.

Field	Description
Page	The page number within the report.
File ID	The logical file ID of the customer-generated file to which the data in this report pertains.
Processing Mode	Type of processing (Production or Test) to be performed on this file.
Source Message Number	Number of the original message that contains the error, from DE 71 (Message Number).
Source Amount	Monetary amount of the rejected message. For messages without a DE 4 (Amount, Transaction) value (for example, retrieval fee billing or financial detail addendum messages), the field will be zero.
MTI: Function Code	The Message Type Identifier and the Function Code associated with the rejected message.
Source Currency	The alphabetic currency code associated with the monetary amount.
Error Code	A unique code (established by Mastercard) that identifies the type of error encountered. Refer to the *IPM Clearing Format Error Numbers and Messages* manual for a list of the error codes established by Mastercard and their corresponding descriptions.
Description	A detailed description of the error encountered.
Source Message Number	Number of the original message that contains the error, from DE 71 (Message Number).
Source Element ID	Identifies the element for which Global Clearing Management System encountered the reject condition.
Invalid Data	Listing of the contents of the element within the rejected message.
Message Details	Details about the message.

Figure 10: Figure: Global Collection Only Error Detail: Input Sequence Report (IP857010-BB), Message Level Reject (alternate)

```
------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
IP857010-BB                                           MASTERCARD WORLDWIDE                                     RUN DATE: YYYY-MM-DD
                                          COLLECTION-ONLY ERROR DETAIL - INPUT SEQUENCE                          PAGE NO:     01 (ALT)
                                                      MESSAGE LEVEL REJECT
                                                           YYYY-MM-DD

.E ID: XXX/YYYY-MM-DD/XXXXXXXXXXX/99999
OCESSING MODE: X

ROR                                                                  SOURCE
DE    DESCRIPTION                                           MESSAGE #      ELEMENT ID   INVALID DATA
99    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX     999999999      PDS9999      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

99    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX     999999999      PDS9999      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

99    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX     999999999      PDS9999      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX


SSAGE UNPARSEABLE
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
--------------------------------------------------------
```

Table 11: Global Collection Only Error Detail: Input Sequence Report (IP857010-BB), Message Level Reject (alternate) field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
File ID	The logical file ID of the customer-generated file to which the data in this report pertains.
Processing Mode	Type of processing (Production or Test) to be performed on this file.
Error Code	A unique code (established by Mastercard) that identifies the type of error encountered. Refer to the *IPM Clearing Format Error Numbers and Messages* manual for a list of the error codes established by Mastercard and their corresponding descriptions.
Description	A detailed description of the error encountered.
Source Message Number	Number of the original message that contains the error, from DE 71 (Message Number).
Element ID	The number of the data element or private data subelement causing the error condition.
Invalid Data	Listing of the contents of the data element or private data subelement in error, within the rejected message.
Message Unparseable	Contains up to the first 200 positions of the rejected message when Global Clearing Management System cannot parse the message into elements.

Figure 11: Figure: Global Collection Only Error Detail: Input Sequence Report (IP857010-BB), Message Level Reject

```
-------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
 IP857010-BB                                                   MASTERCARD WORLDWIDE                                RUN DATE: YYYY-MM-DD
                                                    COLLECTION-ONLY ERROR DETAIL - INPUT SEQUENCE                    PAGE NO:          02
                                                               MESSAGE LEVEL REJECT
                                                                    YYYY-MM-DD

ILE ID: XXX/YYYY-MM-DD/XXXXXXXXXXX/99999
ROCESSING MODE: X

ESSAGE TYPE

OLLECTION ONLY                                                  CURRENCY        AMOUNT                    COUNT
           FINANCIAL DETAIL                                        XXX     XXXXXXXXXXXXXXX              XXXXXXXX
                                                                   XXX     XXXXXXXXXXXXXXX              XXXXXXXX
                                                                   XXX     XXXXXXXXXXXXXXX              XXXXXXXX

           NON-FINANCIAL DETAIL                                                                         XXXXXXXX

           UNRECOGNIZABLE DETAIL                                                                        XXXXXXXX
```

Table 12: Global Collection Only Error Detail: Input Sequence Report (IP857010-BB), Message Level Reject, page 2 field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
File ID	The logical file ID of the customer-generated file to which the data in this report pertains.
Processing Mode	Type of processing (Production or Test) to be performed on this file.
Message Type	Identifies whether the message has a settlement indicator of settled by Mastercard, bilateral (not settled by Mastercard), or Global Collection Only.
Financial Detail	Identifies messages that have monetary impact.
Non-Financial Detail	Identifies messages that do not have monetary impact.
Unrecognizable Detail	Identifies messages that cannot be parsed.
Currency	The alphabetic currency code of the source currency.
Amount	The net total of the source monetary amount of the messages. Messages that do not include a DE 4 (Amount, Transaction) value are not included in this field.
Count	The total number of messages.

Chapter 3 Processing cycles and regulations

This section describes the processing cycles for clearing transactions and introduces the time frame requirements associated with each processing cycle.

Clearing processing cycles and time frames

The clearing process follows a particular process that occur over various cycles and time frames.

The clearing process begins when the acquirer presents transaction data to the issuer for the first time, for posting to the cardholder's account. After the first presentment of the cardholder transaction, the issuer may determine that, for one of the reasons specified in the *Chargeback Guide*, the transaction may be invalid. The issuer may charge back the transaction when procedures in the *Chargeback Guide* specifically allow the issuer to return the transaction to the acquirer for possible remedy.

For each transaction between issuer and acquirer, the following cycles allow presentment, retrieval, and chargeback processing:

- First presentment consists of one step: from the acquirer to the issuer.
- The retrieval process consists of two steps: retrieval request and fulfillment.
- Except in the case of ATM, Maestro®, and Cirrus® transactions, the chargeback cycle consists of three steps: chargeback, second presentment, and arbitration chargeback. Arbitration chargeback does not occur for ATM, Maestro, and Cirrus transactions.

If necessary, arbitration case filing follows the arbitration chargeback.

The Global Clearing Management System maintains a chargeback history file, which stores selected information from all incoming chargeback transactions that Global Clearing Management System accepts. The purpose of the chargeback history file is to track chargeback cycles and documentation that customers send. Global Clearing Management System edits chargeback messages against the chargeback history file to validate cycle sequence, time frames, and documentation requirements.

Mastercard standards govern the clearing presentment, retrieval, and chargeback cycles for all interchange transactions involving the Mastercard brand. These standards define specific time frames, constraints, and thresholds.

Mastercard has designed Global Clearing Management System to support customization of these standards related to customer agreements, such as business service arrangements. Mastercard considers requests for such customization on a case-by-case-basis.

Customer requirements and guidelines for processing transactions through Global Clearing Management System

Customers must use the message formats detailed in the *IPM Clearing Formats* manual for all presented transactions and chargebacks for processing through Global Clearing Management System.

Mastercard encourages customers to process all chargeback documentation through the Mastercom® Chargeback Support Documentation (CSD) application of the Mastercom electronic imaging system. Using the CSD application will help ensure timely delivery of the items, maintain an audit trail for the life cycle of the chargeback, and retain subsequent chargeback and second presentment rights.

Customer guidelines for first presentments

The first presentment occurs when the acquirer submits transaction data to the issuer for the first time, for posting to the cardholder's account.

To minimize subsequent retrievals, chargebacks, and second presentments, acquirers must ensure that all presented clearing transactions contain accurate and complete data in the applicable first presentment and addendum messages. To further minimize subsequent chargebacks and second presentments, issuers must ensure that all transaction detail provided by the acquirer is readily available to the cardholder and to internal operations.

The acquirer must send all presented transactions to Global Clearing Management System using the messages and procedures that Mastercard specifies.

NOTE: For information about the message procedures for presentment of transactions, refer to the *IPM Clearing Formats* manual.

The acquirer must present all cash disbursements, purchases, credits, unique, and Payment Transactions for the full amount of the original transaction currency as agreed to by the cardholder. The amount may not be increased (or reduced in the case of a credit or a Payment Transaction) unless specifically authorized within this manual. Acquirers must promptly present these transactions to issuers.

Currency conversion of Global Clearing Management System transactions

Mastercard will convert all transactions processed through Global Clearing Management System into the equivalent reconciliation currency amount for settlement.

Mastercard (not the acceptor or acquirer) will convert the transaction using the buy, mid, fixed, and sell rates of the representative group of currencies most frequently traded. Other arrangements are defined for those customers participating in bilateral agreements as described in Chapter 1 of the *Settlement Manual* and intracurrency settlement agreements as described in the *Settlement Manual*.

NOTE: For more information about currency conversions, refer to the Currency Conversion chapter.

Time frame for first presentments

A variety of rules and guidelines exist for customers to follow when first presenting, or first receiving, a Global Clearing Management System transaction.

Mastercard defines the presentment time frame as the time between the date of the transaction and the date the transaction is presented to the issuer. Thus, the seven-day time frame defined below for electronically-read transactions does not include the transaction date but does include the St. Louis Operations Center (Central Site) business date of the First Presentment/1240 message.

The following first presentment time frames apply:

- When the transaction was completed with electronically recorded card information (whether card-read or key-entered), the acquirer has a maximum of seven calendar days after the transaction date to present the transaction to the issuer.
- When the transaction was completed with manually recorded card information (whether imprinted or handwritten), the acquirer has a maximum of 30 calendar days after the transaction date to present the transaction to the issuer.
- For transactions effected at a U.S. region merchant with a card issued in the U.S. region, when the transaction was completed with manually recorded card information (whether imprinted or handwritten), the acquirer has a maximum of 14 calendar days after the transaction date to present the transaction to the issuer.
- A payment transaction must be presented in clearing within one calendar day of the authorization date.
- A contactless transit aggregated transaction must be presented in clearing within 14 calendar days of the authorization date.
- A refund transaction must be presented in clearing within five calendar days of the date the merchant agreed to provide a refund to the cardholder (the refund transaction receipt date, or if the refund transaction was authorized by the issuer, then the refund transaction authorization date).

Notwithstanding these time frames, the acquirer has a maximum of 30 calendar days (14 calendar days for intra-United States transactions) after the transaction date to present a transaction when the acquirer must delay presentment:

- Because of the merchant's delay in submitting the transaction, as permitted under Chapter 3, Transaction Records of *Transaction Processing Rules*;
- A national bank holiday of at least four consecutive days occurred, which prevented the acquirer from presenting a card-read or key-entered transaction within the applicable seven-calendar-day time frame.

An issuer must still accept transactions submitted beyond the applicable time frame if the cardholder account is in good standing or the transaction can be otherwise honored and posted.

If the message has no transaction date when processed through Global Clearing Management System, the date 15 days before the date in PDS 0105 (File ID), subfield 2 (File Reference Date) will be presumed (for rules administration) to be the transaction date, subject to subsequent establishment of the actual date by support documentation.

Risk reduction process applied to Global Clearing Management System transactions

Mastercard is updating the risk-reduction process that is applied to clearing messages.

When a First Presentment/1240 message violates risk-reduction parameters and is rejected with error numbers 2202 or 2203, the following currently occurs to notify the acquirer of the rejection:

- Mastercard sends a Bulk Type T112 or T113 file to global acquirers (or a TY30 or TY34 file for customers in Russia) and, optionally, the IP857010-AA Error Detail Report.
- The Global Customer Service team notifies acquirers.

To avoid duplicate communications, Mastercard will no longer require the Global Customer Service team to contact the acquirer when a First Presentment/1240 message is rejected. Upon receiving a T112/T113 or TY30/TY34 file, global acquirers should immediately check the file for error number 2202 or 2203. If the T112/T113 or TY30/TY34 file contains either of these error numbers, acquirers must contact the Global Customer Service team to request a risk-management approval code.

Retrieval requests and fulfillments

On occasion, the issuer may find it necessary to request a copy of the TID to satisfy a cardholder's inquiry or resolve an internal investigation. An acquirer is under obligation to fulfill this request by providing a copy or substitute draft of the TID, or by providing a response indicating the reason for its failure to honor the request.

Customers may not submit retrieval requests for ATM transactions.

NOTE: Refer to the *MasterCom* manuals for more information about retrieval requests and fulfillments, including information about processing time frames and processing procedures.

Healthcare retrieval requests and fulfillments

Mastercard has provided a means for issuers who must respond to an IRS request for healthcare Inventory Information Approval System (IIAS) data.

The issuer instigates the retrieval request process through Mastercom electronic imaging system. The healthcare retreival request must be fulfilled by the acquirer outside of Mastercom through a secure method (such as, sending a bulk file, a fax, or a hard copy to a mailing address).

When the acquirer fulfills the retrieval request outside of Mastercom, the request within Mastercom will cycle off their Mastercom request queue or the acquirer can use an appropriate fulfillment response code.

Issuers can provide instructions to the acquirer for fulfilling this request through PDS 1046 (Member-to-Member Proprietary Data), to be sent in the Retrieval Request/1644 message. PDS 1046 is the preferred method. If the issuer sends more than one preferred method (for example, both a fax and a hard copy to a mailing address), the acquirer can choose which method to use to fulfill the request. For all IIAS (an accepted and widely adopted inventory system that assists merchants with substantiation of qualified health care purchases including cash back, healthcare, prescription, prepaid bill pay, and vision amounts) requests, the acquirer is not allowed to send documentation through Mastercom to fulfill the request. The ability to attach documentation for all IIAS requests has been disabled in Mastercom.

Used in this context for retrieval requests, PDS 1046 would be variable in length, with a minimum of 16 positions and a maximum of 200. It would be preceded by the standard IPM tag field of 1046 and a three-digit length value.

The suggested format for issuers requesting this information follows.

Table 13: PDS 1046 (Member-to-Member Proprietary Data)

Sequence of Information	Positions	Name	Attribute	Justification
1	1-16	Fulfillment Fax Number	ans-16	left
2	17-46	Contact Name	ans-30	left
3	47-62	Contact Phone Number	ans-16	left
4	63-122	Contact E-mail Address	ans-60	left
5	123-152	Contact Street Address	ans-30	left
6	153-177	Contact City	ans-25	left
7	178-187	Contact Postal (ZIP) Code	ans-10	left
8	188-190	Contact State, Province, or Region	ans-3	left
9	191-193	Contact Country (alpha)	ans-3	left

NOTE: Because this format is only a recommendation and uses existing customer-to-customer proprietary data fields within the IPM format, it is not documented in the *IPM Clearing Formats* manual.

Chargeback processing

The chargeback process begins when an issuer determines that, for a valid chargeback reason specified in the *Chargeback Guide*, the transaction may be charged back to the acquirer for possible remedy. The chargeback life cycle includes the first chargeback and, if necessary, a second presentment, arbitration chargeback, if applicable, and arbitration case filing.

The required time frames applicable to each cycle are described below.

Time frame for first chargeback

First chargebacks are carried out within certain amount of time following the St. Louis Operations Center (Central Site) processing date depending on various details.

The message reason code determines the timeliness requirements for the first chargeback. The time frames for first chargebacks are 45, 60, 90, 120, and 540 calendar days after the Central Site processing date, depending on the reason for the chargeback. For certain message reason codes, Global Clearing Management System does not edit the time frame. The chargeback time frame may begin with a day after the Central Site processing date.

When delayed delivery of goods or performance of services by an acceptor results in a subsequent dispute about the condition of the goods or the quality of the services, Mastercard will calculate the period of 120 days using the delivery or performance date.

In cases that involve…	Mastercard calculates the period of 120 days from…
Delayed delivery of goods or performance of services that the cardholder asserts the acceptor never provided	The latest anticipated date that the acceptor was to provide the goods or services.
Interrupted services **NOTE: In no case shall the first chargeback exceed 540 days (approximately 18 months) from the Central Site processing date of the first presentment. The issuer must prorate the chargeback amount to reflect the services received.**	The date that the services cease.

NOTE: For more information about chargeback life cycle support and the time frame associated with each chargeback reason, refer to the *Chargeback Guide*.

Time frames for second presentments or arbitration chargebacks

Second presentments or arbitration chargebacks are carried out within a certain amount of time.

The time frame for a second presentment involving the Mastercard brand or arbitration chargeback is 45 calendar days. Global Clearing Management System measures this as the time between the St. Louis Operations Center (Central Site) processing date on which the customer received the chargeback or second presentment and the Central Site processing date on which Global Clearing Management System processed the transaction as a second presentment or arbitration chargeback. Global Clearing Management System will reject any second presentment or arbitration chargeback submitted more than 45 days after receipt of the previous cycle.

Time frames for disputes involving arbitration

Disputes involving arbitration are carried out within a certain amount of time.

The acquirer may file an arbitration case to Mastercard, for a decision on the dispute, within 45 calendar days of the St. Louis Operations Center (Central Site) processing date of the arbitration chargeback.

Chargeback timeliness edits

The chargeback timeliness edits verify that second presentments and arbitration chargebacks do not exceed the applicable time frames for submission.

The chargeback timeliness edits use the Central Site processing date found in PDS 0158 (Business Activity).

The life cycle timeliness edits will compare the...	To the...
Central Site processing date in PDS 0158 (Business Activity), subfield 5 (Business Date)	Retrieval history date in PDS 0243 (Mastercom Retrieval Response Data), subfield 1 (Mastercom Issuer Retrieval Request Date)
Central Site processing date in PDS 0158, subfield 5	Chargeback History File business date in PDS 0158, subfield 5
Central Site processing date in PDS 0158, subfield 5	Date in retrieval history in DE 31 (Acquirer Reference Data), subfield 3 (Julian Processing Date YDDD)
Retrieval history in PDS 0243, subfield 1	Date in retrieval history in DE 31, subfield 3

Examples

Compare the following examples to understand the effect of the submission date and time on chargeback processing. In both examples, the customer submits the second presentment with a message reason code of 2008, which has the requirement of submission within 45 days after the first chargeback.

Events	Example 1	Example 2
Global Clearing Management System processes the first chargeback (Central Site processing date):	05 July	05 July
The customer submits the second presentment with a message reason code of 2008.	Saturday, 18 August after the sixth clearing. The file header date is Saturday, 18 August.	Saturday, 18 August before the sixth clearing. The file header date is Saturday, 18 August.
Global Clearing Management System attempts to process the second presentment (Central Site processing date).	Sunday, 19 August. Therefore, the date in PDS 0158, subfield 5 is 19 August.	Saturday, 18 August. Therefore, the date in PDS 0158 (Business Activity), subfield 5 (Business Date) is 18 August.

Events	Example 1	Example 2
Global Clearing Management System compares the second presentment processing date (date in PDS 0158, subfield 5), to the first chargeback processing date (date in the Chargeback History File).	PDS 0158, subfield 5 date = 19 August First chargeback processing date = 05 July	PDS 0158, subfield 5 date = 18 August First chargeback processing date = 05 July
Global Clearing Management System edits determine the time elapsed between the first chargeback processing date and the second presentment processing date.	46 days	45 days
RESULT	Global Clearing Management System rejects the second presentment because it is past the 45-day time frame.	Global Clearing Management System accepts the second presentment because it is within the 45-day time frame.

Exclusion from chargeback timeliness edits

Under certain conditions, Mastercard may grant exclusions for individual account ranges or acquiring BINs.

A customer experiencing severe operational difficulties because of a natural disaster may contact the Global Customer Service team and apply for a hardship variance. Once approved by Mastercard, the hardship variance waives timeliness edits applicable to all chargeback reasons for the prescribed time frame.

To allow for situations in which the hardship affects only a portion of a customer's activity or affects a processing center located in another country, Mastercard may grant exclusions for individual account ranges or acquiring BINs. Exclusions granted at the customer level will cause timeliness edits to be waived for all of a customer's activity. Mastercard may also grant a hardship variance at the processor level, which will result in timeliness edits being waived for all customers assigned to that processor.

To implement a chargeback exclusion systematically, the IPM format uses edit exclusion indicators.

Edit exclusion indicators are codes that Global Clearing Management System uses to designate a transaction.

Global Clearing Management System edits PDS 0260 (Edit Exclusion Indicator), subfield 1 (Exclusion Request Code) for valid values. If Global Clearing Management System receives a first chargeback, second presentment, or arbitration chargeback transaction with an invalid exclusion indicator in this private data subelement, Global Clearing Management System will reject the message.

Global Clearing Management System may reject a transaction for a reason other than an invalid exclusion indicator (such as an invalid processing code provided in DE 3 [Processing

Code]) and also find that the exclusion indicator is invalid. In this case, Global Clearing Management System will provide the IPM error code 2006 (INVALID EXCLUSION INDICATOR) in addition to the other applicable error codes in the IPM error message that the system returns to the sender of the transaction.

Processing chargeback messages

Customers must process all chargebacks, second presentments, and arbitration chargebacks through Global Clearing Management System using the First Chargeback/1442, Second Presentment/1240, and Arbitration Chargeback/1442 messages.

The *IPM Clearing Formats* manual shows the formats and data requirements for these messages.

IPM messages are composed of data elements and private data subelements critical to the exchange of transactions between acquirers and issuers. Customers must ensure that all of the data contained within the messages specified above is accurate and complete.

The submitting customer must perform specific edits on the messages specified above. In general, the customer must edit all fields for correct content, and the message must contain all required fields.

If the customer processes the message and it does not pass the edit criteria when Global Clearing Management System receives it, Global Clearing Management System will reject the message as a single item reject.

Identifying the chargeback cycle

Customers must use a combination of message type identifier (MTI) and function code to identify the current cycle of the chargeback.

The specific reason for the First Chargeback/1442, Second Presentment/1240, or Arbitration Chargeback/1442 is in DE 25 (Message Reason Code).

MTI	DE 24 (Function Code)	Description
1442	450	First Chargeback (Full)/1442 for the full First Presentment/1240 amount. Initiated by the issuer.
	453	First Chargeback (Partial)/1442 for part of the First Presentment/1240 amount. Initiated by the issuer.
1240	205	Second Presentment (Full)/1240 for the full First Presentment/1240 amount. Initiated by the acquirer.
	282	Second Presentment (Partial)/1240 for part of the First Presentment/1240 amount. Initiated by the acquirer.

MTI	DE 24 (Function Code)	Description
1442	451	Arbitration Chargeback (Full)/1442 for the full First Presentment/1240 amount. Initiated by the issuer.
	454	Arbitration Chargeback (Partial)/1442 for part of the First Presentment/1240 amount. Initiated by the issuer.

An issuer may exercise one first chargeback per presented transaction within the applicable time frame limit specified in the *Chargeback Guide*.

An acquirer may process a second presentment if it can provide additional information, as specified in the *Chargeback Guide*, to correct the original defect that led to the chargeback.

An issuer may process an arbitration chargeback if it is determined that a transaction was improperly presented for a second time or if the issuer does not receive supporting documentation required with the second presentment.

Submitting the transaction amount for first chargebacks, second presentments, and arbitration

Customers must submit three elements for first chargebacks, second presentments, and arbitration.

For first chargebacks, second presentments, and arbitration chargebacks, the sender submits

- DE 4 (Amount, Transaction), which provides the amount of the current chargeback in either U.S. dollars or the customer's intracurrency settlement currency
- DE 30 (Amount, Original), which provides the original amount from the first presentment, in the original transaction currency; and
- PDS 0149 (Currency Codes, Amounts, Original), which provides the currency code associated with the original transaction amount in DE 30.

If the message is for a partial amount, the sender also may submit PDS 0268 (Amount, Partial Transaction), which provides the partial amount being submitted as a chargeback or second presentment, in the original transaction currency.

NOTE: Once an issuer or acquirer submits a transaction as a partial transaction, customers must submit the transaction as partial in all subsequent phases of the chargeback cycle.

DE 30 consists of the following subfields

- Subfield 1: Original Amount, Transaction and
- Subfield 2: Original Amount, Reconciliation.

PDS 0149 consists of the subfields

- Subfield 1: Currency Code, Original Transaction Amount and
- Subfield 2: Currency Code, Original Reconciliation Amount.

PDS 0268 consists of subfields

- Subfield 1: Amount, Partial Transaction and
- Subfield 2: Currency Code, Partial Transaction.

The combination of DE 4 and these three elements provides the receiver of the transaction with a complete history of the amounts involved in the chargeback cycle. The DE 4 amount supports partial first chargebacks, second presentments, and arbitration chargebacks while still providing the original amount of the transaction from the first presentment in the original transaction currency.

Customers must meet the following specific requirements related to the amount, depending on the phase of the chargeback life cycle.

- An issuer must not present a chargeback for an amount that exceeds the full amount of the transaction presented by the acquirer. An issuer may present a chargeback for an amount less than the full amount of the transaction. The only exceptions are the following:
  - If the message must be converted to U.S. dollars, the chargeback may be for an amount greater than the transaction amount originally presented by the acquirer.
  - If the transaction uses message reason code 4853 (Cardholder Dispute: Credit Posted as a Purchase) or 4860 (Credit Posted as a Purchase), the chargeback is for twice the transaction amount originally presented by the acquirer.
- To charge back a transaction for an amount less than the full amount of the transaction, the issuer uses function code 453 with MTI 1442. The issuer includes the partial amount in PDS 0268.
- An acquirer must not second present a chargeback for an amount that exceeds the full amount of the transaction charged back by the issuer. The acquirer may second present for an amount less than the full amount of the transaction.
- To submit a second presentment for an amount less than the full amount of the transaction, the acquirer uses function code 282 with MTI 1240. The acquirer includes the partial amount in PDS 0268.
- An issuer must not submit an arbitration chargeback for an amount that exceeds the full amount of the transaction presented by the acquirer. An issuer may present an arbitration chargeback for an amount less than the full amount of the transaction.
- To submit an arbitration chargeback for an amount less than the full amount of the transaction, the issuer uses function code 454 with MTI 1442. The issuer includes the partial amount in PDS 0268.

Chargeback procedures for purchase with cash back transactions
Issuers choosing to process chargebacks on purchases with cash back transactions for Maestro® and Debit Mastercard® transactions should adhere to certain guidelines.

Chargebacks on net purchase only

If only the net purchase or a portion of the net purchase of a purchase with cash back transaction is to be charged back, the issuer should submit it as a First Chargeback (Partial)/1442 or Arbitration Chargeback (Partial)/1442.

The following table identifies the message element criteria for processing chargebacks on purchases with cash back transactions.

Table 14: Message element criteria for processing chargebacks on purchase with cash back transactions

Message Element	Requirement
DE 3 (Processing Code), subfield 1 (Cardholder Transaction Type)	Should be populated with 09, purchase with cash back
DE 4 (Amount, Transaction)	Should contain the amount to be charged back
DE 30 (Amounts, Original)	Should contain the original transaction amount of the First Presentment/1240
DE 54 (Amounts, Additional)	Should be present and be populated with zeros

Chargebacks on total amount

If the entire transaction amount of a purchase with cash back transaction is to be charged back, the issuer should submit it as a First Chargeback (Full)/1442 or Arbitration Chargeback (Full)/1442.

The following table identifies the message element criteria for processing chargebacks on purchase with cash back transactions.

Table 15: Message element criteria for processing chargebacks on purchase with cash back transactions

Message Element	Requirement
DE 3 (Processing Code), subfield 1 (Cardholder Transaction Type)	Should be populated with 09, purchase with cash back
DE 4 (Amount, Transaction)	Should contain the amount to be charged back
DE 30 (Amounts, Original)	Should contain the original transaction amount of the First Presentment/1240
DE 54 (Amounts, Additional)	Should contain the cash back portion of the purchase with cash back transaction

Issuers must not submit chargebacks on the cash back amount on Debit Mastercard purchases with cash back transactions for the following message reason codes.

Table 16: Message reason codes

DE 25 (Message Reason Code)	Description
4853	Cardholder Dispute: Defective Merchandise/Not as Described
4854	Cardholder Dispute: Not Elsewhere Classified (U.S. region only)
4855	Nonreceipt of Merchandise
4859	Services Not Rendered
4860	Credit Not Processed

If initiating a chargeback for the purchase amount or a portion thereof, the issuer should submit a First Chargeback (Partial)/1442 or Arbitration Chargeback (Partial)/1442.

DE 95 (Card Issuer Reference Data)

DE 95 (Card Issuer Reference Data) is a control value of 10 positions that the issuer assigns with its original chargeback and is used to track the chargeback throughout its life cycle.

The issuer may, at its option, include its customer ID number when defining the value for this element. The card issuer reference data may be used to identify the originator, and in turn, the originator may determine and direct the chargeback to the department or affiliate customer that initiated the original chargeback.

The issuer provides DE 95 when processing retrieval or chargeback messages. The acquirer is required to include the same data in a subsequent fulfillment of the retrieval request or acquirer advisement. In the case of a chargeback, this applies to both Second Presentment/1240 and Arbitration Chargeback/1442 case filings.

The unique card issuer reference data provides an audit trail of a chargeback's processing life cycle. It allows customers to locate the source documentation needed to rebill a cardholder or recharge a acceptor.

The issuer must not use the card issuer reference data number more than once in a 12-month period. Global Clearing Management System edits validate all incoming chargebacks against the chargeback history file to ensure that the incoming chargebacks do not contain a card issuer reference data used previously with the same BIN. Acquirers must not modify the card issuer reference data when second presenting a chargeback. Global Clearing Management System will reject the chargeback or second presentment if it contains an invalid card issuer reference data. Customers should always submit DE 95 in all chargeback life cycle transactions, even though Global Clearing Management System does not perform the validation edits for ATM chargeback life cycle transactions (DE 3 [Processing Code], subfield 1 [Cardholder Transaction Type], value of 01).

PDS 0262 (Documentation Indicator)

The documentation indicator shows whether supporting documentation will be provided for the current chargeback or fee collection cycle. The field is mandatory for First Chargeback/1442, Second Presentment/1240, and Arbitration Chargeback/1442 messages.

IF supporting documentation…	THEN this PDS contains a value of…
Is neither required nor sent (for example, for a retrieval or fee collection message)	0
Will follow the message	1

Global Clearing Management System will edit this private data subelement for all First Chargeback/1442, Second Presentment/1240, and Arbitration Chargeback/1442 messages and will reject the message if the indicator is not a 0 or a 1.

DE 72 (Data Record)

DE 72 (Data Record) is used during the different chargeback processing cycles to provide the receiving customer with specific information about the item.

NOTE: For specific message text requirements for each type of message, refer to the *Chargeback Guide*.

Getting additional information about chargebacks

Elements which carry information about the previous cycle of the transaction provide customers with additional information when processing exception items.

- DE 30 (Amounts, Original), PDS 0149 (Currency Codes, Amounts, Original), and PDS 0268 (Original and Amount, Partial Transaction)

  For first chargebacks, second presentments, and arbitration chargebacks, the sender submits DE 30 and PDS 0149, which provide the original amount and associated currency code from the first presentment, in the original transaction currency. PDS 0268 provides the partial amount being submitted as a chargeback or second presentment, in the original transaction currency.
- PDS 0243 (Mastercom Retrieval Response Data)

  This private data subelement contains information related to the issuer's retrieval request, the acquirer's response, and any subsequent decisions made by the issuer, the Mastercom system, or both. The information provided in this private data subelement is obtained from Mastercom historical data supplied by Global Clearing Management System. This private data subelement consists of these eight subfields.

  – PDS 0244 (Mastercom Chargeback Support Documentation Dates)

  - Subfield 1: Mastercom Chargeback Support Documentation Sender Processing Date (First Chargeback/1442).
  - Subfield 2: Mastercom Chargeback Support Documentation Sender Processing Date (Second Presentment/1240).

  This private data subelement contains each date that the customers sent Chargeback Support Documentation (CSD) for the first two chargeback cycles. This information indicates whether the customers provided CSD in the appropriate time frames. The system provides this information if it is available.
- PDS 0260 (Edit Exclusion Indicator)
  This private data subelement contains information about processing of edit exclusions when Mastercard has granted deactivation of transaction life cycle editing to a particular customer. Mastercard will notify the customer when the system excludes chargeback cycle edits and will advise the customer of the reason for the exclusion. PDS 0260 consists of the following subfields:

  - Subfield 1: Exclusion Request Code. This code identifies the originator request to bypass edit sets during processing of the transaction.
  - Subfield 2: Exclusion Reason Code. This code, which the Global Clearing Management System assigns, indicates approval of, and the reason for, the edit exclusion.
  - Subfield 3: Exclusion Results Code. This code, which the Global Clearing Management System assigns, indicates the edit set or sets that the Global Clearing Management System actually bypassed when it processed the transaction.
- PDS 0262 (Documentation Indicator)
  This private data subelement indicates whether supporting documentation will be provided for the current chargeback cycle.

- PDS 0266 (First Chargeback/Fee Collection Return Data)
  This private data subelement contains dates, reasons, and other information from a first chargeback. When this PDS is present in a second presentment or an arbitration chargeback, it provides information from the first chargeback of that transaction, including the message text from the first chargeback.

- PDS 0267 (Second Presentment/Fee Collection Resubmission Data)
  This private data subelement contains dates, amounts, reasons, and other information from a second presentment. When this private data subelement is present in an arbitration chargeback, it provides information from the second presentment of that transaction, including the message text from the second presentment.

  Both PDS 0266 and PDS 0267 contain the following information from the appropriate chargeback cycle.

  - Subfield 1: Message reason code (from DE 25 [Message Reason Code] of the first chargeback or second presentment)
  - Subfield 2: First return business date (from PDS 0158 [Business Activity], subfield 5 [Business Date] of the first chargeback or second presentment)
  - Subfield 3: Edit exclusion reason code (from PDS 260, subfield 2 of the first chargeback or second presentment)

- Subfield 4: Edit exclusion results code (from PDS 260, subfield 3 of the first chargeback or second presentment)
- Subfield 5: First return amount (from DE 4 [Amount, Transaction] of the first chargeback or second presentment)
- Subfield 6: First return currency code (from DE 49 [Currency Code, Transaction] of the first chargeback or second presentment)
- Subfield 7: First return data record (from DE 72 [Data Record] of the first chargeback or second presentment)

Arbitration following chargebacks

When the acquirer and issuer have exhausted all of their rights under the previously mentioned three-step chargeback cycle, the acquirer may petition Mastercard to resolve the dispute in an arbitration case filing.

The customer may not file an arbitration case unless it has first exercised all of its rights under the previous processing cycles noted in this chapter.

Chargeback infractions worthy of compliance action

Compliance addresses situations where there is a rules violation but no applicable chargeback reason code.

A customer may proceed to compliance for any alleged violation that

- would result in a financial loss
- is directly related to a rule or other Standard that is published in a Mastercard bulletin or manual and is currently effective, and
- is not addressed by a chargeback remedy defined in the *Chargeback Guide*.

Any customer may proceed to compliance within 180 calendar days from the date when the infraction occurred.

NOTE: For more information about compliance procedures, refer to the *Chargeback Guide*.

Transaction research request

A transaction research request is a request by a customer for Mastercard to provide information about a transaction.

Customers can use either of the following two methods to research information about previous transactions.

- Transaction Investigator tool to conduct research about specific transactions or a range of transactions for an account number. The report generated provides customers with transactional data such as card number, card validation code 2 (CVC 2) response, point-of-sale entry mode, cardholder present information, merchant advice code, and message type identifier (MTI).

- If the transaction is over 180 days, customers can submit a request using the *Authorization Research Request* (Form 074). The Global Customer Service team will perform the research for you. The team provides information about authorization transactions, duplicate reports, microfiche re-creation, currency conversion rates, BIN and ICA numbers, and conversions.

Ways to perform a transaction research request

Customers can choose between two methods to research information about previous transactions.

- Mastercard Transaction Investigator tool: This tool allows customers to conduct research about specific transactions or a range of transactions for an account number.
- Global Customer Service: Contact the Global Customer Service team to have the team perform the research for you. The team provides information about clearing transactions. To participate in this service, customers must complete the *Clearing Transaction Research Request* (Form 949).

Capabilities of the Transaction Investigator tool

The Mastercard Transaction Investigator tool enables users to complete variety of unique tasks. The Mastercard Transaction Investigator tool allows users to search the Mastercard data warehouse for first presentment transactions that a customer has processed either as an issuer or an acquirer.

This capability

- provides secure access to proprietary clearing information
- retrieves relevant transaction data elements online with the option to view all available data elements for a transaction message type, and
- returns the data within seconds after the customer electronically submits the request for research.

In addition, users can print the transaction data or export the information into a Microsoft® Excel file.

The transaction data is stored in the Mastercard data warehouse and is available to customers for three years. Most transactions are available within 24 hours of the transaction time.

To access the Transaction Investigator Tool, customers must be licensed users. New users can sign up for Mastercard Connect through the Online Registration System.

Mastercard Connect registration

To register for Mastercard Connect, follow these steps.

1. Log on to Mastercard Connect at www.mastercardconnect.com.
2. On the Mastercard Connect landing page, click the **Sign Up** link in the left panel.
3. Follow the instructions that appear on your screen.

Initial access to Mastercard Connect requires only your user ID and password, which are created during the enrollment process. A SecurID token is assigned, if required for a Mastercard Connect product that requires higher security level access.

For any assistance with Mastercard Connect enrollment or product registration, contact Global Customer Service Support at customer_support@mastercard.com.

Transaction Investigator product registration

After you have successfully registered and obtained your Mastercard Connect user ID and password or if you are an existing Mastercard Connect user, follow these steps to register for Transaction Investigator.

Procedure

1. Log on to Mastercard Connect at www.mastercardconnect.com.
2. Enter your **User ID and Password**.
3. Click **Store** on the main menu (located in the upper-right corner) on the Mastercard Connect home page.
4. Scroll or search for **Transaction Investigator**.
5. Click **Add to Shopping**. A confirmation message appears.
6. Click **Cart** to display the cart, and then click **Checkout** to display the Order Details window.
7. Under **Order Details**, click **Review Order**, and then click **Place Order**.

   Once the Security Administrator approves the request, Transaction Investigator will appear under the Applications menu on the Mastercard Connect home page.

   For any assistance with Mastercard Connect enrollment or product registration, contact Global Customer Service Support at customer_support@mastercard.com.

Accessing and using the Transaction Investigator

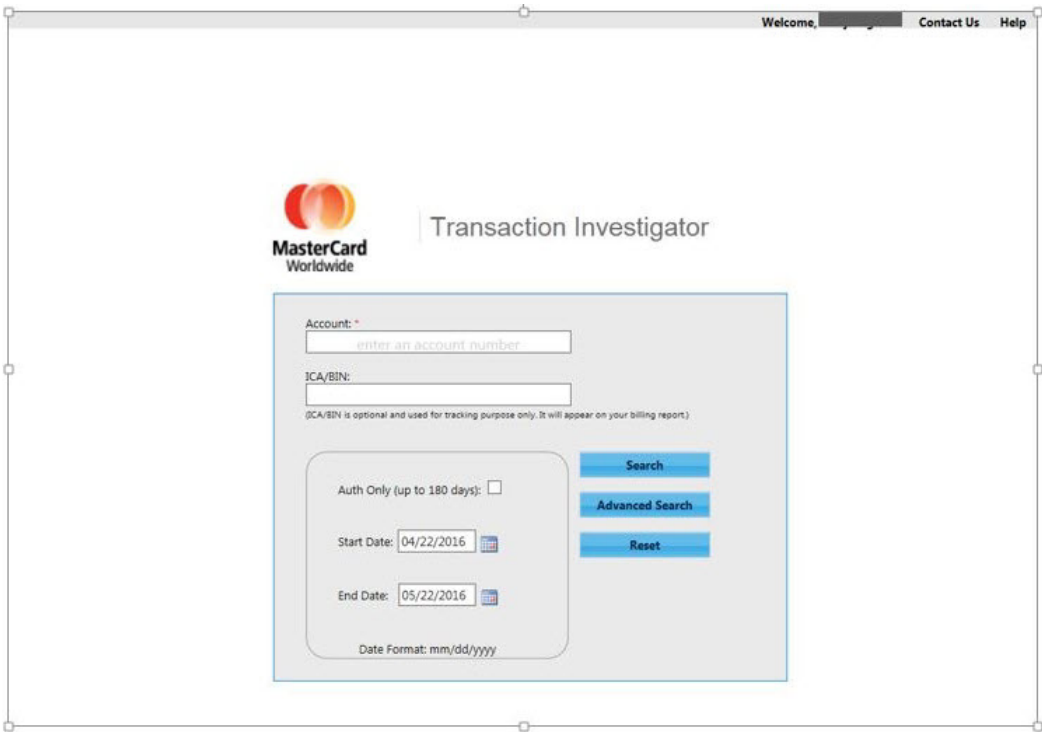
After becoming licensed for the Transaction Investigator tool, follow these steps to access and use the tool.

Procedure

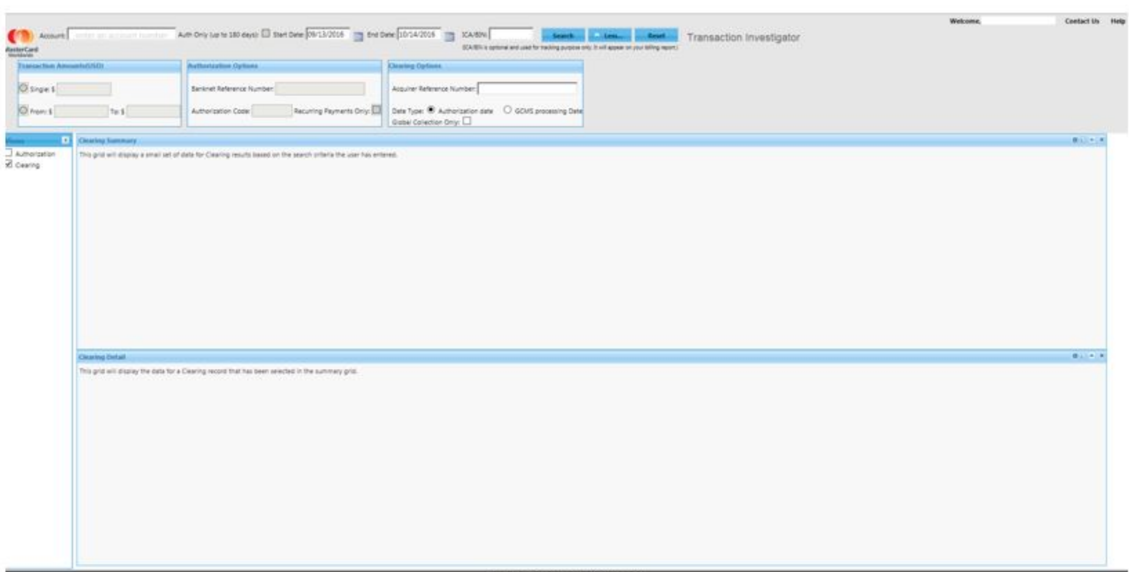
1. Log on to Mastercard Connect using your Mastercard Connect user ID and PIN/SecurID.
2. From the Applications menu, click **Transaction Investigator**.

   On selecting Transaction Investigator, a new browser window opens and displays the Transaction Investigator home page.

   Searches can be performed from this screen using an account number and dates combination, Auth Only data or click **Advanced Search** for additional search criteria.



3. Click **Advanced Search** and select the Clearing View on the left pane.



Clearing summary

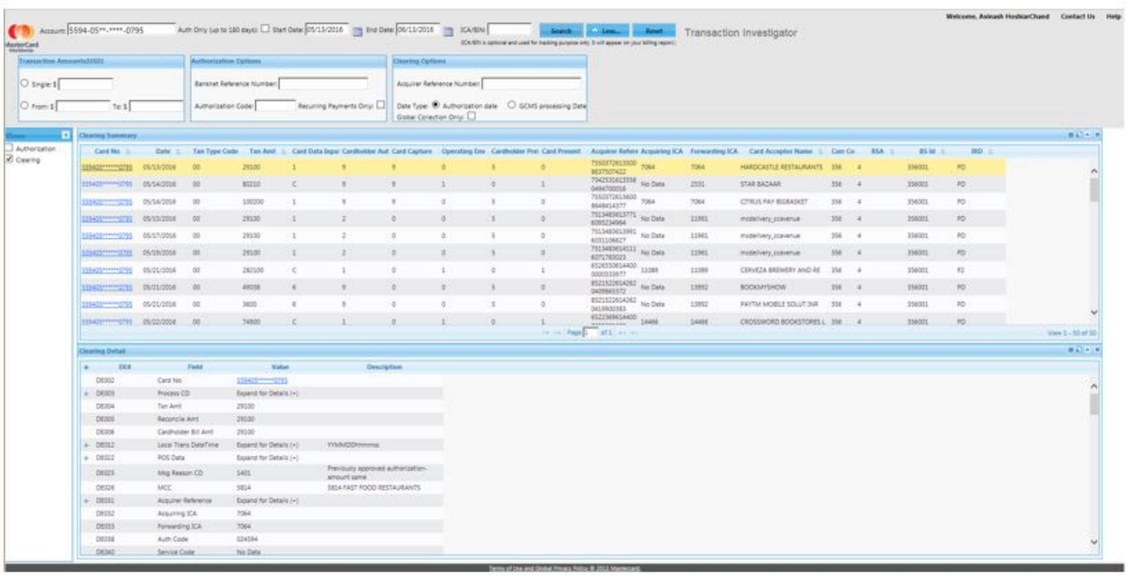
A summary of clearing information is displayed here based on the criteria entered in the search. The information displayed may contain several records. Clicking a record in the grid will automatically highlight and display the corresponding data at the top of the other open panel: Clearing Detail. Data elements that do not contain any data are indicated in the display with the words No Data.

You can customize the data display using the sort feature on any column in the Clearing Summary. By clicking the column heading, the sort direction can be toggled. The default sort is by transaction date.

Clearing detail

The clearing data detail is displayed here for the record selected in the Clearing Summary grid.

To expand the data elements that contain subfield data, click the corresponding plus sign. The subfield data is highlighted for the expanded data element.

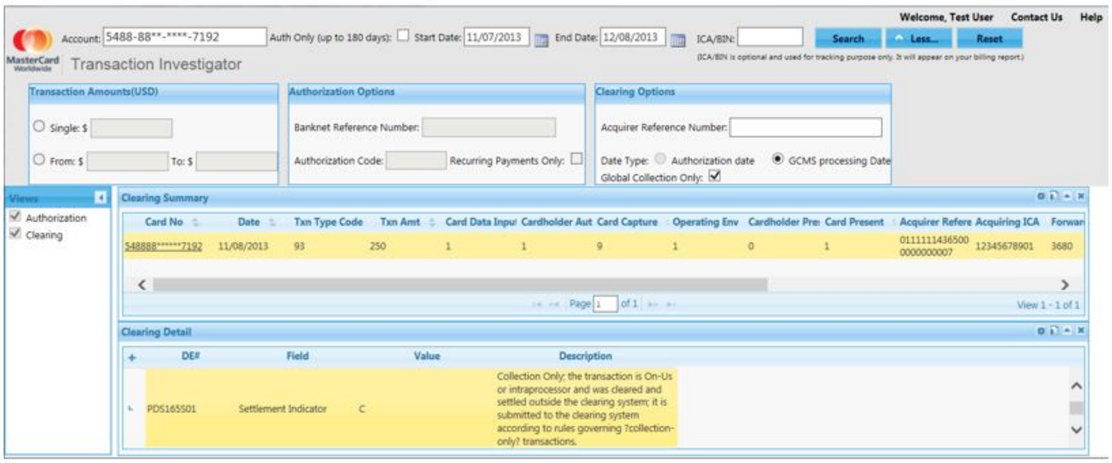


Global Collection-Only data

Global Collection-Only data consists of Collection-only transactions neither issued nor acquired in the United States. A GCO transaction is a transaction that is cleared and settled outside the Mastercard Clearing system. This would include transactions that are either

- acquired and issued by the same customer (On-Us) or
- acquired and issued by customers processing through the same processor (intra-processor)

When a collection-only transaction occurs, the transaction is sent to Mastercard's Global Collection Management System GCMS with a settlement indicator (PDS165S01) value C to indicate collection-only.



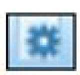
When the Global Collection Only option is selected, the query searches for GCO transactions from the GCO data store. The Clearing summary and details grids will display the GCO transaction records.

How to set user preferences

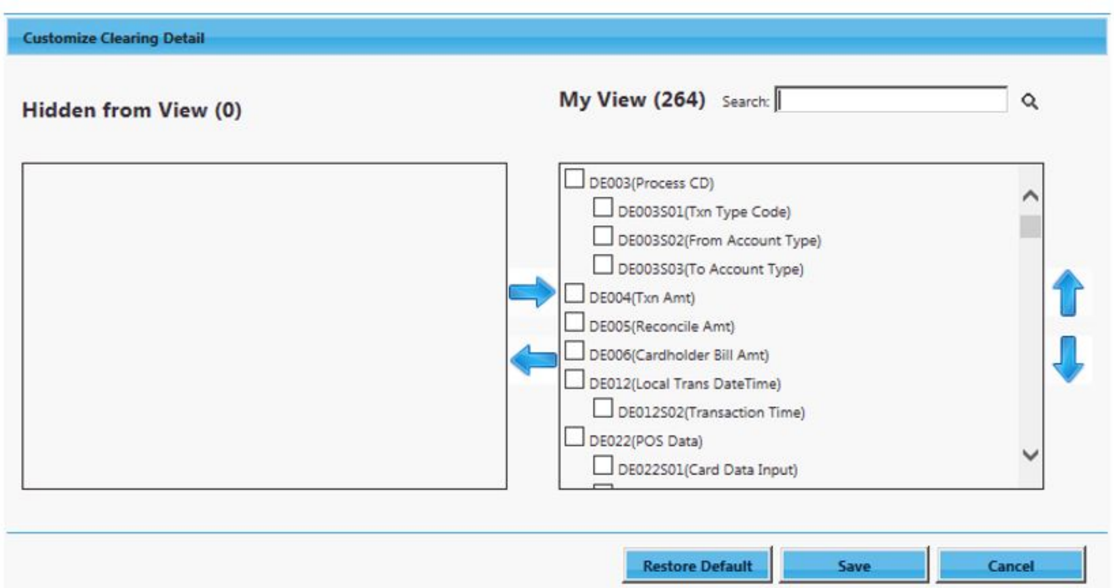
You can set user preferences to customize the display of information in each panel within the Transaction Investigator.

Procedure

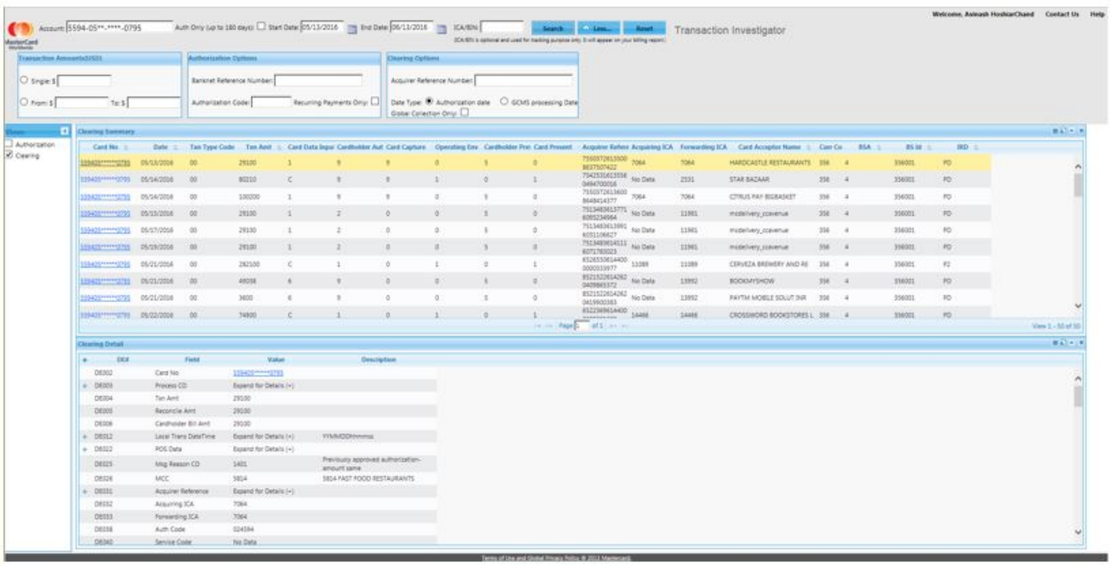
1. Click the **Customize** box, from the panel tool bar.



2. From the Customize window, select the data elements that you want to hide from view.



3. Click the Move Left arrow to move the selected data elements to the Hidden from View panel. Use the Move Right arrow to move selected data elements to the My View panel.
4. Select the desired data element in the My View panel and click either the Up or Down arrow to change the display order of the data elements.
5. Click Save.
6. Click Restore Default to reset the display to show all data elements.
7. Clicking on Search after entering the Cardholder account number and the date range, the results may look similar to the following illustration. The Clearing Detail will display the details corresponding to the highlighted transaction in the Clearing Summary grid.



Understanding fees for transaction research requests

A general research fee applies to each customer inquiry requesting information that is readily available to the customer in a Mastercard publication, report, service, or other source.

Refer to the appropriate regional *Mastercard Consolidated Billing System* manual for fees and billing information (The billing events 2AB1710, 2AB1711, and 2RP1778 apply).

Global Clearing Management System transaction and chargeback analysis reports

These tables and figures provide details about Global Clearing Management System transaction and chargeback analysis reports, such as the bulk types through which they are transmitted, the versions in which they appear, and the descriptions of their fields.

The transaction and chargeback analysis reports include

- Global Clearing Management System Transaction/Chargeback Analysis Report (IP776010-AA)
- Chargeback Activity Summary: Acquirer (IP776020-AA), and
- Dollar/Volume Summary Report: Acquirer (IP776030-AA).

The Global Clearing Management System uses the T783 (production) and T784 (test) bulk types to transmit these reports.

These three reports have three versions with the same layout.

Version...	Summarizes activity by...
-AA	Acquirer
-BB	Issuer
-CC	Global Clearing Management System totals

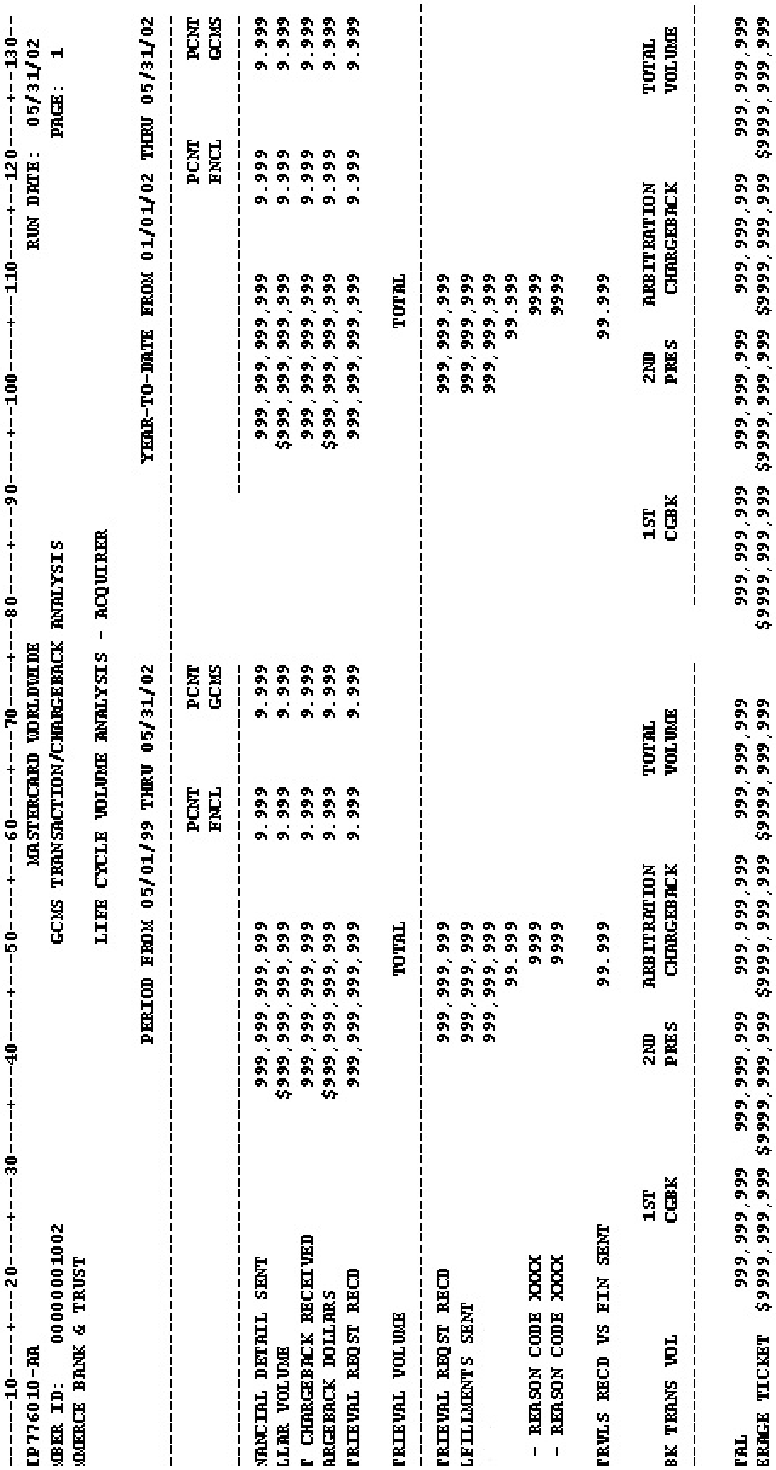
Because the layouts are the same, the following shows only the -AA version.

These reports are available in media types

- Mastercard Network/Bulk
- Mastercard File Express, and
- CONNECT:Direct.

To request these reports, please contact your account manager or Mastercard Customer Implementation Specialist. the Global Customer Service team.

Figure 12: Figure: Global Clearing Management System Transaction/Chargeback Analysis report (IP776010-AA)



```
------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130--
IP776010-AA                                         MASTERCARD WORLDWIDE                                          RUN DATE:  05/31/02
MBER ID:    00000001002                     GCMS TRANSACTION/CHARGEBACK ANALYSIS                                     PAGE:  1
MMERCE BANK & TRUST
                                            LIFE CYCLE VOLUME ANALYSIS - ACQUIRER

                                   PERIOD FROM 05/01/99 THRU 05/31/02                 YEAR-TO-DATE FROM 01/01/02 THRU 05/31/02
------------------------------------------------------------------------------------------------------------------------------------
                                                  PCNT        PCNT                                                PCNT        PCNT
                                                  FNCL        GCMS                                                FNCL        GCMS
------------------------------------------------------------------------        ------------------------------------------------
NANCIAL DETAIL SENT              999,999,999,999     9.999       9.999            999,999,999,999     9.999       9.999
LLAR VOLUME                     $999,999,999,999     9.999       9.999           $999,999,999,999     9.999       9.999
T CHARGEBACK RECEIVED            999,999,999,999     9.999       9.999            999,999,999,999     9.999       9.999
ARGEBACK DOLLARS                $999,999,999,999     9.999       9.999           $999,999,999,999     9.999       9.999
TRIEVAL REQST RECD               999,999,999,999     9.999       9.999            999,999,999,999     9.999       9.999

TRIEVAL VOLUME                             TOTAL                                                TOTAL
-------------------------------------------------------------------------------------------------------------------------------------
TRIEVAL REQST RECD                   999,999,999                                          999,999,999
LFILLMENTS SENT                      999,999,999                                          999,999,999
                                     999,999,999                                          999,999,999
                                          99.999                                               99.999
 - REASON CODE XXXX                         9999                                                 9999
 - REASON CODE XXXX                         9999                                                 9999

TRVLS RECD VS FIN SENT                    99.999                                               99.999

                       1ST           2ND     ARBITRATION        TOTAL            1ST           2ND     ARBITRATION        TOTAL
BK TRANS VOL           CGBK          PRES      CHARGEBACK        VOLUME           CGBK          PRES      CHARGEBACK        VOLUME
------------------------------------------------------------------------    --------------------------------------------------------

TAL             999,999,999    999,999,999    999,999,999    999,999,999     999,999,999    999,999,999    999,999,999    999,999,999
ERAGE TICKET  $9999,999,999 $9999,999,999 $9999,999,999 $9999,999,999   $9999,999,999 $9999,999,999 $9999,999,999 $9999,999,999
```

Table 17: Report IP776010-AA field descriptions

Field	Description
Report Name	Constant; Value is always Mastercard Global Clearing Management System Transaction/Chargeback Analysis..
Report Number	Constant; Value is always IP776010-AA.
Customer ID	Received from Global Clearing Management System customer master file.
Customer Name	Name of the customer associated with the above member ID.
Report Subtitle	Constant; Value is always Life Cycle Volume Analysis—Acquirer.
Run Date	Current processing date.
Page	Incremental number starting at 1 for each new ICA number/customer ID.
Period From	The specific beginning and end dates of the reporting month.
Year-to-date	Calendar year to date beginning with January through the current reporting month.
Financial Detail Sent	Total number of First Presentments/1240-200.
Dollar Volume	Total U.S. dollar amount of First Presentments/1240-200.
First Chargeback Received	Total number of First Chargebacks/1442-450 (full) and 1442-453 (partial).
Chargeback Dollars	Total U.S. dollar amount of 1442-450 (full) and 1442-453 (partial) messages.
Retrieval Reqst Recd	Total number of Retrieval Request/1644-603 messages.
PCNT FNCL	Value of the first Chargeback Received, Chargeback Dollars, and Retrieval Reqst Recd fields as a percentage of the total First Presentments/1240-200 messages sent/received by the customer.
PCNT Global Clearing Management System	Value of fields 1 and 5 for the customer as compared with the total volume of corresponding activity processed by Global Clearing Management System for all customers (IP776010-CC report).
Retrieval Volume	
Retrieval ReqstRecd (by acquirer) Sent (by issuer)	Total number of Retrieval Request/1644-603 messages processed for Mastercom and manual (non-Mastercom) retrieval activity.
Retrieval Volume	
Fulfillments Sent	Total number of fulfillments processed for Mastercom and manual (non-Mastercom) fulfillment activity.

Field	Description
Retrieval Volume	
CgbkRecd	Total number of First Chargeback/1442-450 and 1442-453 messages sent/ received. Both Mastercom and manual (non-Mastercom) chargeback activity is reported.
vs Retvls Recd	Total number of First Chargeback/1442-450 and 1442-453 messages as a percentage of total retrieval requests received (Retrieval Reqst Recd field). Percentages are shown in the report for Mastercom, manual (non-Mastercom), and total activity.
Reason Code	Total number of First Chargeback/1442-450 and 1442-453 messages. Both Mastercom and manual (non-Mastercom) activity is reported.
Retrieval Volume c	
Retrvls Recd vs Fin Sent	Total number of Retr. Rqst. Rcd. (Retrieval Request/1644-603 messages) as a percentage of Financial Detail Sent (First Presentment/1240-200 messages) for Mastercom and manual (non-Mastercom) activity.
1st Cgbk	Number of 45-day, 120-day, and total First Chargeback/1442-450 (Full) and 1442-453 (Partial) messages for all message reason codes received (by acquirer) or sent (by issuer). **NOTE: Included in the 45-day count are transactions submitted with message reason code, which are 60-day chargebacks, and included in the 120-day count are ATM transactions submitted with reason code 4859, which are 180-day chargebacks.**
2nd Pres	Number of 45-day, 120-day, and Second Presentment/1240-205 (Full) for all message reason codes received (by issuer) or sent and 1240-282 (Partial) messages (by acquirer).
Arbitration Chargeback	Number of 45-day, 120-day, and total Arbitration Chargeback/1442-451(Full) and 1442-454 (Partial) messages for all reason codes received (by acquirer) or sent (by issuer).
Total Volume	Number of all first chargeback, second presentment, and arbitration chargeback messages.
Total	Total number of First Chargeback (1442-450 and 1442-453), Second Presentment (1240-205 and 1240-282), and Arbitration Chargeback (1442-451 and 1442-454) messages.

Field	Description
Average Ticket	Total chargeback dollars divided by total chargeback volume. Total U.S. dollars can be derived by adding the net U.S. dollar amount for chargebacks and second presentments shown on the corresponding IP776030 Dollar Volume Summary report.

Figure 13: Figure: Chargeback Activity Summary: Acquirer (IP776020-AA)

```
-------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+--100----+--110----+--120----+--130-
776020-AA                                            MASTERCARD WORLDWIDE                                   RUN DATE:  01/31/01
MBER ID:    00000001002                          GCMS TRANSACTION/CHARGEBACK ANALYSIS                                  PAGE:  1
OMMERCE BANK & TRUST
                                                 CHARGEBACK ACTIVITY SUMMARY - ACQUIRER
                                                   PERIOD FROM 01/01/01 THRU 01/31/01
--------------------------------------------------------------------------------------------------------------------------------------
EASON     PERCENT      TOTAL CGBK       TOTAL CGBK            1ST           2ND              ARB
CODE      OF CGBK        VOLUME        DOLLAR AMOUNT          CGBK          PRES             CGBK
--------------------------------------------------------------------------------------------------------------------------------------
4834         .571              4                $210              4
4837         .143              1                 $48              1
            -----   -------------   ---------------   -------------   --------- ----   -------------
AND TOTAL   1.000              7                $637              7
```

Table 18: Report IP776020-AA field descriptions

Field	Description
Report Name	Constant; Value is always Mastercard Global Clearing Management System Transaction/Chargeback Analysis..
Report Number	Constant; Value is always IP776020-AA.
Customer ID	Received from Global Clearing Management System customer master file.
Customer Name	Name of the customer associated with the above customer ID.
Report Subtitle	Constant; Value is always Chargeback Activity Summary–Acquirer.
Run Date	Current processing date.
Page	Incremental number starting at 1 for each new ICA number/customer ID.
Period From	The specific beginning and end dates of the reporting month.
Reason Code	All activity on this report is sorted by message reason code. Message reason codes 4834 and 4859 include both ATM and non-ATM activity. For a chargeback reason code, both MasterCom and manual (non-MasterCom) activity is reported.
Percent of Cgbk	Percentage of Total Chargeback Volume (for message reason code specified) to the grand total of total chargeback volume processed.
Total Cgbk Volume	Total number of first chargebacks, second presentments, and arbitration chargebacks by message reason code.
Total Cgbk DollarAmount	Total dollar amount of first chargebacks, second presentments, and arbitration chargebacks by message reason code.
1st Cgbk	Volume of First Chargeback/1442-450 (Full) and 1442–453 (Partial) messages.
2nd Pres	Volume of Second Presentment/1240-205 (Full) and 1240-282 (Partial) messages.
Arb Cgbk	Volume of Arbitration Chargeback/1442-451 (Full) and 1442-454 (Partial) messages.
Grand Total	Grand totals for all chargeback, second presentment, and arbitration chargeback activity.

Figure 14: Figure: Dollar/Volume Summary Report: Acquirer (IP776030-AA)

```
------10----+---20----+---30----+---40----+---50----+---60----+---70----+---80----+---90----+---100----+---110----+---120----+---130--
776030-AA                                          MASTERCARD WORLDWIDE                                      RUN DATE:  01/31/01
MBER ID:    00000001002                        GCMS TRANSACTION/CHARGEBACK ANALYSIS                                     PAGE:  1
MMERCE BANK & TRUST
                                                 DOLLAR/VOLUME SUMMARY - ACQUIRER
----------------------------------------------------------------------------------------------------------------------------------
                                             PERIOD FROM 01/01/01 THRU 01/31/01         YEAR-TO-DATE FROM 01/01/01 THRU 01/31/01
----------------------------------------------------------------------------------------------------------------------------------
                                                TRANSACTIONS       DOLLAR AMOUNT             TRANSACTIONS       DOLLAR AMOUNT
----------------------------------------------------------------------------------------------------------------------------------
NANCIAL DETAIL DEBITS                                  8,975            $720,477                    8,975            $720,477
NANCIAL DETAIL DEBIT REVERSALS                             0                  $0                        0                  $0
NANCIAL DETAIL CREDITS                                   114             $12,867                      114             $12,867
NANCIAL DETAIL CREDIT REVERSALS                            0                  $0                        0                  $0
                                           -----------------  -----------------   -----------------  -----------------
                            * NET TOTAL                9,089            $707,610                    9,089            $707,610

ARGEBACK DEBITS                                            7                $637                        7                $637
ARGEBACK DEBIT REVERSALS                                   0                  $0                        0                  $0
ARGEBACK CREDITS                                           0                  $0                        0                  $0
ARGEBACK CREDIT REVERSALS                                  0                  $0                        0                  $0
                                           -----------------  ------------------  -----------------  -----------------
                            * NET TOTAL                    7                $637                        7                $637

PRESENTMENT DEBITS                                         0                  $0                        0                  $0
PRESENTMENT DEBIT REVERSALS                                0                  $0                        0                  $0
PRESENTMENT CREDITS                                        0                  $0                        0                  $0
PRESENTMENT CREDIT REVERSALS                               0                  $0                        0                  $0
                                           -----------------  ------------------  -----------------  -----------------
                            * NET TOTAL                    0                  $0                        0                  $0

TRIEVAL REQUESTS                                           2                 $78                        2                 $78
TRIEVAL REQUEST REVERSALS                                  0                  $0                        0                  $0
                                           -----------------  -----------------   -----------------  -----------------
                            * NET TOTAL                    2                 $78                        2                 $78

TRIEVAL REQUEST FULFILLMENTS                               0                  $0                        0                  $0
TRIEVAL REQUEST FULFILLMENT REVERSALS                      0                  $0                        0                  $0
                                           -----------------  -----------------   -----------------  -----------------
                            * NET TOTAL                    0                  $0                        0                  $0
---------------------------------------------------------------------------------------------------------------------------------

NET TOTAL TRANSACTIONS  = DEBITS + CREDITS - DEBIT REVERSALS - CREDIT REVERSALS
```

Table 19: Report IP776030-AA field descriptions

Field	Description
Report Name	Constant; Value is always Mastercard Global Clearing Management System Transaction/Chargeback Analysis.
Report Number	Constant; Value is always IP776030-AA.
Customer ID	Received from Global Clearing Management System customer master file.
Report Subtitle	Constant; Value is always Dollar/Volume Summary: Acquirer.
Run Date	Current processing date.
Page	Incremental number starting at 1 for each new ICA number/customer ID.
Period From	The specific beginning and end dates of the reporting month.
Year-to-date	Calendar year-to-date beginning with January through the current reporting month.
Transactions	The count of transactions.
Dollar Amount	The dollar amount corresponding to the specified transactions.
Financial Detail Debits	Total number and associated dollar volume of First Presentment/1240-200 non-reversal debit messages.
Financial Detail Debit Reversals	Total number and associated dollar volume of First Presentment/1240-200 reversal debit messages.
Financial Detail Credits	Total number and associated dollar volume of First Presentment/1240-200 non-reversal credit messages.
Financial Detail Credit Reversals	Total number and associated dollar volume of First Presentment/1240-200 credit reversal messages.
* Net Total (Transactions)	Debits + credits - debit reversals - credit reversals.
* Net Total (Dollar Volume)	Debits - credits - debit reversals + credit reversals.
Chargeback Debits	Total number and associated dollar volume of non-reversal debit First Chargeback/1442-450 (Full) and 1442-453 (Partial) and Arbitration Chargeback/1442–451 (Full) and 1442-454 (Partial) messages.
Chargeback Debit Reversals	Total number and associated dollar volume of reversal debit First Chargeback/1442-450 (Full) and 1442-453 (Partial), and Arbitration Chargeback/1442-451 (Full) and 1442-454 (Partial) messages.

Field	Description
Chargeback Credits	Total number and associated dollar volume of non-reversal credit First Chargeback/1442-450 (Full) and 1442-453 (Partial) and Arbitration Chargeback/1442-451 (Full) and 1442-454 (Partial) messages.
Chargeback Credit Reversals	Total number and associated dollar volume of credit reversal First Chargeback/1442-450 (Full) and 1442-453 (Partial) and Arbitration Chargeback/1442-451 (Full) and 1442-454 (Partial) messages.
Representment Debits	Total number and associated dollar volume of non-reversal debit Second Presentment/1240-205 (Full) and 1240-282 (Partial) messages.
Representment Debit Reversals	Total number and associated dollar volume of reversal debit Second Presentment/1240-205 (Full) and 1240-282 (Partial) messages.
Representment Credits	Total number and associated dollar volume of non-reversal credit Second Presentment/1240-205 (Full) and 1240-282 (Partial) messages.
Representment Credit Reversals	Total number and associated dollar volume of reversal credit Second Presentment/1240–205 (Full) and 1240–282 (Partial) messages.
Retrieval Requests	Total number and associated dollar volume of non-reversal Retrieval Request/1644-603 messages.
Retrieval Request Reversals	Total number and associated dollar volume of reversal Second presentment/1240-205 (Full) and 1240-282 (Partial) messages.
Retrieval Request Fulfillments	Total number and associated dollar volume of non-reversal Mastercom and manual (non-Mastercom) fulfillment activity.
Retrieval Request Fulfillment Reversals	Total number and associated dollar volume of reversal Mastercom and manual (non-Mastercom) fulfillment activity.

Chapter 4 Global Clearing Management System transaction processing for Account Level Management services

This section describes how Global Clearing Management System performs transaction processing for applicable Account Level Management services.

Account Level Management

Mastercard Account Level Management is a platform that enables specialized processing so that Mastercard can manage capabilities at the individual card account level.

Mastercard Account Level Management provides issuers the flexibility of qualifying cardholder accounts for competitive interchange as well as upgrading cardholder accounts to a different card product. The following are the key capabilities of Account Level Management functionality. Availability of, and distinctions of, are based on location:

- Enhanced Value
- Product Graduation Plus
- Product Graduation Select
- High Value
- Spend Shortfall
- Small Business Spend Processing
- Consumer Product Monitoring

Refer to the *Account Level Management Manual* for detailed information.

Chapter 5 Mastercard contactless and PAN Mapping Service

This chapter describes both how Global Clearing Management System performs transaction processing for Mastercard contactless and the PAN Mapping Service.

Overview of the Mastercard contactless and PAN Mapping Service

Mastercard supports account level processes for Mastercard contactless and PAN Mapping Service.

Mastercard contactless cards and non-card form factors that contain a proximity chip offer consumers a fast and convenient way to pay. Using proximity chip payment technology, consumers can pay for their purchases at the point of sale by tapping their Mastercard contactless card or non-card form factor on a Mastercard contactless terminal. The Mastercard contactless card or non-card form factor transmits the card information to the terminal. The Mastercard contactless terminal interacts with existing authorization mechanisms to initiate and complete the authorization. The increased speed and convenience make Mastercard contactless a very attractive way to pay, especially in high-traffic venues such as mass transit stations, movie theaters, and fast food restaurants.

Mastercard contactless Mapping Service participation guidelines

Participation in the Mastercard contactless and PAN Mapping Service, including definitions of Mastercard contactless account number and primary account number (PAN), requires a user to follow various guidelines.

Mastercard contactless account number is a unique number encoded on the proximity chip of a Mastercard contactless card or non-card form factor that the Mastercard PAN Mapping Service associates with the PAN.

PAN is the number that is embossed, encoded, or both, on a Mastercard card that identifies the issuer and the particular cardholder account.

Mastercard recommends that a unique account number be used for Mastercard contactless transactions. This unique account number is the optimal way to avoid the risk of cross-contamination. Use of a unique account number in the Mastercard contactless chip is accepted by the issuer only if the value in DE 22 (Point of Service Data Code), subfield 7 (Card Data Input Mode) indicates proximity (for example, from a Mastercard contactless contactless chip). This comparison allows blocking of the authorization for transactions presented through non-proximity channels such as magnetic stripe, mail order/telephone order (MO/TO), and the Internet.

Implementation of a separate Mastercard contactless account number requires the issuer to

- allocate an extra account number to provide Mastercard contactless functionality for an existing PAN, and
- establish a cross-reference between the PAN and the Mastercard contactless account number so that they are managed together, if required.

Mastercard recognizes that the use of a separate Mastercard contactless account number for some issuers may not be viable; therefore, Mastercard created the Mastercard PAN Mapping Service. This optional service helps issuers process Mastercard contactless transactions by translating Mastercard contactless account numbers into PANs that issuers can process with minimal impact. Mastercard contactless account numbers eligible for the service may belong to a Mastercard issuer.

Through the Mastercard PAN Mapping Service, Mastercard can provide Mastercard contactless issuance and processing services as described in this chapter.

PAN Mapping Service

Processing-only participation in the Mastercard contactless Mapping Service

Issuers may choose to offer the Mastercard contactless Mapping Service by creating the mapping file themselves. This choice is referred to as Processing-only participation.

In this scenario, the issuers provide Mastercard with a file mapping their cardholders' PAN to Mastercard contactless account numbers. The issuer or Mastercard then provides each cardholder with a Mastercard contactless card or non-card form factor containing a Mastercard contactless account number.

When the Mastercard contactless card or non-card form factor is used at a Mastercard contactless terminal, the transaction first comes to Mastercard, where the Mastercard contactless account number is replaced with the cardholder's PAN.

Processing and issuance of non-card form factor participation

Individual consumers may request a Mastercard contactless card or non-card form factor from a secure Web site. This process is referred to as Processing and Issuance of Non-card Form Factor participation.

Cardholders use a secure Web site to request or register a Mastercard contactless card or non-card form factor and enter the PAN they would like to associate with it. The Web site performs some security checks on the information entered and then approves the request. Mastercard then provides the cardholder with the Mastercard contactless card or non-card form factor requested. Upon receipt, the cardholder returns to the Web site and registers the Mastercard contactless card or non-card form factor to activate the Mastercard contactless account number. Mastercard collects the information provided through the Web site and creates the file mapping of the Mastercard contactless account number to the PAN.

Process flow of the Mastercard PAN Mapping Service

Mastercard maintains a Mastercard PAN Mapping Service database that maps Mastercard contactless account numbers to PANs.

The Mastercard contactless Mapping Service database is used by the Mastercard Network and Global Clearing Management System, so that the acquirer can always process transactions using the Mastercard contactless account number and the issuer can always process using the PAN.

1. When a consumer taps an eligible Mastercard contactless card or non-card form factor on a Mastercard contactless terminal, the card or non-card form factor transmits the Mastercard contactless account number to the terminal.
2. The Mastercard contactless terminal passes the Mastercard contactless account number and other authorization information to the acquirer.
3. The acquirer initiates an authorization message containing the Mastercard contactless account number and sends it to the Mastercard Network.
4. The Mastercard Network maps the Mastercard contactless account number to the cardholder's PAN before sending the transaction to the issuer.
5. The issuer responds with an authorization response message containing the PAN.
6. The Mastercard Network maps the cardholder's PAN back to the Mastercard contactless account number and sends the response message on to the acquirer.
7. The acquirer forwards the Mastercard contactless account number and other authorization response information to the Mastercard contactless terminal.
8. The Mastercard Network logs all authorizations for which it performed the Mastercard PAN Mapping Service and makes this information available to Global Clearing Management System.
9. The acquirer sends to Global Clearing Management System the corresponding clearing message, containing the Mastercard contactless account number.
10. Global Clearing Management System maps the Mastercard contactless account number to the PAN using either the authorization logs or the Mastercard PAN Mapping Service database before sending the clearing message to the issuer for posting.
11. Issuers can send to Global Clearing Management System subsequent retrieval and chargeback messages containing the cardholder's PAN, and Global Clearing Management System maps the cardholder's PAN to the Mastercard contactless account number before sending the message to the acquirer.

Refer to the *Authorization Manual* for detailed information about using this service for authorization processing.

Using the MPE to identify issuer account ranges participating in the contactless Mapping Service

The IPM MPE table IP0040T1: Issuer Account Range contains the Mapping Service Indicator field. This field identifies issuer account ranges that require the Mastercard PAN Mapping Service.

This field contains one of the following values for each issuer account range.

Value	Description
space	The issuer account range does not participate in the Mastercard PAN Mapping Service.
1	The issuer account range consists of PAN account numbers owned by an issuer, in which the issuer actively participates in the PAN Mapping Service. Every transaction containing this account range is to be mapped.

Value	Description
2	The issuer account range consists of PAN account numbers owned by an issuer, in which the issuer actively participates in the PAN Mapping Service. Not all transactions containing this account range are to be mapped because the issuer is phasing in the PAN Mapping Service.
3	The issuer account range consists of contactless account numbers provided by Mastercard, assigned to an issuer that participates in the Processing Only option of the PAN Mapping Service.
4	The issuer account range consists of PAN account numbers provided by Mastercard, assigned to an issuer that participates in the Processing and Issuance of Non-card Form Factor option of the contactless Mapping Service by permitting its cardholders to request a contactless card or non-card form factor through the website.
5	The issuer account range consists of contactless account numbers provided by Mastercard, assigned to a merchant that sponsors the contactless card or non-card form factor. The issuer passively participates in the PAN Mapping Service.
6	The issuer account range consists of contactless account numbers provided by Mastercard, and Mastercard sponsors the contactless card or non-card form factor. The issuer passively participates in the PAN Mapping Service.

Before distributing contactless non-card form factors to consumers, Mastercard adds to the IPM MPE file issuer account ranges that consist of contactless account numbers. The IPM MPE file contains valid Global Clearing Management System Product IDs, country codes, and other fields necessary for processing for these issuer account ranges. They are assigned to participate in all the default interregional, intraregional, and intracountry business services that are relevant to their assigned country codes.

NOTE: If an issuer account range contains a value of 1-6 in this new field in the IPM MPE, acquirers must send ALL transactions involving this issuer account range to Mastercard for authorization and clearing because only the Mastercard systems contain the data needed to map a contactless account number to a PAN. Transactions processed in an On-Us or intraprocessor mode will not have access to this mapping data.

Identifying PAN Mapping within IPM Messages

Contents of PDS 0001 (Mastercard Mapping Service Account Number)

Global Clearing Management System provides PDS 0001 in any First Presentment/1240, Retrieval Request/1644, Fee Collection (Retrieval Fee Billing)/1740, First Chargeback/1442, Second Presentment/1240, or Arbitration Chargeback/1442 message in which it maps between a contactless account number and a PAN.

This element indicates to the receiver of the message that Global Clearing Management System performed the PAN Mapping Service for the transaction, and therefore, the sender of the message has processed the transaction using a different value in DE 2. PDS 0001 is for information only. The receiver of the message is not required to recognize PDS 0001 and must not retain and return PDS 0001 in future life cycle messages, although customers may choose to store and use it within their internal systems to help resolve processing questions that may occur.

PDS 0001 contains the following two subfields.

Number	Name	Description
1	Account Number Type	This subfield indicates whether subfield 2 contains a contactless account number or a PAN. It also indicates the participation option and whether Global Clearing Management System performed the PAN Mapping Service using authorization logs or another source.
2	Account Number	In messages received by issuers, this subfield contains the contactless account number and DE 2 (Primary Account Number [PAN]) contains the PAN. In messages received by acquirers, this subfield contains the PAN and DE 2 contains the contactless account number.

PDS 0001, subfield 1 (Account Number Type)

Technical details about PDS 0001 (Mastercard Mapping Service Account Number), subfield 1 (Account Number Type).

Position 1 of this subfield contains

- a value of 1-6, or the value 8 or 9 if the number in subfield 2 is a virtual account number, and
- the value T if the account number in subfield 2 is a real card number.

Position 2 of this subfield contains the value space if Global Clearing Management System performed the mapping service according to the authorization logs. It contains a C if Global Clearing Management System performed the mapping service according to a source other than the authorization logs (This position will contain a C in all retrieval and chargeback messages).

Values for this subfield are listed in the following table.

Value	Description
TC	Subfield 2 contains a PAN. Mapping was based on a source other than the authorization logs.

Value	Description
1	Subfield 2 contains a contactless account number owned by an issuer, and the issuer is actively participating in the PAN Mapping Service. Every transaction containing this account range is to be mapped. Mapping was based on the authorization logs.
1C	Subfield 2 contains a contactless account number owned by an issuer, and the issuer is actively participating in the PAN Mapping Service. Every transaction containing this account range is to be mapped. Mapping was based on a source other than the authorization logs.
2	Subfield 2 contains a contactless account number owned by an issuer, and the issuer is actively participating in the PAN Mapping Service. Not all transactions in this issuer account range are mapped, because the issuer is phasing in the PAN Mapping Service. Mapping was based on the authorization logs.
2C	Subfield 2 contains a contactless account number owned by an issuer, and the issuer is actively participating in the PAN Mapping Service. Not all transactions in this issuer account range are mapped, because the issuer is phasing in the PAN Mapping Service. Mapping was based on a source other than the authorization logs.
3	Subfield 2 contains a contactless account number provided by Mastercard and is assigned to an issuer that is actively participating in the PAN Mapping Service. Mapping was based on the authorizations logs.
3C	Subfield 2 contains a contactless account number provided by Mastercard and is assigned to an issuer that is actively participating in the PAN Mapping Service. Mapping was based on a source other than the authorization logs.
4	Subfield 2 contains a contactless account number provided by Mastercard and is assigned to an issuer that is passively participating in the PAN Mapping Service by permitting its cardholders to request a contactless card or device via that Web site. Mapping was based on the authorization logs.
4C	Subfield 2 contains a contactless account number provided by Mastercard and is assigned to an issuer that is passively participating in the contactless Mapping Service by permitting its cardholders to request a contactless card or device via the Web site. Mapping was based on a source other than the authorization logs.
5	Subfield 2 contains a contactless account number provided by Mastercard and is assigned to a merchant that sponsors the contactless card or device. The issuer is passively participating in the PAN Mapping Service. Mapping was based on the authorization logs.
5C	Subfield 2 contains a contactless account number provided by Mastercard and is assigned to a merchant that sponsors the contactless card or device. The issuer is passively participating in the PAN Mapping Service. Mapping was based on a source other than the authorization logs.
6	Subfield 2 contains a contactless account number provided by Mastercard, and Mastercard sponsors the contactless card or device. The issuer is passively participating in the PAN Mapping Service. Mapping was based on the authorization logs.

Value	Description
6C	Subfield 2 contains a contactless account number provided by Mastercard, and Mastercard sponsors the PAN card or device The issuer is passively participating in the contactless Mapping Service. Mapping was based on a source other than the authorization logs.

PDS 0001, subfield 2 (Account Number)

PDS 0001 (Mastercard Mapping Service Account Number), subfield 2 (Account Number) technical details are listed here.

Subfield 2 contains a virtual or real account number or a PAN. When issuers receive PDS 0001, the subfield 2 always contains a virtual account number.

This subfield is 6-19 digits in length.

Contents of DE 22 (Point of Service Data Code), Subfield 7 (Card Data Input Mode)

Currently, issuers only receive values A or M when sent by the acquirer.

For the mapping of contactless M/Chip and Contact M/Chip transactions in the PAN Mapping Service, Mastercard will pass through the values (C and M) as provided by the acquirer.

The issuer must send the same values (either the C or M value), which are the original values sent by the acquirer, in any subsequent First Chargeback/1442 or Arbitration Chargeback/1442 messages.

Processing transactions through the Mastercard contactless Mapping Service

Transactions involving Mastercard contactless account numbers must be sent to the Mastercard Network for authorization and to Global Clearing Management System for clearing, because these are the only systems that have access to the Mastercard PAN Mapping Service database needed to map between Mastercard contactless account numbers and PANs.

1. The Mastercard Network maps a Mastercard contactless account number to a PAN before sending the authorization message to the issuer, and it maps the PAN back to the Mastercard contactless account number before sending the authorization response to the acquirer. In both the authorization and authorization response messages, the Mastercard Network provides data fields indicating that the Mastercard Authorization System performed the Mastercard PAN Mapping Service.
2. The acquirer receives an authorization response message containing the Mastercard contactless account number in DE 2 (Primary Account Number [PAN]), and the PAN in DE 48 (Additional Data: Private Use), subelement 33 (contactless Mapping Information). The acquirer is not required to recognize or store the PAN.
3. The acquirer populates DE 2 in the IPM First Presentment/1240 message with the Mastercard contactless account number captured by the Mastercard contactless terminal.
4. Global Clearing Management System performs the Mastercard PAN Mapping Service for the First Presentment/1240 and any subsequent life cycle transactions. All clearing messages received by the issuer contain the PAN in DE 2, the Mastercard contactless

account number in PDS 0001 (Mastercard Mapping Service Account Number), and a value of A or M in DE 22 (Point of Service Data Code), subfield 7 (Card Data Input Mode). All clearing messages received by the acquirer contain the Mastercard contactless account number in DE 2, the PAN in PDS 0001, and the acquirer's originally submitted value in DE 22, subfield 7.

DE 22 values identify contactless transactions to Global Clearing Management System

These are the requirements to perform the Mastercard contactless Mapping Service for various messages.

To perform the PAN Mapping Service for First Presentment/1240 messages, Global Clearing Management System requires that the First Presentment/1240 contain DE 22 (Point of Service Data Code), subfield 7 (Card Data Input Mode) with a value of A or M to indicate PAN entry through a contactless mode. The acquirer must provide one of these values in a First Presentment/1240 message when DE 2 contains a contactless account number.

To perform the PAN Mapping Service for First Chargeback/1442 and Arbitration Chargeback/1442 messages, Global Clearing Management System requires that the chargeback message contain DE 22, subfield 7 with a value of A or M, which are the original values sent by the acquirer, to indicate that Global Clearing Management System performed the PAN Mapping Service for the first presentment. The issuer receives this value in the First Presentment/1240 message and must provide it in any subsequent chargeback message to identify to Global Clearing Management System when to map a PAN back to a contactless account number.

Therefore, issuers that participate in PAN mapping must be able to receive and provide DE 22, subfield 7, value A (PAN auto-entry through contactless magnetic stripe) or M (PAN auto-entry through contactless M/Chip), which are the original values sent by the acquirer, in IPM clearing messages, even if they do not issue contactless cards.

Processing First Presentment/1240 messages through the Mastercard contactless Mapping Service

When processing a First Presentment/1240, Global Clearing Management System validates the contents of DE 2 (Primary Account Number [PAN]) against IPM MPE table IP0040T1.

If the Mapping Service Indicator field in table IP0040T1 indicates that DE 2 contains a service-eligible Mastercard contactless account number (indicated by a value of 1 to 6 in the Mapping Service Indicator field. Global Clearing Management System checks DE 22 (Point of Service Data Code), subfield 7 (Card Data: Input Mode) to ensure that it is present and that it contains a value of A or M to indicate PAN entry through a contactless mode. If DE 22, subfield 7 contains A or M, Global Clearing Management System continues processing. If DE 22, subfield 7 does not contain A or M, Global Clearing Management System rejects the transaction because this would be a fraudulent use of the Mastercard contactless account number.

1. Global Clearing Management System first attempts to match to the Mastercard PAN Mapping Service authorization log according to the combination of Mastercard contactless account number and Banknet Reference Number and Date. The Mastercard contactless account number is in DE 2. The Banknet Reference Number and Date are present in DE 63 (Transaction Life Cycle ID), subfield 2 (Trace ID) in the IPM First Presentment/1240.

2. If Global Clearing Management System does not find a match in the Mastercard PAN Mapping Service authorization log, or if DE 63 is not present in the First Presentment/1240, Global Clearing Management System attempts to match to the Mastercard PAN Mapping Service database using the Mastercard contactless account number in DE 2.
3. If Global Clearing Management System cannot match the First Presentment/1240 message to either the Mastercard PAN Mapping Service authorization log or the Mastercard PAN Mapping Service database, Global Clearing Management System rejects the transaction.

After successfully mapping the Mastercard contactless account number to a PAN, Global Clearing Management System uses the PAN in its processing. For example, it uses business services in which the issuer of the PAN participates, and it delivers the transaction to the endpoint associated with the issuer of the PAN, as opposed to the Mastercard contactless account number. If the transaction contains no errors, Global Clearing Management System modifies the data as follows before sending the First Presentment/1240 to the issuer by

- moving the Mastercard contactless account number from DE 2 to PDS 0001 (Mastercard Mapping Service Account Number), subfield 2 (Account Number)
- populating DE 2 with the PAN, and
- passing through the value received from the acquirer in DE 22, subfield 7.

Global Clearing Management System also logs the mapped transaction to a Mastercard PAN Mapping Service First Presentment history file. Any acknowledgment reconciliation messages or reporting created for the acquirer is based on the Mastercard contactless account number. Any notification reconciliation messages or reporting created for the issuer is based on the PAN.

If the transaction is rejected for any existing Global Clearing Management System error, Global Clearing Management System sends the rejected transaction back to the acquirer with the acquirer's originally submitted values in DE 2.

For chargebacks and retrieval requests, issuers will be allowed to use

- value A (for Contactless Magnetic Stripe transactions)
- value M (for Contactless M/Chip transactions)
- value R (for Digital Secure Remote Payment containing EMV data transactions)
- value S (for Digital Secure Remote Payment containing UCAF data transactions or Card on File, Electronic Commerce tokenization), or
- value T (for Card on File tokenization).

Processing Retrieval Request/1644, First Chargeback/1442, and Arbitration Chargeback/1442 messages through the Mastercard contactless Mapping Service

The issuer populates DE 2 (Primary Account Number [PAN]) with the PAN in all retrieval and chargeback messages.

In addition, for First Chargeback/1442 and Arbitration Chargeback/1442 messages, the issuer must also populate DE 22 (Point of Service Data Code), subfield 7 (Card Data: Input Mode) with A or M. This value is needed to indicate that Global Clearing Management System must map the PAN in DE 2 to a Mastercard contactless account number.

For First Chargeback/1442 and Arbitration Chargeback/1442 messages, Global Clearing Management System attempts to match the PAN in DE 2 to the Mastercard PAN Mapping Service First Presentment history file if DE 22, subfield 7 is present and contains a value of A or M.

Global Clearing Management System attempts to match to the history file using the following fields.

Matching criteria for retrieval requests and chargebacks

Global Clearing Management System attempts to match this combination of fields in the retrieval request or chargeback message...	To this combination of fields in the Mastercard PAN Mapping Service First Presentment history file
DE 2 (Primary Account Number)	PAN
DE 31 (Acquirer Reference Data)	DE 31
DE 30 (Amounts, Original) subfield 1 (Original Amount, Transaction)	DE 4 (Amount, Transaction)
PDS 0149 (Currency Codes, Amounts, Original), subfield 1 (Currency Code, Original Transaction Amount)	DE 49 (Currency Code, Transaction)
DE 12 (Date and Time, Local Transaction), subfield 1 (Date)	DE 12, subfield 1

If the chargeback message does not contain DE 22, subfield 7 with a value of A, C or M, Global Clearing Management System assumes that it did not perform the Mastercard PAN Mapping Service at the time of the First Presentment/1240. Global Clearing Management System continues processing the Retrieval Request/1644, First Chargeback/1442, or Arbitration Chargeback/1442 as it normally does and delivers the message to the acquirer with the PAN in DE 2 and the issuer's submitted values in DE 22. If, upon receipt, the acquirer does not recognize the transaction because the First Presentment/1240 had actually been submitted with a Mastercard contactless account number, the acquirer must follow existing dispute resolution rules and procedures that apply when the PAN is not recognized.

If Global Clearing Management System does successfully match the message to the Mastercard PAN Mapping Service First Presentment history file, and the message is a First Chargeback/1442, Global Clearing Management System validates that the chargeback amount is greater than the regional limit for reason code 4837.

If the mapped retrieval or chargeback transaction contains no errors, Global Clearing Management System modifies the data before sending the message to the acquirer by

- moving the PAN from DE 2 to PDS 0001, subfield 2

- populating DE 2 with the contactless account number
- populating DE 94 (Transaction Originator Institution ID Code) and DE 33 (Forwarding Institution ID Code) with customer ID information related to the contactless account number, and
- moving the value originally submitted by the acquirer in the First Presentment/1240 message to DE 22, subfield 7 if the issuer provided the other DE 22 subfields in the retrieval or chargeback.

When Global Clearing Management System logs the Retrieval Request/1644, First Chargeback/1442, or Arbitration Chargeback/1442 message to its existing retrieval or chargeback history files, it logs both the PAN and the Mastercard contactless account number. Any acknowledgment reconciliation messages or reports created for the issuer are based on the PAN. Any notification reconciliation messages or reports created for the acquirer are based on the Mastercard contactless account number.

Processing Second Presentment/1240 messages through the Mastercard contactless Mapping Service

Details about the processing of Second Presentment/1240 messages through the Mastercard contactless Mapping Service are described here.

The acquirer populates DE 2 (Primary Account Number [PAN]) with the Mastercard contactless account number in the Second Presentment/1240. Global Clearing Management System attempts to match all Second Presentment/1240 messages to the existing chargeback history file as usual. If Global Clearing Management System is unable to match the message to the chargeback history file, it rejects the Second Presentment/1240.

If Global Clearing Management System successfully matches the Second Presentment/1240 to the chargeback history file, and the chargeback history file indicates that DE 2 contains a Mastercard contactless account number, Global Clearing Management System maps it to the PAN and uses the PAN in its processing. For example, it uses business services in which the issuer of the (PAN) participates, and it delivers the transaction to the endpoint associated with the issuer of the PAN as opposed to the Mastercard contactless account number. If the transaction contains no errors, Global Clearing Management System modifies the data before sending the Second Presentment/1240 to the issuer by

- moving the Mastercard contactless account number from DE 2 to PDS 0001 (Mastercard Mapping Service Account Number), subfield 2 (Account Number), and
- populating DE 2 with the PAN.

Any acknowledgment reconciliation messages or reports created for the acquirer are based on the Mastercard contactless account number. Any notification reconciliation messages or reports created for the issuer are based on the PAN.

Processing Fee Collection (Retrieval Fee Billing)/1740 messages through the Mastercard contactless Mapping Service

A Fee Collection (Retrieval Fee Billing)/1740 message is used only when an issuer has requested a hardcopy retrieval document, the acquirer fulfills the request through Mastercom, and the acquirer seeks to collect the delivery fee from the issuer as reimbursement for costs associated with delivering the hardcopy document to the issuer.

The acquirer populates DE 2 (Primary Account Number [PAN]) with the service-eligible Mastercard contactless account number in the Fee Collection (Retrieval Fee Billing)/1740. Global Clearing Management System validates the contents of DE 2 against IPM MPE table IP0040T1, as usual. If the Mapping Service Indicator field in table IP0040T1 indicates that DE 2 contains a service-eligible Mastercard contactless account number, Global Clearing Management System maps the Mastercard contactless account number in DE 2 to the PAN using the Mastercard PAN Mapping Service First Presentment history file.

If Global Clearing Management System cannot match the Fee Collection (Retrieval Fee Billing)/ 1740 message to the Mastercard PAN Mapping Service First Presentment history file, Global Clearing Management System rejects the transaction.

After successfully mapping the Mastercard contactless account number to a PAN, Global Clearing Management System uses the PAN in its processing. For example, it uses business services in which the issuer of the PAN participates, and it delivers the transaction to the endpoint associated with the issuer of the PAN, as opposed to the Mastercard contactless account number. If the transaction contains no errors, Global Clearing Management System modifies the data before sending the message to the issuer by

- moving the Mastercard contactless account number from DE 2 to private data subelement (PDS) 0001 (Mastercard Mapping Service Account Number), subfield 2 (Account Number), and
- populating DE 2 with the PAN.

Any acknowledgment reconciliation messages or reports created for the acquirer are based on the Mastercard contactless account number. Any notification reconciliation messages or reports created for the issuer are based on the PAN.

Summary of the contents of elements related to the Mastercard contactless Mapping Service

This table summarizes the contents of the elements that are affected when Global Clearing Management System performs the Mastercard contactless Mapping Service.

Clearing Message	Scenario	DE 2	PDS 0001, Subfield 2	DE 22, subfield 7	DE 94 and DE 33
First Presentment/ 1240	From acquirer to Mastercard	contactless account number	Not present	A or M	As provided by acquirer

Clearing Message	Scenario	DE 2	PDS 0001, Subfield 2	DE 22, subfield 7	DE 94 and DE 33
Retrieval Request/1644	From issuer to Mastercard	PAN	Not present	As provided by issuer	As provided by issuer
	From Mastercard to acquirer	contactless account number	PAN	A or M, if issuer provided other DE 22 values in the retrieval	Customer IDs associated with the contactless account number
Fee Collection (Retrieval Fee Billing)/1740	From acquirer to Mastercard	contactless account number	Not present	DE 22 not in message layout	As provided by acquirer
	From Mastercard to issuer	PAN	contactless account number	DE 22 not in message layout	As provided by acquirer
First Chargeback/ 1442	From Mastercard to acquirer	contactless account number	PAN	A, C, or M, if issuer provided other DE 22 values in the chargeback	Customer IDs associated with the contactless account number
Second Presentment/ 1240	From acquirer to Mastercard	contactless account number	Not present	A or M	As provided by acquirer
	From Mastercard to issuer	PAN	contactless account number	A or M	As provided by acquirer
Arbitration Chargeback/ 1442	From issuer to Mastercard	PAN	Not present	A or M	As provided by issuer
	From Mastercard to acquirer	contactless account number	PAN	A, C, or M, if issuer provided other DE 22 values in the chargeback	Customer IDs associated with the contactless account number

Interchange compliance processing

Mastercard performs the Mastercard contactless Mapping Service for First Presentment/1240 messages, which are analyzed during the interchange compliance process.

As described in the *Authorization Manual*, transactions for which the Mastercard Authorization System performs the Mastercard PAN Mapping Service do not contain magnetic stripe data when they are sent to the issuer and logged by the Mastercard Network. Therefore, U.S.-acquired First Presentment/1240 messages for which Mastercard performs the Mastercard PAN Mapping Service may not pass the magnetic stripe quality test within the interchange compliance process. This test requires validation of the magnetic stripe presence at the time of the authorization for specific incentive interchange programs, unless the transaction is exempt.

Mastercard modified the interchange compliance magnetic stripe quality test to exempt transactions in which PDS 0001 is present in the IPM First Presentment/1240 message. The presence of PDS 0001 indicates that Mastercard performed the Mastercard PAN Mapping Service; and therefore, magnetic stripe data is not expected to be present in the authorization message.

Mastercom processing

All customers have been assigned a Mastercom endpoint to help with the routing of retrieval and chargeback documentation through the Mastercom system.

The Mastercom system is PC-based and electronically transmits a copy of the requested TID through the Mastercom server. The result is a clear copy that the issuer and the cardholder can read, and proof for the acquirer that it fulfilled the request. Once again, Mastercard strongly recommends that customers use the Mastercom system to ensure timely delivery of items and to retain subsequent chargeback and presentment rights.

Chapter 6 Mastercard Digital Enablement Service

This chapter describes the Mastercard Digital Enablement Service (MDES) as it pertains to the clearing process.

Overview of Mastercard Digitial Enablement Service

MDES is a secure, globally-scalable digitization platform for the management, generation, and provisioning of digital payment credentials onto mobile devices, PCs, servers, and other form factors. MDES provides simpler, more secure digital payment experiences.

MDES was developed to facilitate the financial industry transition from consumer account credentials stored on payment cards to digital credentials provisioned into mobile devices. These digitized credentials enable consumers to perform payments via existing contactless point-of-sale (POS) and other POS systems and via new remote payment methods, such as in-app payments.

MDES technology has been enhanced to allow the digitization of cardholder credentials stored on servers, facilitating more secure browser-based electronic commerce (e-commerce) and in-app transactions.

Mastercard Digital Enablement Service process flow

Mastercard maintains a PAN mapping database that maps tokens to PANs.This database is used by both the Authorization and Clearing Platforms, so that the acquirer can always process using the token and the issuer can always process using the PAN.

The following explains the dual message system process flow when a transaction is generated using a token.

1. The cardholder initiates a transaction with a token by
   - tapping a device to a contactless reader at a point-of-sale (POS) terminal
   - initiating a Digital Secure Remote Payment (DSRP) with a mobile wallet or web-based payment application that uses MDES
   - using a device provisioned with a token that is able to leverage the magnetic stripe reader at a POS terminal (for dynamic magnetic stripe data transactions).
   - initiating an e-commerce transaction with a payment application on a web site hosted by a Digital Activity Customer (DAC), such as a wallet provider or token requestor, that uses MDES static tokens that do not have dynamic payment credentials; or
   - initiating a credential-on-file transaction.

   For contactless or dynamic magnetic stripe data, the token and associated chip or dynamic magnetic stripe data are transmitted to the terminal, and subsequently, the merchant and the acquirer. For DSRP, the token and associated chip data are transmitted to the merchant or merchant payment gateway, which forwards the data to the acquirer. For static tokens, the DAC, when the DAC is not a merchant, provides the cardholder's token to the merchant or the merchant payment gateway. The merchant or merchant payment gateway forwards the data to the acquirer.

2. The acquirer initiates an authorization request containing the token and chip or dynamic magnetic stripe data and sends it to the Mastercard Network. The acquirer will provide DE 22 (POS Entry Mode), subfield 1 (POS Terminal PAN Entry Mode) with value
   - 07 (PAN auto-entry via contactless M/Chip)
   - 09 (PAN/Token entry via electronic commerce containing DSRP cryptogram in DE 55 [Integrated Circuit Card System-Related Data])
   - 10 (Credential on File)
   - 81 (PAN/Token entry via electronic commerce with optional AAV or DSRP cryptogram in UCAF)
   - 90 (PAN auto-entry via magnetic stripe): The full track data has been read from the data encoded on the card and transmitted within the authorization request in DE 35 (Track 2 Data) or DE 45 (Track 1 Data) without alteration or truncation; or
   - 91 (PAN auto-entry via contactless magnetic stripe): The full track data has been transmitted by the acquirer within the authorization request in DE 35 or DE 45 and forwarded to the issuer without alteration or truncation.

   For electronic commerce (e-commerce) transactions using static tokens, the acquirer will initiate an authorization request containing the token and DE 22, subfield 1 with value

   - 81 or
   - 82 (PAN auto-entry via server [issuer, acquirer, or third party vendor system]).

   NOTE: For static tokens, cryptography data will not be present in transactions.
3. For secure element and Mastercard Cloud-Based Payment tokens, the Authorization Platform performs either chip or dynamic CVC 3 data pre-validation, and maps the token to the primary account number. For static tokens, the Authorization Platform maps the token to the PAN.
4. If the cryptography validation and PAN mapping are successful, the Authorization Platform then sends the issuer the authorization request.
5. The issuer responds with an authorization response message, and the Authorization Platform maps the PAN back to the token and provides the response to the acquirer.
6. The acquirer forwards the token and other authorization response information to the contactless terminal or merchant payment gateway.
7. The Authorization Platform logs all authorizations for which it performed MDES services and makes this information available to the Clearing Platform.
8. The acquirer sends the first presentment message to the Clearing Platform containing the token in DE 2 (Primary Account Number). The acquirer provides DE 22, subfield 7 (Card Data: Input Mode) with value
   - A (PAN auto-entry via contactless magnetic stripe)
   - B (Magnetic stripe reader inout; track data captured and passed unaltered)
   - M (PAN auto-entry via contactless M/Chip)
   - R (PAN entry via electronic commerce, including remote chip), or
   - S (Electronic commerce).

   For static tokens, the acquirer provides DE 22, subfield 7 with value

- 7 (Credential on file)
- S (Electronic commerce), or
- T (PAN auto-entry via server [issuer, acquirer, or third party vendor system]).

9. The Clearing Platform maps the token to the PAN using either the authorization logs or the PAN mapping database and sends the first presentment to the issuer containing
   - DE 2 with the cardholder's PAN
   - DE 14 (Data, Expiration)
     - If provided on a presentment from the acquirer, DE 14 will not be present in the presentment message to the issuer when MDES has been applied.
   - DE 22, subfield 7 with the value provided by the acquirer.
     - The Clearing Platform no longer converts values, but passes through these values.
   - PDS 0001 (Mastercard Mapping Service Account Number), subfield 1 (Account Number Type) with one of the following values:
     - C (C followed by a space), indicating that subfield 2 (Account Number) contains the MDES secure element device token used at the point of sale. The account range is owned by an issuer. Mapping was based on the authorization log.
     - CC (value CC), indicating that subfield 2 contains the MDES secure element device token used at the point of sale. The account range is owned by an issuer. Mapping was based on a source other than the authorization log.
     - H (value H followed by a space), indicating that subfield 2 contains the MDES Cloud-Based Payments token device account number used at the point of sale. The account range is owned by an issuer. Mapping was based on the authorization log.
     - HC (value HC), indicating that subfield 2 contains the MDES Cloud-Based Payments token device account number used at the point of sale. The account range is owned by an issuer. Mapping was based on a source other than the authorization log.

     PDS 0001, subfield 2 (Account Number) contains the token. For static tokens, PDS 0001, subfield 1 will be the following:

     - O (O followed by a space), indicating that subfield 2 contains the MDES Card on File token submitted by the acquirer. The account range is owned by Mastercard. Mapping was based on the authorization log.
     - OC, indicating that subfield 2 conatins the MDES Card on File token submitted by the acquirer. The account range is owned by Mastercard. Mapping was based on a source other than the authorization log.

     PDS 0001, subfield 2 contains the token.
   - PDS 0058 (Token Assurance Level) (if applicable)
   - PDS 0059 (Token Requestor ID), and
   - PDS 0207 (Wallet Identifier) (if applicable).

   On a first presentment, if there is no match on the authorization logs or PAN mapping database for the token, the Clearing Platform will reject the first presentment with existing error number 2358 (DE2 PRIMARY ACCOUNT NUMBER [PAN] INVALID. THE PAN MAPPING SERVICE CANNOT MAP DE2 TO ANOTHER ACCOUNT NUMBER).

10. Issuers send subsequent retrieval and chargeback messages containing the cardholder's PAN in DE 2. For all Retrieval Request/1644 messages, the Clearing Platform attempts to match the PAN in DE 2 to the MDES First Presentment history file. For First Chargeback/1442 and Arbitration Chargeback/1442 messages, the Clearing Platform attempts to match the PAN in DE 2 to the MDES First Presentment history file. If a match is found, the Clearing Platform will map the cardholder's PAN to the token before sending the message to the acquirer. Acquirers will receive retrieval requests or chargeback messages that have had MDES performed with
    - DE 2 with the token
    - DE 22, subfield 7 with the original value provided by the acquirer in the first presentment
    - PDS 0001, subfield 1, value TC (Subfield 2 contains a PAN. Mapping was based on a source other than the authorization logs.); PDS 0001, subfield 2 containing the cardholder's PAN
    - PDS 0058 (Token Assurance Level) (if applicable)
    - PDS 0059 (Token Requestor ID), and
    - PDS 0207 (Wallet Identifier) (if applicable).

    If DE 2 in the Retrieval Request/1644 message or First Chargeback/1442 message cannot be matched to a First Presentment/1240 message in the MDES First Presentment History File, the Clearing Platform assumes that it did not perform MDES at the time of the First Presentment/1240 message. The Clearing Platform continues processing the Retrieval Request/1644 message, First Chargeback/1442 message, or Arbitration Chargeback/1442 message and delivers the message to the acquirer with the PAN in DE 2. If, upon receipt, the acquirer does not recognize the transaction because the First Presentment/1240 message had actually been submitted with an MDES token, the acquirer must follow existing dispute resolution rules and procedures that apply when the PAN is not recognized.
11. Within second presentments, the acquirer provides the token in DE 2. The Clearing Platform attempts to match all Second Presentment/1240 messages to the existing chargeback history file. If the Clearing Platform is unable to match the message to the chargeback history file, it rejects the Second Presentment/1240 message. If the Clearing Platform successfully matches the Second Presentment/1240 message to the chargeback history file, and the chargeback history file indicates that DE 2 contains an MDES token, the Clearing Platform maps it to the PAN and uses the PAN in its processing. The Clearing Platform sends the Second Presentment/1240 message to the issuer containing
    - DE 2 with the cardholder's PAN
    - DE 22, subfield 7 with the value provided by the acquirer, and
    - PDS 0001, subfield 1 with value
        - C (followed by a space)
        - CC
        - H (H followed by a space)
        - HC
        - O (O followed by a space)
        - OC
        - PDS 0058 (if applicable)

- PDS 0059, or
- PDS 0207 (if applicable).

Suspended or deactivated tokens

When a token has been suspended or deactivated from use, Mastercard will permit these transactions to pass through to the issuer for clearing. If the cardholder disputes the transaction, the issuer can chargeback under message reason code 4808 (Requested/Required Authorization Not Obtained). This processing is consistent with that applied for non-token transactions. Mastercard will not block the transaction in clearing but rather allow the dispute resolution process to occur. For transactions including a token, Mastercard will not enforce error number 2358 (DE2 PRIMARY ACCOUNT NUMBER [PAN] INVALID. THE PAN MAPING SERVICE CANNOT MAP DE2 TO ANOTHER ACCOUNT NUMBER) and will allow the deactivated or suspended tokens to pass through to the issuer for clearing.

Using the MPE to identify issuer account ranges participating in the Mastercard Digital Enablement Service

The IPM MPE table IP0040T1: Issuer Account Range contains the Mapping Service Indicator field. This field identifies issuer account ranges that require MDES with value C (Mastercard Digital Enablement Service Account Range).

Mastercard adds the applicable MDES token account ranges to the IPM MPE before generating tokens for use in smart devices. The IPM MPE file contains valid Global Clearing Management System Product IDs, country codes, and other fields necessary for processing for these account ranges. They are assigned to participate in all the default interregional, intraregional, and intracountry business services that are relevant to their assigned country codes.

NOTE: If an issuer account range contains a value of C in the Mapping Service Indicator field in the IPM MPE, acquirers must send ALL transactions involving this issuer account range to Mastercard for authorization and clearing because only the Mastercard systems contain the data needed to map an MDES token to a PAN. Transactions processed in an On-Us or intraprocessor mode will not have access to this mapping data.

Identifying Mastercard Digital Enablement Service mapping within IPM messages

This section identifies MDES mapping within IPM messages.

Contents of PDS 0001 (Mastercard Mapping Service Account Number)

The Clearing Platform provides PDS 0001 (Mastercard Mapping Service Account Number) in any First Presentment/1240, Retrieval Request/1644, Retrieval Request Acknowledgement/1644, Fee Collection (Retrieval Fee Billing, Handling Fees, and Other than Retrieval Fee Billing/

Handling Fees)/1740, First Chargeback/1442, Second Presentment/1240, or Arbitration Chargeback/1442 message in which it maps between an MDES token and a PAN.

This element indicates to the receiver of the message that the Clearing Platform performed the MDES PAN mapping service for the transaction, and therefore, the sender of the message has processed the transaction using a different value in DE 2 (Primary Account Number [PAN]). PDS 0001 is for information only. The receiver of the message must not retain and return PDS 0001 in future life cycle messages, although customers may choose to store and use it within their internal systems to help resolve processing questions that may occur.

PDS 0001 contains the following two subfields.

Number	Name	Description
1	Account Number Type	This subfield indicates whether subfield 2 contains an MDES token or a PAN. It also indicates whether the Clearing Platform performed MDES PAN mapping using authorization logs or another source.
2	Account Number	In messages received by issuers, this subfield contains the MDES token and DE 2 contains the PAN. In messages received by acquirers, this subfield contains the PAN and DE 2 contains the MDES token.

PDS 0001, subfield 1 (Account Number Type)

Technical details about PDS 0001 (Mastercard Mapping Service Account Number), subfield 1 (Account Number Type).

Position 1 of this subfield contains

- value C if the number in subfield 2 is an MDES secure element token
- value H if the number is in subfield 2 is an MDES Cloud-Based Payments token
- value O if the number in subfield 2 is a static token, or
- value T if the account number in subfield 2 is a PAN.

Position 2 of this subfield contains a space if the Clearing Platform performed the mapping service according to the authorization logs. It contains a C if the Clearing Platform performed the mapping service according to a source other than the authorization logs (This position will contain a C in all retrieval and chargeback messages).

Values for this subfield are listed in the following table.

Value	Description
C Space	Subfield 2 contains the MDES token used at the point of sale. The account range is owned by an issuer. Mapping was based on the authorization log.

Value	Description
CC	Subfield 2 contains the MDES token used at the point of sale. The account range is owned by an issuer. Mapping was based on a source other than the authorization log.
H Space	Subfield 2 contains the MDES token used at the point of sale. The account range is owned by an issuer. Mapping was based on the authorization log.
TC	Subfield 2 contains a PAN. Mapping was based on a source other than the authorization logs.
O	Subfield 2 contains the MDES Card on File token submitted by the acquirer. The account range is owned by Mastercard. Mapping was based on the authorization log..
OC	Subfield 2 contains the MDES Card on File token submitted by the acquirer. The account range is owned by Mastercard. Mapping was based on a source other than the authorization log.

PDS 0001, subfield 2 (Account Number)
PDS 0001 (Mastercard Mapping Service Account Number), subfield 2 (Account Number) technical details are listed here.

Subfield 2 contains a token or a PAN. When issuers receive PDS 0001, subfield 2 always contains a token. When acquirers receive PDS 0001, subfield 2 always contains a PAN.

This subfield is 6-19 digits in length.

Processing First Presentment/1240 Messages through the Mastercard Digital Enablement Service Mapping Service

When processing a First Presentment/1240, the Clearing Platform validates the contents of DE 2 (Primary Account Number [PAN]) against IPM MPE table IP0040T1, as usual.

If the Mapping Service Indicator field in table IP0040T1 indicates that DE 2 contains a service-eligible MDES token (indicated by a value of C in the Mapping Service Indicator field):

1. The Clearing Platform first attempts to match to the MDES authorization log according to the combination of MDES token and Banknet Reference Number and Date. The MDES token is in DE 2. The Banknet Reference Number and Date are present in DE 63 (Transaction Life Cycle ID), subfield 2 (Trace ID) in the IPM First Presentment/1240.
2. If the Clearing Platform does not find a match in the MDES authorization log, or if DE 63 is not present in the First Presentment/1240, the Clearing Platform attempts to match to the PAN Mapping database using the MDES token in DE 2.
3. If the Clearing Platform cannot match the First Presentment/1240 message to either the MDES authorization log or the PAN mapping database, the Clearing Platform rejects the transaction.

4. The Clearing Platform will validate and when incorrect, reject the First Presentment/1240 message containing PDS 0052 (Electronic Commerce Security Level Indicator), subfield 1 (Security Protocol), subfield 2 (Cardholder Authentication), and subfield 3 (UCAF Collection Indicator) values if they do not match the correct security level indicator (SLI) value in DE 48 (), subelement 42 (), subfield 1 () from the Authorization Request Response/110 message.

After successfully mapping the MDES token to the PAN, the Clearing Platform uses the PAN in its processing. For example, it uses business services in which the issuer of the PAN participates, and it delivers the transaction to the endpoint associated with the issuer of the PAN, as opposed to the MDES token. If the transaction contains no errors, the Clearing Platform modifies the data before sending the First Presentment/1240 to the issuer by

- moving the MDES token from DE 2 to PDS 0001 (Mastercard Mapping Service Account Number), subfield 2 (Account Number)
- populating DE 2 with the PAN, and
- passing through the value received from the acquirer in DE 22 (POS Entry Mode), subfield 7 (Card Data: Input Mode).

The Clearing Platform also logs the mapped transaction to a MDES First Presentment history file. Any acknowledgment reconciliation messages or reporting created for the acquirer is based on the MDES token. Any notification reconciliation messages or reporting created for the issuer is based on the PAN.

If the transaction is rejected for any existing Clearing Platform error, the Clearing Platform sends the rejected transaction back to the acquirer with the acquirer's originally submitted values in DE 2 and DE 22.

Processing Retrieval Request/1644, First Chargeback/1442, and Arbitration Chargeback/1442 messages through the Mastercard Digital Enablement Service

For all Retrieval Request/1644 messages, the Clearing Platform attempts to match the PAN in DE 2 (Primary Account Number [PAN]) to the MDES First Presentment history file.

For First Chargeback/1442 and Arbitration Chargeback/1442 messages, the Clearing Platform attempts to match the PAN in DE 2 to the MDES First Presentment history file. If a match is found, the Clearing Platform will map the cardholder’s PAN to the token before sending the message to the acquirer.

The Clearing Platform attempts to match to the history file using the following fields.

Matching criteria for retrieval requests and chargebacks

The Clearing Platform attempts to match this combination of fields in the retrieval request or chargeback message...	To this combination of fields in the MDES First Presentment history file
DE 2 (Primary Account Number)	PAN
DE 31 (Acquirer Reference Data)	DE 31
DE 30 (Amounts, Original) subfield 1 (Original Amount, Transaction)	DE 4 (Amount, Transaction)
PDS 0149 (Currency Codes, Amounts, Original), subfield 1 (Currency Code, Original Transaction Amount)	DE 49 (Currency Code, Transaction)
DE 12 (Date and Time, Local Transaction), subfield 1 (Date)	DE 12, subfield 1

If the mapped retrieval or chargeback transaction contains no errors, the Clearing Platform modifies the data before sending the message to the acquirer by

- moving the PAN from DE 2 to PDS 0001 (Mastercard Mapping Service Account Number), subfield 2 (Account Number),
- populating DE 2 with the MDES token, and
- populating DE 94 (Transaction Originator Institution ID Code) and DE 33 (Forwarding Institution ID Code) with customer ID information related to the MDES token.

When the Clearing Platform logs the Retrieval Request/1644, First Chargeback/1442, or Arbitration Chargeback/1442 message to its existing retrieval or chargeback history files, it logs both the primary account number and the MDES token. Any acknowledgment reconciliation messages or reports created for the issuer are based on the PAN. Any notification reconciliation messages or reports created for the acquirer are based on the MDES token.

If DE 2 in the Retrieval Request/1644 message or First Chargeback/1442 message cannot be matched to a First Presentment/1240 message in the MDES First Presentment history file, the Clearing Platform assumes that it did not perform MDES at the time of the Fist Presentment/1240 message. The Clearing Platform continues processing the Retrieval Request/1644 message, First Chargeback/1442 message, or Arbitration Chargeback/1442 message and delivers the message to the acquirer with the PAN in DE 2. If, upon receipt, the acquirer does not recognize the transaction because the First Presentment/1240 message had actually been submitted with an MDES token, the acquirer must follow existing dispute resolution rules and procedures that apply when the PAN is not recognized.

Processing Second Presentment/1240 Messages through the Mastercard Digital Enablement Service

Details about the processing of Second Presentment/1240 messages through MDES are described here.

The acquirer populates DE 2 (Primary Account Number [PAN]) with the MDES token in the Second Presentment/1240. The Clearing Platform attempts to match all Second Presentment/1240 messages to the existing Chargeback history file. If the Clearing Platform is unable to match the message to the Chargeback history file, it rejects the Second Presentment/1240.

If the Clearing Platform successfully matches the Second Presentment/1240 to the Chargeback history file, and the Chargeback history file indicates that DE 2 contains an MDES token, the Clearing Platform maps it to the PAN and uses the PAN in its processing. For example, it uses business services in which the issuer of the (PAN) participates, and it delivers the transaction to the endpoint associated with the issuer of the PAN as opposed to the MDES token. If the transaction contains no errors, the Clearing Platform modifies the data before sending the Second Presentment/1240 to the issuer by

- moving the MDES token from DE 2 to PDS 0001 (Mastercard Mapping Service Account Number), subfield 2 (Account Number), and
- populating DE 2 with the PAN

Any acknowledgment reconciliation messages or reports created for the acquirer are based on the MDES token. Any notification reconciliation messages or reports created for the issuer are based on the PAN.

Processing Fee Collection/1740 Messages through the Mastercard Digital Enablement Service

Fee Collection/1740 messages initiated with MDES tokens: The acquirer populates DE 2 (Primary Account Number [PAN]) with the service-eligible MDES token in the Fee Collection/1740.

The Clearing Platform validates the contents of DE 2 against IPM MPE table IP0040T1, as usual. If the Mapping Service Indicator field in table IP0040T1 indicates that DE 2 contains a service-eligible MDES token, the Clearing Platform maps the MDES token in DE 2 to the PAN using the MDES First Presentment history file.

If the Clearing Platform cannot match the Fee Collection/1740 message to the MDES First Presentment history file, the Clearing Platform rejects the transaction.

After successfully mapping the MDES token to a PAN, the Clearing Platform uses the PAN in its processing. For example, it uses business services in which the issuer of the PAN participates, and it delivers the transaction to the endpoint associated with the issuer of the PAN, as opposed to the MDES token. If the transaction contains no errors, the Clearing Platform modifies the data before sending the message to the issuer by

- moving the MDES token from DE 2 to PDS 0001 (Mastercard Mapping Service Account Number), subfield 2 (Account Number), and
- populating DE 2 with the PAN.

Any acknowledgment reconciliation messages or reports created for the acquirer are based on the MDES token. Any notification reconciliation messages or reports created for the issuer are based on the PAN.

Fee Collection 1740/messages initiated with the PAN: The issuer populates DE 2 with the PAN in the Fee Collection/1740 message. The Clearing Platform attempts to match the PAN in DE 2 to the MDES First Presentment history file. If a match found, the Clearing Platform will map the cardholder's PAN to the MDES token before sending the message to the acquirer. If the Clearing Platform cannot match the Fee Collection/1740 message to the First Presentment history file, the Clearing Platform will continue processing the Fee Collection/1740 message as a non-PAN mapped transaction. DE 2 in the Fee Collection/1740 message to the acquirer will contain the PAN.

Summary of the contents of elements related to the Mastercard Digital Enablement Service

This table summarizes the contents of the elements that are affected when the Clearing Platform performs MDES processing.

Clearing Message	Scenario	DE 2	PDS 0001, Subfield 2	DE 22, subfield 7	DE 94 and DE 33
First Presentment/ 1240	From acquirer to Mastercard	Token	Not present	A, B, M, R, S, or T	As provided by acquirer
	From Mastercard to issuer	PAN	Token	A, B, M, R, S, or T	As provided by acquirer
Retrieval Request/1644	From issuer to Mastercard	PAN	Not present	As provided by issuer	As provided by issuer
	From Mastercard to acquirer	Token	PAN	A, B, M, R, S, or T if issuer provided other DE 22 values in the retrieval	Customer IDs associated with the token

Clearing Message	Scenario	DE 2	PDS 0001, Subfield 2	DE 22, subfield 7	DE 94 and DE 33
Fee Collection (Retrieval Fee Billing)/1740	From acquirer to Mastercard	Token	Not present	DE 22 not in message layout	As provided by acquirer
	From Mastercard to issuer	PAN	Token	DE 22 not in message layout	As provided by acquirer
First Chargeback/ 1442	From issuer to Mastercard	PAN	Not present	A, B, M, R, S, or T	As provided by issuer
	From Mastercard to acquirer	Token	PAN	A, B, M, R, S, or T	Customer IDs associated with the token
Second Presentment/ 1240	From acquirer to Mastercard	Token	Not present	A, B, M, R, S, or T	As provided by acquirer
	From Mastercard to issuer	PAN	Token	A, B, M, R, S, or T	As provided by acquirer
Arbitration Chargeback/ 1442	From issuer to Mastercard	PAN	Not present	A, B, M, R, S, or T	As provided by issuer
	From Mastercard to acquirer	Token	PAN	A, B, M, R, S, or T	Customer IDs associated with the token

Interchange compliance processing

MDES is performed for First Presentment/1240 messages, which are analyzed during the interchange compliance process.

As described in the *Authorization Manual*, transactions for which the Authorization Platform performs the MDES do not contain magnetic stripe data when they are sent to the issuer and logged by the Authorization Platform. Therefore, U.S.-acquired First Presentment/1240 messages for which Mastercard performs the MDES may not pass the magnetic stripe quality test within the interchange compliance process. This test requires validation of the magnetic stripe presence at the time of the authorization for specific incentive interchange programs, unless the transaction is exempt.

Mastercard modified the interchange compliance magnetic stripe quality test to exempt transactions in which PDS 0001 (Mastercard Mapping Service Account Number) is present in the IPM First Presentment/1240 message. The presence of PDS 0001 indicates that Mastercard performed a PAN mapping; and therefore, magnetic stripe data is not expected to be present in the authorization message.

Mastercom processing

All customers have been assigned a Mastercom endpoint to help with the routing of retrieval and chargeback documentation through the Mastercom system.

The Mastercom system is PC-based and electronically transmits a copy of the requested TID through the Mastercom server. The result is a clear copy that the issuer and the cardholder can read, and proof for the acquirer that it fulfilled the request. Once again, Mastercard strongly recommends that customers use the Mastercom system to ensure timely delivery of items and to retain subsequent chargeback and presentment rights.

Chapter 7 Mastercard Transaction Enablement Service

Overview of Mastercard Transaction Enablement Service (TES)

TES is an optional service that ensures the correct submission of certain Data Elements (DEs) and or Private Data Subelements (PDSs) by correcting DEs and or PDSs on behalf of acquirers.

Acquirers participating in TES may obtain various benefits, including reduced settlement delays and operational impacts associated with the management of clearing rejects. Also, acquirers that would like to receive reconciliation report data associated with TES can request it from Mastercard.

Mastercard will make the reconciliation data available to acquirers through the raw data file upon request via Customer Support. The file contains the data elements and or subelements originally submitted by acquirers and were subsequently adjusted by GCMS as a result of participating in the service. This file will only be sent to acquirers upon First Presentment (1240-200) messages clearing succesfully.

Service Requirements for Acquirers

TES is an opt-out service in Brazil. All acquirers configuring new identifiers (also referred to as an ICA number) will be automatically enrolled unless they choose to opt out at the time of onboarding.

However, the raw data file, IP714010-AA (Acquirer Accepted Errors Detail Report), containing reconciliation data from TES will be available to acquirers only by request through Customer Support.

Acquirer Accepted Errors Detail Report (IP714010-AA)

Mastercard created a new logical raw data file (IP714010-AA) that is sent to acquirers within the existing TN70 (prod) / TN72 (test) bulk file types. Each raw report date file will be differentiated by looking at the header and trailer record of each report.

NOTE: TN70 (prod) / TN72 (test) bulk file type attributions are not changing, only a new logical raw data file is being added to these existing bulk file types.

Header Record

Field ID	Length	Comments
1	ans-17	Value HIP714010-AA
2	n-11	ICA
3	n-07	Endpoint

Field ID	Length	Comments
4	ans-683	Filler of spaces

Detail Record

Field name	DE	PDS	Subfield	Length	Starting position
D (Detail Record)	Static value			1	1
Distribution ICA				11	2
Message Type Indicator	MTI			4	13
Primary Account Number (PAN)	2			19	17
Processing Code (includes all subfields)	3		1, 2, 3	6	36
Amount, Transaction	4			12	42
Reconciliation Amount	5			12	54
Reconciliation Conversation Rate	9			8	66
Date and Time, Local Transaction	12			12	74
Point of Service Data Code	22		1-12	12	86
Function Code	24			3	98
Message Reason Code	25			4	101
Card Acceptor Business Code	26			4	105
Original Amount, Transaction	30		1	12	109

Field name	DE	PDS	Subfield	Length	Starting position
Acquirer Reference Data	31			23	121
Approval Code	38			6	144
Service Code	40			3	150
Card Acceptor Terminal ID	41			8	153
Card Acceptor ID Code	42			15	161
Card Acceptor Name and location	43		1, 2, 3	83	176
Card Acceptor post Code	43		4	10	259
Card Acceptor State, Province, or Region Code	43		5	3	269
Card Acceptor Country Code	43		6	3	272
Global Clearing Management System Product Identifier		0002		3	275
Licensed Product Identifier		0003		3	278
Terminal Type		0023		3	281
Message Reversal Indicator		0025	1	1	284
Electronic Commerce Security Level Indicator		0052	1, 2, 3	3	285
File ID		0105	1, 2, 3, 4	25	288
Fee Type Code		0146	1	2	313
Fee Processing Code		0146	2	2	315

Field name	DE	PDS	Subfield	Length	Starting position
Fee Settlement Indicator		0146	3	2	317
Currency Code		0146	4	3	319
Amounts, Transaction Fee		0146	5	12	322
Currency Code Fee Reconciliation		0146	6	3	334
Amount Fee Reconciliation		0146	7	12	337
Extended: Fee Type Code		0147	1	2	349
Extended: Fee Processing Code		0147	2	2	351
Extended: Fee Settlement Indicator		0147	3	2	353
Extended: Currency Code, Fee		0147	4	3	355
Extended: Interchange Amount, Fee		0147	5	18	358
Extended: Currency Code, Recon.		0147	6	3	376
Extended: Interchange Amount, Fee, Recon.		0147	7	18	379
Currency Exponents		0148	1, 2	4	397
Currency Code, Original Transaction Amount		0149	1	3	401
Card Program Identifier		0158	1	3	404

Field name	DE	PDS	Subfield	Length	Starting position
Business Service Arrangement Type Code		0158	2	1	407
Business Service ID Code		0158	3	6	408
Interchange Rate Designator		0158	4	2	414
Central Site Business Date		0158	5	6	416
Business Cycle		0158	6	2	422
Card Acceptor Classification Override Indicator		0158	7	1	424
Product Class Override Indicator		0158	8	3	425
Corporate Incentive Rates Apply Indicator		0158	9	1	428
Special Conditions Indicator		0158	10	1	429
Mastercard Assigned ID Override Indicator		0158	11	1	430
ALM Account Category Code		0158	12	1	431
Rate Indicator		0158	13	1	432
MasterPass Incentive Indicator		0158	14	1	433
Settlement Service Transfer Agent ID		0159	1	11	434

Field name	DE	PDS	Subfield	Length	Starting position
Settlement Service Transfer Agent Account		0159	2	28	445
Settlement Service Level Code		0159	3	1	473
Settlement Service ID Code		0159	4	10	474
Settlement Foreign Exchange Rate Class Code		0159	5	1	484
Reconciliation Date		0159	6	6	485
Reconciliation Cycle		0159	7	2	491
Settlement Date		0159	8	6	493
Settlement Cycle		0159	9	2	499
Transaction Currency Code	49			3	501
Reconciliation Currency Code	50			3	504
Additional Amount	54			20	507
Trace ID	63		2	15	527
Transaction Destination Institution ID Code	93			11	542
Transaction Originator Institution ID Code	94			11	553
Data Record	72			100	564

Field name	DE	PDS	Subfield	Length	Starting position
Digital Wallet Interchange Override Indicator		0158	15	1	664
Currency Conversion Date		0015	1	6	665
Currency Conversion Indicator		0015	2	1	671
Original MCC	26			4	672
Original IRD		0158	4	2	676
Accepted Error Numbers		0005	3	40	678

Trailer Record

Field ID	Length	Comments
1	ans-17	Value of TIP714010-AA
2	n-11	ICA
3	n-07	Endpoint
4	n-12	Total of detail records only
5	ans-671	Filler of spaces

Application Notes

- The interchange rate designator (IRD) is not applicable for Brazil, therefore the Original IRD field will contain spaces.
- The Original MCC field applies to Brazil only.

Processing Message Exception/1644-691 messages through the Mastercard Transaction Enablement Service.

Contents of PDS 0445 (Original Transaction Information)
PDS 0445 (Original Transaction Information) contains one or more data elements (DE) and private data subelements (PDS) echoing the transaction information that was submitted by acquirers and adjusted by TES.

For more information about the attributes, please refer to the *IPM Clearing Formats Manual*

MCC Adjustments in Brazil

For acquirers participating in TES, Mastercard will adjust the submitted data element (DE) 26 (Acceptor Business Code [MCC]) within Brazilian intracountry First Presentment/1240-200 messages. If the MCC submitted by the acquirer is not valid for the Merchant Tax ID provided in Private Data Subelement (PDS) 0220 (Brazil Merchant Tax ID), Mastercard will replace it with a valid MCC to ensure that the transaction is not rejected with GCMS error 3007.

When Mastercard rejects the original First Presentment for a reason other than error code 3007, Mastercard will return the message with an updated DE 26 (Acceptor Business Code [MCC]) value in First Presentment/1240-200 message and the originally submitted DE 26 value in PDS 0445 (Original Transaction Information) within the Message Exception/1644-691 message that accompanies the reject. For example, a customer submits MCC code (DE 26) 1234 to Mastercard in the First Presentment/1240-200 message and it is not valid for the Brazil Merchant Tax ID. When Mastercard applies TES, the MCC value is updated with 5678. Later in the process, the message is rejected with a different error code and must be returned to the acquirer.

Mastercard will include adjusted MCC 5678 in DE 26 within the First Presentment/1240-200 message, and the original, acquirer-provided MCC 1234 in PDS 0445 within the Message Exception/1644-691 message in the T112 and T113 files. For more information about PDS 0445, refer to *AN 7424 Introducing Private Data Subelement (PDS) 0445 (Original Transaction Information)*.

NOTE: As a result of the MCC adjustment, GCMS may derive an interchange fee amount that differs from the amount originally expected by the acquirer. This can occur because TES may modify the MCC but will not change the IRD. As a result, GCMS interchange overrides that are based on the MCC will be affected by the adjusted MCC.

The Associação Brasileira das Empresas de Cartões de Crédito e Serviços (ABECS), of which Mastercard is an associated member, is enabling public access to their CNPJ/TAX ID and MCC database. ABECS will make updates to their CNPJ/TAX ID and MCCs database on the last business day of every month. In turn, Mastercard will provide the following one month for acquirers and processors to make their database updates as needed before changes are effective in Mastercard systems.

Accordingly, the effective date for changes or rejections due to incorrect MCCs will be the first of the month, based on data updates from the prior month. For example:

Table 20: Example

Step	Description	Date
Step 1	ABECS updates the database on the last business day of the month, which may or may not be the last calendar day of the month.	Friday, September 29, 2023
Step 2	ABECS provides the following month for acquirers and Mastercard to make updates to their databases.	Sunday, October 1, 2023 through Tuesday, October 31, 2023
Step 3	Clearing messages will be validated and modified by Mastercard using the latest updates made during the prior month by Mastercard.	Wednesday, November 1, 2023
Step 4	Process repeats monthly.	

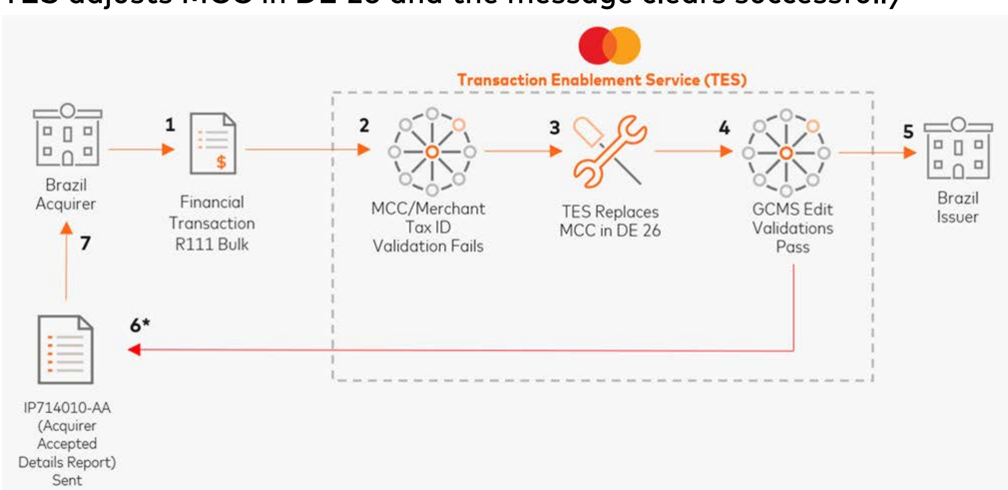
NOTE:

Mastercard is not responsible for the timing, availability and content of the data made available on the ABECS website.

https://www.abecs.org.br/consulta-mcc-individual

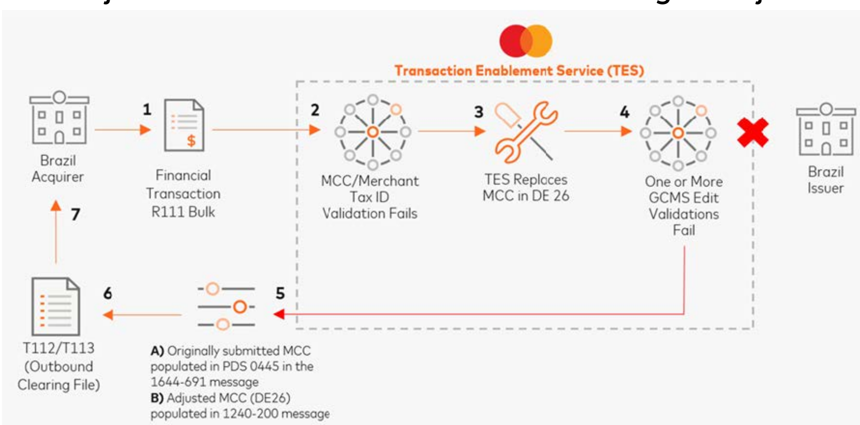
ABECS has sole discretion to alter the data as needed.

TES adjusts MCC in DE 26 and the message clears successfully



1. The acquirer submits a First Presentment/1240-200 message through the R111 bulk file for processing.
2. GCMS performs the Brazil Merchant Tax ID/MCC validation and it fails.
3. TES adjusts the MCC to a value corresponding to the Brazil Merchant Tax ID present in the First Presentment message.
4. GCMS performs the remaining edit validations and all edit validations pass.
5. GCMS passes the First Presentment/1240-200 to the Brazil issuer with the updated MCC.
6. If the Brazil acquirer opts to receive the new report (IP714010-AA), then it will be sent to them.

TES adjusts the MCC in DE 26 and the message is rejected



1. The acquirer submits a First Presentment/1240-200 message through the R111 bulk file for processing.
2. GCMS performs the Brazil Merchant Tax ID/MCC validation and it fails.
3. TES adjusts the MCC to a value corresponding to the Brazil Merchant Tax ID that was present in the first presentment message.
4. GCMS performs the remaining edit validations. One other validation fails, causing the message to be rejected.
5. GCMS rejects the First Presentment/1240-200 message.
6. TES populates the original MCC in PDS 0445 within the Message Exception/1644-691 message and the adjusted MCC in DE 26 within the First Presentment/1240-200 message.
7. GCMS sends this information either in T112 or T113 depending on the acquirer's participation in T113.

Chapter 8 Mastercard Transaction Calculator

Overview of Mastercard Transaction Calculator

Mastercard Transaction Calculator derives the applicable interchange program based on acquirer-submitted clearing data.

High-level Process Overview

The following is a high-level overview of how the interchange program is derived by Mastercard Transaction Calculator and applied to acquirer-submitted clearing data.

- The acquirer sends the Private Data Subelement (PDS) 0158 (Business Activity), subfield 4 (Interchange Rate Designator) in the First Presentment/1240-200 clearing message with a value present or equal to space (blank).
- Once Mastercard Transaction Calculator is enabled, Mastercard applies the applicable interchange program on behalf of customers based on customer-provided transaction data, within the First Presentment/1240-200 messages.
  - If the acquirer populates PDS 0158, subfield 4 with an interchange program value, Mastercard updates the value with the interchange program qualified under Mastercard Transaction Calculator.

Service Requirements for Acquirers

Mastercard Transaction Calculator is currently enabled in select markets.

Additional Information

For additional information, review the *Mastercard Transaction Calculator Product Guide* on the Technical Resource Center or contact Customer Support.

PDS 0158, subfield 4

Refer to the guide for more information.

Mastercard Transaction Calculator Product Guide

Chapter 9 Mastercard In Control platform

This chapter describes the optional Mastercard In Control processing services as they pertain to clearing processing.

Overview of the Mastercard In Control platform

The Mastercard In Control platform is a powerful and flexible system that provides a number of advanced authorization, transaction routing, and alert notification capabilities designed to assist issuers in creating new and enhanced payment products for their consumer and commercial cardholders.

Mastercard In Control fully integrates patented payment technologies with unparalleled global processing capabilities. With the integration of this capability into Mastercard core processing, issuers can benefit from cost efficiencies and speed-to-market for new commercial product development.

With the Mastercard In Control platform, issuers can leverage off-the-shelf solutions and create customized offerings to meet the needs of their customers.

Among the advanced features issuers can leverage to support their commercial card portfolios are

- enhanced authorization controls that direct how, when, and where cards may be used
- personalized real-time communication about transaction activities through a robust alert functionality
- improved levels of security, control, data capture, and traceability on every purchase through a limited use number feature that allows authorization, spending limits, and usability controls to be set on a transaction-by-transaction basis
- the ability for cardholders to establish spend-control rules for their pre-existing payment cards to be applied during the authorization process, and
- enhanced purchase controls for Mastercard commercial cards. In addition to other capabilities, this service platform allows for the generation of a unique Mastercard In Control virtual card number for every transaction, and

Participation in Mastercard In Control is optional.

Mastercard In Control Real Card Spend Control service

The Mastercard In Control Real Card Spend Control service provides cardholders with the ability to establish spend control rules for their pre-existing payment cards.

The spend control rules for cardholders' payment cards

- are enforced during the authorization process
- can be defined for both card-present and card-not-present transaction environments, and
- may result in an alert notification being generated to the cardholder or the transaction being declined on their behalf (depending on the cardholder's pre-defined response rules).

Global Clearing Management System processing for the Mastercard In Control platform

The Mastercard In Control service processes normally in Global Clearing Management System, with certain exceptions.

- Transactions with the Mastercard In Control virtual card number (VCN) in DE 2 (Primary Account Number) are rejected back to the acquirer if mapping to the cardholder's real card number (RCN) cannot be performed. An example would be an unauthorized, fraudulent clearing transaction using a Mastercard In Control account number.
- PDS 0001 (Mastercard Mapping Service Account Number) is included in the transaction messages sent to the issuer when PAN Mapping has been performed. PDS 0001 contains the Mastercard In Control VCN. PDS 0001 is not included in transaction messages sent to the acquirer when PAN mapping has been performed.
- Chargebacks are not rejected back to the issuer if there is no mapping for the transaction. Mastercard attempts to map every chargeback, and if this is not successful, processing will proceed as usual.
- A Spend Control RCN Switch has been added to the IPM Mastercard Parameter Extract (MPE) Table IP0040T1: Issuer Account Range. This switch is set to Y when the account range participates in Mastercard In Control Real Card Spend Control services. Rules for the Real Card Spend Control service are enforced during the authorization process. Refer to the *Authorization Manual* for more information.

For In Control First Presentment/1240 messages:

- If PDS 0502 (Custom Identifier) is present in the First Presentment/1240 message, then the values will be overlaid with the value OTHER1 in subfield 1 (Custom Identifier Type) and the Virtual Account Number in subfield 2 (Custom Identifier Detail).
- If PDS 0502 is not present in the First Presentment/1240 message, then PDS 0502 is added to the message and sent to the issuer. The values are OTHER1 in subfield 1 (Custom Identifier Type) and the Virtual Account Number in subfield 2 (Custom Identifier Detail).

Mastercard In Control mapping process

The mapping processes for both acquirer-initiated and issuer-initiated transactions are described in the Mapping Process for Acquirer-initiated Transactions and Mapping Process for Issuer-initiated Transactions tables.

Mastercard supports a virtual card number (VCN) as an optional service for Mastercard In Control participants. This added layer of security protects issuers and cardholders against the risk of fraudulent acquisition and use of an Mastercard In Control account number.

Mastercard maps the VCN to the PAN for processing for acquirer-initiated transactions.

Mapping process for acquirer-initiated transactions

Stage	Description
1.	The VCN is sent to the Global Clearing Management System.
2.	The Global Clearing Management System maps the VCN to the cardholder PAN. The PAN is used during the clearing process. 1. The first attempt to match to the mapping service authorization log according to the combination of VCN, Banknet Reference Number, and Banknet Date. – VCN is in DE 2 (Primary Account Number [PAN]) – The Banknet Reference Number and Date are present in DE 63 (Transaction Life Cycle ID), subfield 2 (Trace ID) in First Presentment/1240 messages. 2. If Global Clearing Management System does not find a match in the mapping service authorization log, or if DE 63 is not present in the First Presentment/1240 message, Global Clearing Management System attempts to match to the mapping service database using the VCN and registration flag. 3. If Global Clearing Management System cannot match the First Presentment/1240 message, Global Clearing Management System rejects the transaction.
3.	The issuer receives the cardholder's PAN in DE 2 (Primary Account Number [PAN]) and the VCN in PDS 0001 (Mastercard Mapping Service Account Number).

Mapping process for issuer-initiated transactions

Stage	Description
1.	The RCN is sent in DE 2. This DE 2 account number is used during the clearing process.
2.	Clearing recognizes the transaction as a mapped transaction by checking the virtual presentment history table and maps the cardholder's PAN to the VCN.
3.	The acquirer receives the VCN in DE 2. **NOTE: The acquirer only receives the masked RCN in PDS 0001 (Mastercard Mapping Service Account Number) for retrieval and chargeback requests.**

NOTE: Transactions that contain the VCN in DE 2 and which cannot be mapped are rejected back to the sender.

When acquirers receive PDS 0001, the subfield 2 (Account Number) always contains a real, masked card number. The real card number (RCN) will be masked according to PCI guidelines by

- displaying the first six digits

- filling the remaining digits of the real card number with zeros, and
- displaying the final four digits (for example: 1234560000001234 for a 16-digit PAN or 1234560000000001234 for a 19-digit PAN).

Chapter 10 Private Label Program

This section describes the Mastercard Private Label Program that offers customers a superior private label transaction processing solution.

Overview of the Private Label Program

The Mastercard Private Label Program leverages the existing Mastercard payment system infrastructure to provide efficient authorization, clearing, and settlement services for private label card transactions, in addition to value-added products and services that issuers may use in conjunction with their private label programs.

Mastercard has extensive network reach, acceptance, and standardized formats that provide issuers with a robust network processing solution for private label card transactions, thereby addressing the infrastructure limitations of a closed-loop processing model.

In addition to providing a superior private label transaction processing solution, the Mastercard Private Label Program provides issuers with the ability to use many of the world-class, value-added services offered by Mastercard. Issuers may optionally benefit from the array of Mastercard risk management solutions, enhanced transaction processing services, and portfolio performance management expertise to facilitate financial improvement of their portfolios.

These services are provided exclusively for transactions originating from the approved private label card portfolios of Mastercard issuers.

Private Label addendum

Private Label Program participants have conveyed the need to obtain the same data they receive in their closed-loop processing model when they process transactions through the Private Label Program. The receipt of this custom data is integral to customers meeting their business needs as participants in a private label program.

The two addenda messages that support the Private Label Program are

- Private Label Common Data, which supports data fields common to the transaction, and
- Private Label Line Item Detail, which supports data fields specific to the individual items being purchased and included in the transaction.

The Private Label Common Data and Private Label Line Item Detail addenda messages will be optional for Private Label First Presentment/1240 messages. The Private Label Common Data addendum message will be conditionally required if the Private Label Line Item Detail addendum message is provided. In addition, the Private Label Common Data addendum message must precede the Private Label Line Item Detail addendum message. If the Private Label Common Data or Private Label Line Item Detail addendum messages are submitted and rejected, the corresponding First Presentment/1240 message will not be rejected.

Layouts for the Private Label Common Data and Private Label Line Item Detail addendum messages can be found in the *IPM Clearing Formats* manual.

Private Label card activation plus initial load

Mastercard has expanded the existing card activation at the point-of-sale terminal (POS) functionality to allow card activation messages to be submitted with an initial load. Customers can offer this functionality, making private label cards more attractive to their merchants, by enabling activation of prepaid cards with or without a predefined amount.

Acquirers that want to offer the private label card activation plus initial load functionality must be able to support and value C09 (Card Activation) for PDS 0043 (Transaction Type Identifier) in First Presentment/1240 messages.

Private label card issuers that want to offer the private label card activation plus initial load functionality must be able to support and receive value C09 for PDS 0043 in First Presentment/1240 messages.

Participation in the Private Label Program

Issuers and acquirers are not required to participate in the Mastercard Private Label Program. Those issuers and acquirers that choose to participate in the program are required to support all provisions of the program.

Chapter 11 Clearing Chip Processing service

This chapter describes the optional Clearing Chip Processing service for issuers that choose the Chip to Magnetic Stripe Conversion service.

Clearing Chip Processing service overview

Mastercard provides a Clearing Chip Processing service to assist issuers that want to migrate to Mastercard chip technology while minimizing the impact and cost of upgrading their host systems and operations. This On-behalf Service allows issuers to take advantage of the latest chip technology.

Chip to Magnetic Stripe Conversion Service is offered in both the Global Clearing Management System and Authorization System. For additional information about Authorization System Chip to Magnetic Stripe Conversion refer to the *Authorization Manual*. Clearing and Authorization System On-behalf Services are optional for issuers.

NOTE: Clearing and Authorization System On-behalf Services must be requested individually.

Chip to Magnetic Stripe Conversion

The Chip to Magnetic Stripe Conversion service removes chip-related data in DE 55 (Integrated Circuit Card [ICC] System-related Data) if it is present when DE 14 (Date Expiration) is greater than or equal to the floor expiration date.

The issuer receives the First Presentment/1240–200 message containing PDS 0071 (Chip to Magnetic Stripe Conversion Indicator), subfield 1 (On-behalf Service) with a value of 01, indicating chip to Magnetic Stripe Conversion, and subfield 2 (On-behalf Service) with a value of C, S, or M (based on value in DE 22 [Point of Service Data Code)]) indicating that the conversion of the chip transaction to a magnetic stripe transaction has been completed.

The following lists the actions for the chip to Magnetic Stripe Conversion service.

If Chip to Magnetic Stripe Conversion is Y for clearing issuer account range...	Then the Global Clearing Management System will...
DE 55	Remove DE 55
PDS 0071 (Chip to Magnetic Stripe Conversion Indicator)	**Will contain**
Subfield 1 (On-behalf Service)	01 = Chip to Magnetic Stripe Conversion

Subfield 2 (On-behalf Service)	C = Conversion of the Chip transaction to magnetic transaction has been completed when DE 22 is 05 S = Conversion of the Chip transaction to magnetic transaction has been completed when DE 22 is 07 M = Conversion of the Chip transaction to magnetic transaction has been completed when DE 22 is 80
Subfield 3 (On-behalf Service)	Blank = No value present

NOTE: The Chip to Magnetic Stripe Conversion service affects issuers only. Acquirers are not affected by this service.

The Chip to Magnetic Stripe Conversion service is optional for issuers.

Issuers must contact their regional Mastercard representative to request this service and identify the account range for which the Chip to Magnetic Stripe Conversion service will support.

Chapter 12 Extended Decimal Precision service

Conditional Extended Decimal Precision service provides participating customers with interchange calculated to six decimal positions for each transaction.

Extended Decimal Precision service overview

The Extended Decimal Precision (EDP) service provides participating customers with interchange calculated to six decimal positions for each transaction. Qualified transactions are totaled using a defined set of criteria, and then rounded. In the European Union countries, if the transactions are identified as regulated, the totaled amount is truncated.

Participation in the EDP service is established at the business service arrangement level.

Transactions qualified for the EDP service have these attributes.

- EDP adjustment amounts are distributed in Fee Collection Messages with a message reason code of 7827 (Extended decimal precision adjustment amount).
- EDP adjustment amounts are applied to settlement on the next available settlement date.
- Customers receive PDS 0147 (Extended Precision Amounts).
- Customers can select to receive Reconciliation Messages, which provide EDP totals by
  - Debits, Extended Precision Amount in Reconciliation Currency (PDS 0397)
  - Credits, Extended Precision Amount in Reconciliation Currency (PDS 0398), and
  - Amount, Net Extended Precision in Reconciliation Currency (PDS 0399).

NOTE: Regardless of selected reconciliation options, customers receive separate reconciliation messages 1644-685 (Financial Position Detail) and 1644-688 (Settlement Position Detail) from GCMS for EDP and non-EDP transactions.

Extended Decimal Precision adjustment amount determination

Once daily, after the last clearing cycle, Mastercard calculates the EDP adjustment amount as follows.

- For each Transaction Originator (Sender)/Destination (Receiver) Institution ID pair and reconciliation currency, the amounts in PDS 0146 (Amounts, Transaction Fee), subfield 7 (Amount, Fee, Reconciliation) are summed.
- For each Transaction Originator (Sender)/Destination (Receiver) Institution ID pair and reconciliation currency, the amounts in PDS 0147 (Extended Precision Amounts), subfield 7 (Interchange Amount, Fee, Reconciliation) are summed.
- The totaled amounts of PDS 0146, subfield 7 are subtracted from the totaled amounts of PDS 0147, subfield 7 to calculate the EDP adjustment amount in sender and receiver reconciliation currency.

EDP adjustment amount calculation example

All transactions in this example have these characteristics.

- First Presentment/1240 messages
- Transaction currency is EUR
- Sender Reconciliation Currency is EUR

- Receiver Reconciliation Currency is EUR
- Assume 1 EUR = 1.25 USD (mid currency conversion rate)

Transaction	Sender	Receiver	Sender Fee Amount in Recon Currency (PDS 0146, SF 7)	Sender Interchange Amount, Fee, in Recon Currency (PDS 0147, SF 7)	Receiver Fee Amount in Recon Currency (PDS 0146, SF 7)	Receiver Interchange Amount, Fee, in Recon Currency (PDS 0147, SF 7)
1	Acquirer 1	Issuer 1	-5.00	-5.003987	5.00	5.003987
2	Acquirer 1	Issuer 1	-10.00	-10.001234	10.00	10.001234
3	Acquirer 1	Issuer 1	-20.00	-20.005841	20.00	20.005841
4	Acquirer 2	Issuer 2	-6.00	-6.001223	6.00	6.001223
5	Acquirer 2	Issuer 2	-7.00	-7.003589	7.00	7.003589
6	Acquirer 3	Issuer 1	-8.00	-8.001899	8.00	8.001899
7	Acquirer 2	Issuer 1	-11.00	-11.002651	11.00	11.002651
8	Acquirer 2	Issuer 1	-30.00	-30.003877	30.00	30.003877
9	Acquirer 2	Issuer 1	-40.00	-40.002445	40.00	40.002445
10	Acquirer 4	Issuer 3	-50.00	-50.008511	50.00	50.008511
11	Acquirer 4	Issuer 3	-20.00	-20.007688	20.00	20.007688

EDP Calculation: PDS 0146, subfield 7 and PDS 0147, subfield 7 summed by Sender/Receiver pairs:

Sender	Receiver	Sender Net Fee Amount in Recon Currency (PDS 0146, SF 7)	Sender Net Interchange Amount, Fee, in Recon Currency (PDS 0147, SF 7)	Sender Net Adjustment in Recon Currency (PDS 0147, SF 7 minus PDS 0146, SF 7)	Receiver Net Fee Amount in Recon Currency (PDS 0146, SF 7)	Receiver Net Interchange Amount, Fee, in Recon Currency (PDS 0147, SF 7)	Receiver Net Adjustment in Recon Currency (PDS 0147, SF 7 minus PDS 0146, SF 7)
Acquirer 1	Issuer 1	-35.00	-35.011062	-0.011062	35.00	35.011062	0.011062
Acquirer 2	Issuer 2	-13.00	-13.004812	-0.004812	13.00	13.004812	0.004812
Acquirer 3	Issuer 1	-8.00	-8.001899	-0.001899	8.00	8.001899	0.001899
Acquirer 2	Issuer 1	-81.00	-81.008973	-0.008973	81.00	81.008973	0.008973

Sender	Receiver	Sender Net Fee Amount in Recon Currency (PDS 0146, SF 7)	Sender Net Interchange Amount, Fee, in Recon Currency (PDS 0147, SF 7)	Sender Net Adjustment in Recon Currency (PDS 0147, SF 7 minus PDS 0146, SF 7)	Receiver Net Fee Amount in Recon Currency (PDS 0146, SF 7)	Receiver Net Interchange Amount, Fee, in Recon Currency (PDS 0147, SF 7)	Receiver Net Adjustment in Recon Currency (PDS 0147, SF 7 minus PDS 0146, SF 7)
Acquirer 4	Issuer 3	-70.00	-70.016199	-0.016199	70.00	70.016199	0.016199

Net EDP adjustment of the acquirer

Net EDP adjustment amount of Acquirer 1 in USD = 0.011062 * 1.25 = 0.013827 = 0.01 USD (DR)

Net EDP adjustment amount of Acquirer 2 in USD = 0.013785 * 1.25 = 0.017231 = 0.01 USD (DR)

Net EDP adjustment amount of Acquirer 3 in USD = 0.001899 * 1.25 = 0.002373 = 0.00 USD (DR)

Net EDP adjustment amount of Acquirer 4 in USD = 0.016199 * 1.25 = 0.020248 = 0.02 USD (DR)

Net EDP adjustment of the issuer

Net EDP adjustment amount of Issuer 1 in USD = 0.021934 * 1.25 = 0.027417 = 0.02 USD (CR)

Net EDP adjustment amount of Issuer 2 in USD = 0.004812 * 1.25 = 0.006015 = 0.00 USD (CR)

Net EDP adjustment amount of Issuer 3 in USD = 0.016199 * 1.25 = 0.020248 = 0.02 USD (CR)

The EDP adjustment amounts are reported per Institution ID in Fee Collection Messages, Message Type Indicator (MTI) = 1740, and Function Code (DE 24) = 783, with Message Reason Code (DE 25) = 7827.

The Fee Collection Messages are processed through GCMS on the following GCMS Central Site Business Date.

Using the example above, GCMS builds Fee Collection Messages as follows.

DE 93 (Transaction Destination Institution ID Code)	DE 3 (Processing Code), SF 1 (Cardholder Transaction Type)	DE 4 (Amount, Transaction)	DE 49 (Currency Code, Transaction)
Acquirer 1	19	000000000001	840
Acquirer 2	19	000000000001	840
Acquirer 4	19	000000000002	840
Issuer 1	29	000000000002	840

DE 93 (Transaction Destination Institution ID Code)	DE 3 (Processing Code), SF 1 (Cardholder Transaction Type)	DE 4 (Amount, Transaction)	DE 49 (Currency Code, Transaction)
Issuer 3	29	000000000002	840

Balancing reconciliation messages to transactions

- Accumulate financial transactions by selected reconciliation options and currency.
- Sum PDS 0146, subfield 7 debits and match to the debits' fee amount received in PDS 0392 (Debits, Fee Amounts in Reconciliation Currency).
- Sum PDS 0146, subfield 7 credits and match to the credits' fee amount received in PDS 0393 (Credits, Fee Amounts in Reconciliation Currency).
- Net PDS 0146, subfield 7 debits and credits and match to the net fee amount received in PDS 0395 (Amount, Net Fee in Reconciliation Currency).
- Sum PDS 0147, subfield 7 debits and match to the debits' fee amount received in PDS 0397 (Debits, Extended Precision Amount in Reconciliation Currency).
- Sum PDS 0147, subfield 7 credits and match to the credits' fee amount received in PDS 0398 (Credits, Extended Precision Amount in Reconciliation Currency).
- Net PDS 0147, subfield 7 debits and credits and match to the net fee amount received in PDS 0399 (Amount, Net Extended Precision in Reconciliation Currency).

Balance reconciliation messages to Clearing Acknowledgment and Notification Cycle Reports

The net sum of PDS 0394 (Amount, Net Transaction) and PDS 0395 (Amount, Net Fee) will match to the IP727010-AA Clearing Cycle Acknowledgment and IP727020-AA Clearing Cycle Notification Reports.

Chapter 13 Business service

This section defines business service and describes the types of business service options Mastercard offers.

Definition of business service

A business service is an arrangement with Mastercard between two or more customers that defines, in a manner consistent with Mastercard Standards (or the standards of the other applicable brand), the card program identifier, business rules, and interchange processing requirements for transactions occurring between the participating customers.

An arrangement can be either mandated by Mastercard Standards or voluntarily entered into by the participating customers. Business service processing in Global Clearing Management Service (Global Clearing Management System) supports current mandated arrangements as well as current and future voluntary arrangements.

Business service functionality provides for flexibility and customization of transaction processing. The particular processing options and fee structures are based on

- mutual participation in the arrangement, where both the issuer and acquirer agree to participate in the business service arrangement, and
- the business rules that are defined by Mastercard for the particular business service arrangement and interchange program.

Mastercard defines a set of qualification criteria and editing rules for each card program identifier within a business service arrangement. Card program identifiers include any of the Mastercard family of brands, including, but not limited to, Mastercard, Cirrus, and Maestro. Mastercard may agree to add additional brands (that are not Mastercard brands) as business needs dictate. The qualification criteria and editing rules are parameter-based and maintained in tables to provide for timely updates and to permit implementation of changes outside the normal Mastercard release schedule.

NOTE: Most major changes, such as changes that affect all customers globally or all customers within a specific region, will continue to be implemented in a standard release schedule.

In Global Clearing Management System, business services allow customers to customize interchange rules, options, and fee structures for transactions that involve a given card program. The customization also may be based on

- the acquirer's business country code: the country code associated with the acquiring BIN involved in the transaction. Mastercard establishes the country codes and includes them on the Integrated Product Messages (IPM) Mastercard Parameter Extract (MPE) file, or
- the issuer's business country code: the country code associated with the issuing account range involved in the transaction (Mastercard establishes the country codes and includes them on the IPM MPE), or
- the merchant's country code: the country code associated with the merchant and found in Data Element (DE) 43 (Acceptor Name/ Location), subfield 6 (Acceptor Country Code), or
- The interchange program rules that the particular business service agreement and interchange program define. These business rules include
  - specific product identification codes
  - timeliness requirements (such as submission time frames for first presentments)

- authorization code requirements
- acceptor business code (MCC) requirements
- processing code requirements, and
- other business service and business service ID criteria.

The purpose of business service functionality is to

- support customers by reducing the development and testing effort required to establish new business arrangements and interchange programs and rates, thereby allowing Mastercard to react to changing market situations quickly, and
- support customers in their business relationships with other customers, including mandated business relationships, such as intraregional and interregional interchange programs. For example, Global Clearing Management System can assess fees for business service transactions in local currencies. This can simplify the calculation and reconciliation of expected fees for customers.

NOTE: For more information about processing cycles, time frames, and thresholds for clearing transactions, refer to the Processing Cycles and Regulations chapter of the *Global Clearing Management System Reference Manual*.

Types of business service arrangements

Business service arrangements may exist at many levels of customer business relationships. Customers may participate in multiple business service arrangements under a single customer ID.

There are five types of business service arrangements, each with a defined hierarchy or priority to determine how the system processes transactions.

All customers participate in at least one intraregional business service arrangement and at least five interregional business service arrangements. These arrangements consist of the interchange programs and rates defined by Mastercard (such as International Standard interchange and International Electronic interchange).

The following are the types of arrangements that Mastercard defines:

Business Service Arrangement	Description	System Selection Hierarchy	Geography	Arrangement Type Code (PDS 0158s2)
Business-to-Business	An arrangement between all the customers (acquirers and issuers) that participate in a given business initiative. The interchange is defined by Mastercard. This business service type has no geographic or business region boundaries.	First priority	None	8
Customer-to-Customer	An arrangement involving a pair of customers, or group of customers (This business service type has no geographic or business region boundaries). **NOTE: If both Business-to-Business and Customer-to-Customer Business Service arrangements are valid, then the Customer-to-Customer Business Service Arrangement will have priority over the Business-to-Business Service Arrangement.**	First priority	None	8
Intracountry	An arrangement involving all customers within a single country.	Second priority	Single Country	4
Intercountry (formerly Subregional)	An arrangement involving customers in multiple countries or business regions. Participants are not required to be within a single business region.	Third priority	Two or more Countries or Regions	3
Intraregional	An arrangement involving all customers within a business region.	Fourth priority	Single Region	2
Interregional	An arrangement involving all customers in different business regions.	Fifth priority	Two Regions: From and To	1

Business service arrangements are established in accordance with local laws and regulations. For questions about participation in, or the hierarchy of business arrangement qualification, please contact your Mastercard representative.

Business-to-business business service

Business-to-business arrangement leverages Business Service Level 8. This arrangement reflects the relationship between all customers that are part of the business initiative.

As an example, all acquirers globally and participating issuers could be part of business-to-business arrangement. The same criteria is used by all participating acquirers and issuers regardless of where the transaction is acquired or issued. This arrangement is not the same as customer-to-customer arrangement. Mastercard defines the interchange criteria and interchange rate.

Customer-to-customer business service

Customer-to-customer arrangements reflect specific business relationships among customers. Participating customers work with Mastercard to establish common processing standards, interchange programs and rates, and qualifying criteria for the arrangement.

Global Clearing Management System supports customers' participation in multiple customer-to-customer arrangements.

Intracountry business service

The intracountry business service supports business arrangements available to all customers within the same country. This type of business service arrangements apply when the acquirer, issuer, and merchant are all located in the same country. Customers work with Mastercard to establish common processing standards, interchange programs and rates, and qualifying criteria for the arrangement.

Intercountry business service

Intercountry business service arrangements allow all customers within multiple countries or business regions to enter into an agreement with Mastercard to apply unique fees and editing rules to transactions among participating customers. This type of business service arrangements apply when the acquirer, issuer, and merchant are located across multiple countries and at least one is located in a different country.

NOTE: The definition of the rules for all customer defined arrangements must be consistent with Mastercard standards (or the standards of the other applicable brands) and established in accordance with the *Mastercard Rules*.

Intraregional business services

Intraregional business service arrangements apply to all customers within a single region. This type of business service arrangements apply when the acquirer, issuer, and merchant are located within single region, and at least one participant among the acquirer, issuer, or merchant is located in a different country within the region. For the United States region, Intraregional business service will applied when the acquirer, issuer, and merchant are all located within United States region. All customers currently participate in at least one intraregional business service arrangement.

Intraregional arrangements consist of the interchange programs and rates defined by Mastercard, such as the Interregional Consumer Rate I, Digital Commerce, Core and the Issuer/ Acquirer Chip incentive interchange rate programs.

Interregional business services

Interregional business service arrangements apply to all customers in two different regions. This type of business service arrangements apply when at least one participant among the acquirer, issuer, and merchant is located in another region. All customers currently participate in at least five interregional business service arrangements, depending on the country that is defined for the customers' issuing account ranges, acquiring BINs, or both.

Interregional arrangements consist of the International interchange programs and rates defined by Mastercard (such as Interregional Consumer Rate I, Digital Commerce, Core and Corporate Purchasing Data Rate II).

The geographic designation for interregional arrangements consists of a from region and a to region.

- The from region is defined as the region associated to the value in DE 31 (Acquirer Reference Data), subfield 2 (Acquirer Reference ID), or in the absence of DE 31, the value in DE 94 (Transaction Originator Institution ID Code) of the message.
- The to region is defined as the region associated to the value in the DE 2 (Primary Account Number [PAN]), or in the absence of DE 2 the value in DE 93 (Transaction Destination Institution ID Code) of the message.

When the acquirer and issuer are in the same region and the merchant is in a different region, the from region is defined as the region associated to the merchant identified in DE 43 (Acceptor Name/ Location), subfield 6 (Acceptor Country Code).

Participating in business service arrangements

Customers may participate in business service arrangements at the individual issuing account range and acquiring BIN levels. Once the issuer and acquirer are identified, Global Clearing Management System selects the appropriate business service arrangement for each message on the basis of those in common between the issuer and acquirer.

NOTE: A customer is considered a participant in a business service if at least one issuing account range or acquiring BIN is participating.

Requirements for customers participating in business service arrangements

There are various technical requirements for customer participation in business service arrangements.

Participants must

- issue cards or acquire transactions
- format all transactions using the appropriate IPM message format
- recognize from the IPM MPE or from internal host database tables the parameters used in determining business service arrangement participation
- use an approved Mastercard method of file transfer to submit transactions (such as the Mastercard interface processor [MIP], CONNECT:Direct, or Mastercard File Express), and
- participate in mandatory testing.

Business service features and qualification criteria

Each business service has specific requirements, or criteria, that transactions must meet to be processed within that arrangement. When transactions are exchanged between participating customers of an arrangement, Global Clearing Management System validates the transaction against the established criteria and determines whether the transaction qualifies.

Additionally, IRDs are defined within the arrangement, each with its own unique set of qualification criteria and corresponding interchange fee structure. The criteria available for customization within an arrangement are described in the following table.

Qualification Criteria	Description
Card Program Identifier	The set of card program identifiers in PDS 0158 (Business Activity), subfield 1 (Card Program Identifier) that are valid for the arrangement. Each of the remaining business service setup parameters have unique values for each card program identifier.
Global Clearing Management System Product Identifier	The set of clearing product codes in PDS 0002 (Global Clearing Management System Product Identifier), derived from DE 2 (Primary Account Number [PAN]) that are valid for the card program identifier within the business service arrangement.
Transaction Function	The set of transaction functions (Message Type Identifier plus DE 24 [Function Code]) that are valid for the card program identifier within the business service arrangement.
Processing Code/ Reversal Indicator	The set of Processing Codes in DE 3 (Processing Code), subfield 1 (Cardholder Transaction Type) that are valid for each transaction function established for the card program identifier within the business service arrangement. Also defines whether reversals in PDS 0025 (Message Reversal Indicator), subfield 1 (Message Reversal Indicator) are permitted for the processing code.

Qualification Criteria	Description
Cardholder From Account ID	The set of Cardholder From Account ID codes in DE 3 (Processing Code), subfield 2 (Cardholder From Account Type Code) that are valid for each transaction function established for the card program identifier within the business service arrangement.
Cardholder To Account ID	The set of Cardholder To Account ID codes in DE 3 (Processing Code), subfield 3 (Cardholder To Account Type Code) that are valid for each transaction function established for the card program identifier within the business service arrangement.
Message Reason Codes/ Reversal Indicator	The set of Message Reason Codes in DE 25 (Message Reason Code) that are valid for each card program identifier within the business service arrangement. Defines whether reversals are permitted for the message reason code.
Geography	The valid geographical usage for the brand, expressed as a set of valid regions, country codes, or a combination of both.
Acceptor Business (CAB) Programs	The set of CAB programs that are valid for each card program identifier within the business service arrangement.

Additional features for business service arrangements

Options such as timeliness editing and authorization code requirements may be defined for a business service. In addition, interchange fee structures and optional addendum message requirements must be defined for transactions to be exchanged within the arrangement.

Business service calendar and transaction timeliness

A business service calendar is established by the participants of each arrangement, defining the processing days and holidays to be observed within the arrangement. Global Clearing Management System uses the information in the calendar for calculating transaction timeliness, when applicable.

If requested, Global Clearing Management System will perform transaction timeliness editing according to the number of days permitted, considering any excluded days as specified in the business service calendar. Several types of dates may be excluded from the interchange timeliness calculation, such as

- non-processing days (holidays)
- holidays
- transaction date, and
- file header date.

NOTE: When two or more conditions occur on the same day (for example, Holiday = excluded date, and Processing Date = not excluded), exclusions take precedence and the day will not be counted in the timeliness calculation.

Interchange rates and fees structure

Customer arrangements define, in accordance with Mastercard Standards, interchange rate designators (IRDs) and corresponding interchange rate structures to be applied to transactions exchanged between participating customers.

In addition, participating customers can specify whether Global Clearing Management System should calculate interchange fees for bilaterally settled transactions that qualify for the business service. For more information about bilaterally settled transactions, refer to the Bilateral Settlement Activity chapter of the *Global Clearing Management System Reference Manual*.

Manual cash disbursement accommodation fee

Customers that participate in an intracountry business service arrangement may establish an accommodation fee for manual (non-ATM) cash disbursements. The issuer pays an accommodation fee to the acquirer for transactions involving a manual (non-ATM) cash disbursement.

Customer-defined manual cash disbursement fees may be calculated as a percentage of the transaction amount, a unit fee in local currency or U.S. dollars, a minimum cash disbursement accommodation fee, or any combination thereof.

Procedures for applying for a business service arrangement

Customers should contact the Global Customer Service team or the appropriate Mastercard regional office for information about initiating a business service arrangement or modifying an arrangement currently recognized by Mastercard and processed within Global Clearing Management System.

Certain business service arrangements will be documented and signed by participating customers. All agreements requiring signatures must be signed and submitted to Mastercard before business service testing may begin. In addition, each business service arrangement is subject to and conditioned on the prior written approval of Mastercard.

NOTE: Customers that require additional assistance to support unique local requirements should contact the appropriate regional office.

Identifying business service within IPM messages

Global Clearing Management System uses the IRD submitted by the sender of the message and the parameters established within the system to select or validate various information for each transaction:

- PDS 0158 (Business Activity), subfield 1 (Card Program Identifier)

- PDS 0158, subfield 2 (Business Service Type)
- PDS 0158, subfield 3 (Business Service ID)

Depending on the business activity for the transaction, Global Clearing Management System applies appropriate processing rules, in accordance with the business service.

The sending customer optionally may submit the business service arrangement type and ID code in the message. In this situation, Global Clearing Management System will validate only that the values submitted in PDS 0158, subfields 2 and 3 are applicable for the message. Global Clearing Management System will either select the card program identifier or validate the customer-submitted card program identifier value in PDS 0158, subfield 1. If the system finds the transaction does not qualify for the submitted business service and interchange rate designator, the transaction will be rejected.

Contents of PDS 0158 (Business Activity)

Global Clearing Management System selects or validates the values in PDS 0158 (Business Activity) for each applicable financial transaction.

The first four subfields are as follows.

Subfield	Description	Definition	For example...		
1	Card Program Identifier	Three-position code that identifies Mastercard or other applicable brand under whose umbrella transactions are processed.	MCC	=	Mastercard® card
2	Business Service Arrangement Type Code	One-position code that identifies the interchange relationship for the business arrangement.	2	=	Intraregional
3	Business Service ID Code	Unique, six-position code that identifies the specific interchange arrangement assigned to the transaction.	010001	=	U.S. intraregional business service
4	Interchange Rate Designator	Code that specifies the interchange rate to apply to the transaction.	70	=	U.S. intraregional Merit III interchange rate

When sending transactions to Global Clearing Management System, customers must submit an interchange rate designator in subfield 4[1] and may populate subfields 1, 2, and 3 with either spaces or the appropriate business service data. Global Clearing Management System will reject any transaction that contains invalid data in PDS 0158, subfields 1 through 4. For all other valid transactions, Global Clearing Management System will populate subfields 1, 2, and 3 with the

[1] Refer to PDS 0158: Business Activity in the *IPM Clearing Formats* manual for format exceptions to subfield 4.

system-selected information, and will also populate subfields 5 through 12 of PDS 0158 before forwarding the transaction to the receiving customer.

Global Clearing Management System derives the information according to evaluation of the message contents against the qualification criteria for business service arrangements in common between the issuer and acquirer. If Global Clearing Management System cannot find a business service in which to process the transaction, the Global Clearing Management System will reject the transaction.

PDS 0158, subfield 1 (Card Program Identifier)

The use of PDS 0158 (Business Activity), subfield 1 (Card Program Identifier) by transaction originators is conditional; if used, it may require Mastercard to exercise alternate card program edits, which use the BIN in the Acquirer Reference Data (ARD) to obtain and validate the card program.

PDS 0158, subfield 2 (Business Service Arrangement Type Code)

This table indicates the business service type (located in PDS 0158, subfield 2 [Business Service Arrangement Type Code]) currently defined.

PDS 0158, Subfield 2 Value	Business Service Type
1	Interregional
2	Intraregional
3	Intercountry
4	Intracountry
8	Business-to-Business Arrangement or Customer-to-Customer Agreement

PDS 0158, subfield 3 (Business Service ID Code)

PDS 0158, subfield 3 (Business Service ID Code) is a six-position value that identifies the business service to which the transaction is assigned for reconciliation and rules considerations.

Type Code	Type Description	ID Code	ID Code Description		
1	Interregional	FFTTnn	FF[2]	=	from acquiring region
			TT	=	to issuing region

[2] When the acquirer and issuer are in the same region and the merchant is in a different region, the from region is defined as the region associated to the merchant identified in DE 43 (Acceptor Name/ Location), subfield 6 (Acceptor Country Code).

Type Code	Type Description	ID Code	ID Code Description		
			nn	=	unique number the corporation assigned to each interregional business service
2	Intraregional	RRnnnn	RR	=	business region
			nnnn	=	unique number the corporation assigned to each intraregional business service
3	Intercountry	nnnnnn	nnnnnn	=	unique ID the corporation assigned to each intercountry business service
4	Intracountry	CCCnnn	CCC	=	ISO numeric country code
			nnn	=	unique number the corporation assigned to each intracountry business service
8	Customer-to-Customer or Business-to-Business	Nnnnnn	Nnnnnn	=	unique number the corporation assigned to each customer-to-customer arrangement on file

Account Management System (AMS) region codes

This table lists the Mastercard billing/clearing codes, Account Management System (AMS) region codes, and corresponding descriptions.

Global Clearing Management System Code and MCBS (billing) Code	AMS Region Code	Description
01	1	United States
02	A	Canada
03	B	Latin America and the Caribbean
04	C	Asia/Pacific
05	D	Europe
06	E	Middle East/Africa

Intraregional ID codes

This table lists and describes the intraregional ID codes found in PDS 0158, subfield 3 (Business Service ID Code).

Intraregional ID Code	Description
010001	Intraregional business service 0001 for Region 1 (Global Clearing Management System region 01).
020001	Intraregional business service 0001 for Region A (Global Clearing Management System region 02).
030001	Intraregional business service 0001 for Region B (Global Clearing Management System region 03).
040001	Intraregional business service 0001 for Region C (Global Clearing Management System region 04).
050001	Intraregional business service 0001 for Region D (Global Clearing Management System region 05). This business service will be used for POS transactions (Mastercard POS, Maestro POS, payment transactions, purchase with cashback, and Mastercard manual cash disbursements).
050002	Intraregional business service 0002 for Region D (Global Clearing Management System region 05). This business service will be used for ATM transactions (Mastercard ATM, Maestro ATM, Maestro manual cash disbursements, and Cirrus).
060001	Intraregional business service 0001 for Region E (Global Clearing Management System region 06).

Interregional ID codes

This table lists and describes the interregional ID codes found in PDS 0158, subfield 3 (Business Service ID Code).

Interregional ID Code	Description
010201	Interregional business service 01 for Region 1 to Region A (Global Clearing Management System region 01 to 02)
010301	Interregional business service 01 for Region 1 to Region B (Global Clearing Management System region 01 to 03)
010401	Interregional business service 01 for Region 1 to Region C (Global Clearing Management System region 01 to 04)

Interregional ID Code	Description
010501	Interregional business service 01 for Region 1 to Region D (Global Clearing Management System region 01 to 05)
010601	Interregional business service 01 for Region 1 to Region E (Global Clearing Management System region 01 to 06)
020101	Interregional business service 01 for Region A to Region 1 (Global Clearing Management System region 02 to 01)
020301	Interregional business service 01 for Region A to Region B (Global Clearing Management System region 02 to 03)
020401	Interregional business service 01 for Region A to Region C (Global Clearing Management System region 02 to 04)
020501	Interregional business service 01 for Region A to Region D (Global Clearing Management System region 02 to 05)
020601	Interregional business service 01 for Region A to Region E (Global Clearing Management System region 02 to 06)
030101	Interregional business service 01 for Region B to Region 1 (Global Clearing Management System region 03 to 01)
030201	Interregional business service 01 for Region B to Region A (Global Clearing Management System region 03 to 02)
030401	Interregional business service 01 for Region B to Region C (Global Clearing Management System region 03 to 04)
030501	Interregional business service 01 for Region B to Region D (Global Clearing Management System region 03 to 05)
030601	Interregional business service 01 for Region B to Region E (Global Clearing Management System region 03 to 06)
040101	Interregional business service 01 for Region C to Region 1 (Global Clearing Management System region 04 to 01)
040201	Interregional business service 01 for Region C to Region A (Global Clearing Management System region 04 to 02)
040301	Interregional business service 01 for Region C to Region B (Global Clearing Management System region 04 to 03)
040501	Interregional business service 01 for Region C to Region D (Global Clearing Management System region 04 to 05)
040601	Interregional business service 01 for Region C to Region E (Global Clearing Management System region 04 to 06)

Interregional ID Code	Description
050101	Interregional business service 01 for Region D to Region 1 (Global Clearing Management System region 05 to 01)
050201	Interregional business service 01 for Region D to Region A (Global Clearing Management System region 05 to 02)
050301	Interregional business service 01 for Region D to Region B (Global Clearing Management System region 05 to 03)
050401	Interregional business service 01 for Region D to Region C (Global Clearing Management System region 05 to 04)
050601	Interregional business service 01 for Region D to Region E (Global Clearing Management System region 05 to 06)
060101	Interregional business service 01 for Region E to Region 1 (Global Clearing Management System region 06 to 01)
060201	Interregional business service 01 for Region E to Region A (Global Clearing Management System region 06 to 02)
060301	Interregional business service 01 for Region E to Region B (Global Clearing Management System region 06 to 03)
060401	Interregional business service 01 for Region E to Region C (Global Clearing Management System region 06 to 04)
060501	Interregional business service 01 for Region E to Region D (Global Clearing Management System region 06 to 05)

NOTE: The IPM MPE contains a complete list of business service arrangements.

PDS 0158, subfield 4 (Interchange Rate Designator)

For transactions that involve Mastercard card programs, the originator of the message must submit a valid interchange rate designator (IRD) value in PDS 0158 (Business Activity), subfield 4 (Interchange Rate Designator).

PDS 0158, subfields 1 through 3 may contain spaces. Global Clearing Management System will populate these subfields with the system-derived values. If the system cannot find a business service in which to process the transaction, the Global Clearing Management System will reject the transaction.

For transactions that involve card programs other than Mastercard, the originator of the message must submit a valid IRD value in PDS 0158, subfield 4, if required by the arrangement. Spaces may be submitted in PDS 0158, subfields 1-3, and Global Clearing Management System will populate these subfields with the system-derived values.

NOTE: If PDS 0158, subfield 4 is CS, and the merchant or acquirer country is not China (CHN), or the issuer country is China (CHN), the Clearing Platform will reject the chargeback message with error number 2709 (PDS0158S4 INTERCHANGE RATE DESIGNATOR INVALID WHEN MERCHANT OR ACQUIRER COUNTRY IS NOT CHINA OR ISSUER COUNTRY IS CHINA).

Acquirer creation of the outbound message with business activity

Acquirers must use various information to create outbound messages with business activity.

The acquirer

- uses information provided by Mastercard to identify the country codes of the sender and receiver of the transaction
- uses information provided by Mastercard to identify the business arrangements in which the sender and receiver participate, and, and
- provides the appropriate interchange rate designator (IRD) in PDS 0158, subfield 4 (Interchange Rate Designator) to designate an interchange arrangement within the specified business arrangement.

Issuer identification of business activity within the inbound message

The issuer identifies the business service information within the transaction.

Location of the business service information used by the issuer
PDS 0158, subfield 1: Card Program Identifier
PDS 0158, subfield 2: Business Service Arrangement Type Code
PDS 0158, subfield 3: Business Service ID Code
PDS 0158, subfield 4: Interchange Rate Designator (IRD)
PDS 0158, subfield 5: Business Date (Global Clearing Management System provides this field)
PDS 0158, subfield 6: Business Cycle (Global Clearing Management System provides this field)
PDS 0158, subfield 7: Acceptor Classification Override Indicator
PDS 0158, subfield 8: Product Class Override Indicator
PDS 0158, subfield 9: Corporate Incentive Rates Apply Indicator
PDS 0158, subfield 10: Special Conditions Indicator
PDS 0158, subfield 11: Mastercard Assigned ID Override Indicator
PDS 0158, subfield 12: Future Use Account Level Management Account Category Code
PDS 0158, subfield 13: Rate Indicator

Location of the business service information used by the issuer
PDS 0158, subfield 14: Masterpass Incentive Indicator
PDS 0158, subfield 15: Digital Wallet Interchange Override Indicator

Retrieval request and retrieval fee billing transactions

PDS 0158 (Business Activity) is not required in retrieval request or retrieval fee billing transactions.

When business service is submitted by the customer

The sending customer may submit business service arrangement information in the message.

- PDS 0158, subfield 1: Card Program Identifier
- PDS 0158, subfield 2: Business Service Arrangement Type Code
- PDS 0158, subfield 3: Business Service ID Code

When the sending customer submits business service arrangement information in the private data subelements listed above, Global Clearing Management System validates only that the submitted arrangement information is applicable for the message. Global Clearing Management System either selects the card program identifier, if not submitted by the customer, or validates the customer-submitted card program identifier value in PDS 0158, subfield 1. If the submitted information in PDS 0158, subfield 2 and PDS 0158, subfield 3 is not valid for the message or for the Global Clearing Management System-selected or customer-submitted card program identifier in PDS 0158, subfield 1, Global Clearing Management System rejects the message.

IF the sender submits…	THEN…
Business service arrangement information (PDS 0158, subfield 2 and subfield 3) [3]	• Both the Business Service Arrangement Type Code (PDS 0158, subfield 2) and Business Service ID Code (PDS 0158, subfield 3) must be submitted together. • The Card Program Identifier (PDS 0158, subfield 1) must contain spaces or a valid card program identifier for the business service arrangement information provided. • If IRD validation is required for the message, the IRD also must be present in the message. Global Clearing Management System validates the transaction against the qualification criteria for the IRD.

[3] Card Program Identifier (PDS 0158, subfield 1) may be spaces or may contain a card program identifier value when submitting business service information in PDS 0158, subfield 2 and PDS 0158, subfield 3.

Using the MPE to select the card program identifier and business service information

Global Clearing Management System can select or validate the business activity (PDS 0158, subfields 1-4) for all financial transactions. The following outlines the steps that Global Clearing Management System follows to select the business activity for financial transactions using the IPM Mastercard Parameter Extract (MPE). This includes selection or validation of the card program identifier, selection or validation of the business service arrangement, and validation of the interchange rate designator (IRD), if applicable.

Step	Action
Data and Message Content Validation	
1a.	Validate format requirements of the elements used in the selection process
1b.	Validate syntax and attributes of elements used in the selection process
1c.	Validate content of elements used in the selection process
2.	Determine whether the transaction requires business service processing
Business Service Arrangement Selection	
3a.	Retrieve and Validate Issuer Card Program Identifier and Business Service Arrangement Participation (Standard Process)
3b.	Retrieve and Validate Issuer Card Program Identifier and Business Service Arrangement Participation (Central Acquiring Process) Global Clearing Management System determines whether Central Acquiring logic applies to an intra-European or inter-European transaction by comparing the acquiring BIN country code (found in table IP0041T1) with the merchant country code (found in DE 43 [Acceptor Name/ Location], subfield 6 [Acceptor Country Code] of the transaction). If these country codes are the same, the Standard Process (defined in Step 3a above) applies. If the country codes are not the same, the Central Acquiring Process applies, as defined in this subsection.
Business Service Arrangement Validation	
4.	Validate MTI/Function Code/Processing Code/Reversal Indicator Combination
5.	Validate MTI/Function Code/Message Reason Code combination
6.	Determine whether IRD validation is required for the transaction
IRD Validation	
7.	Validate MTI/Function Code/Processing Code/Reversal Indicator combination for the IRD
8.	Validate product codes

Step	Action
9.	Validate AB programs
10.	Validate transaction currency
11.	Determine whether the issuer account range is exempt from Central Acquiring

The following diagrams depict the flow:

Figure 15: Data and message content validation

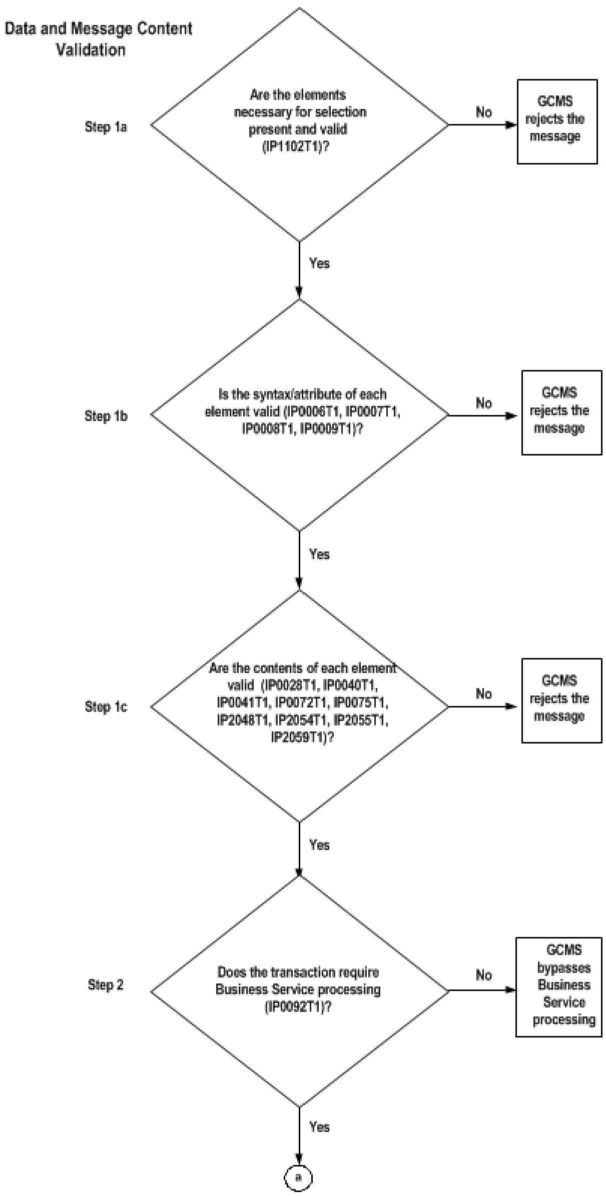


Figure 16: Business service arrangement selection and validation

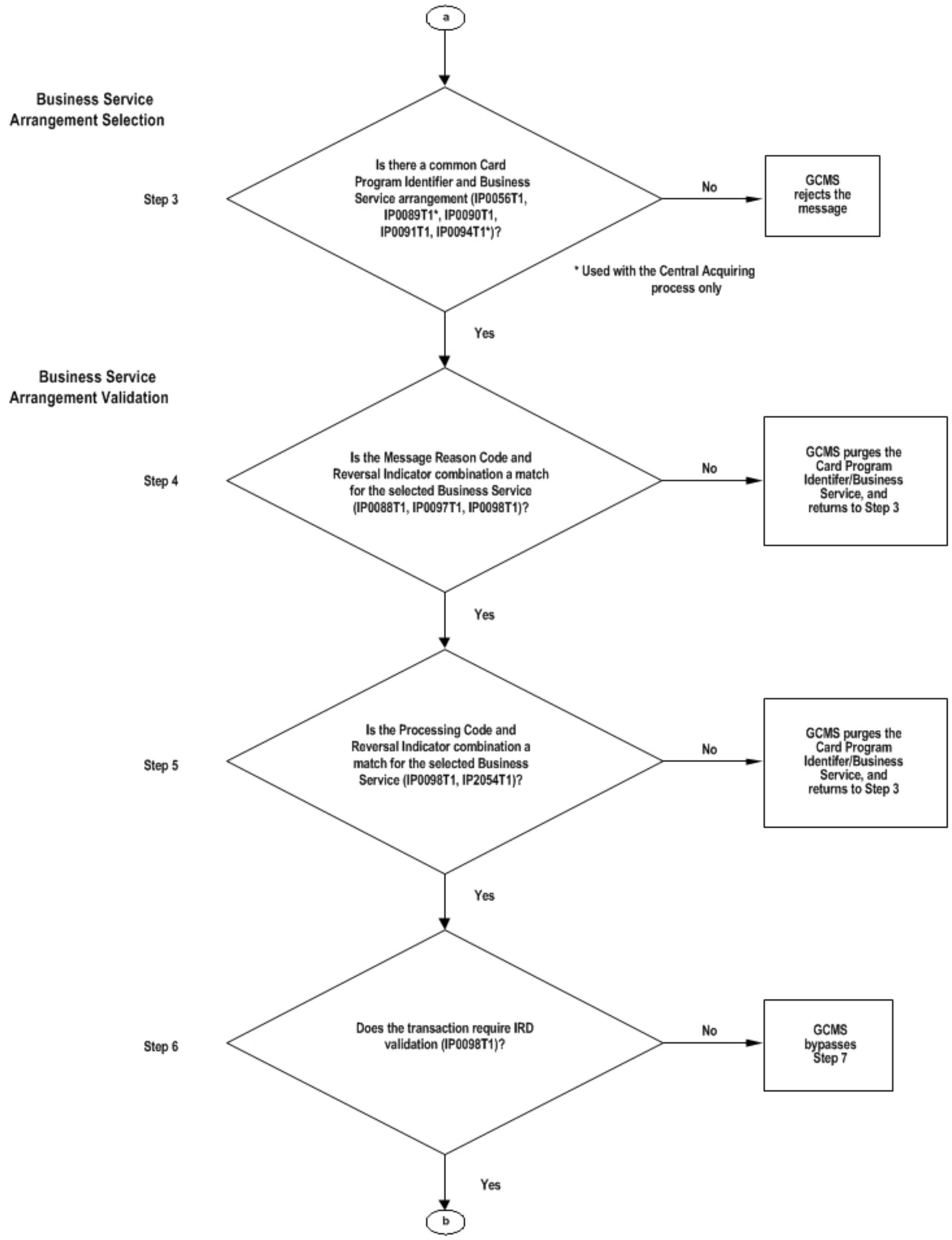
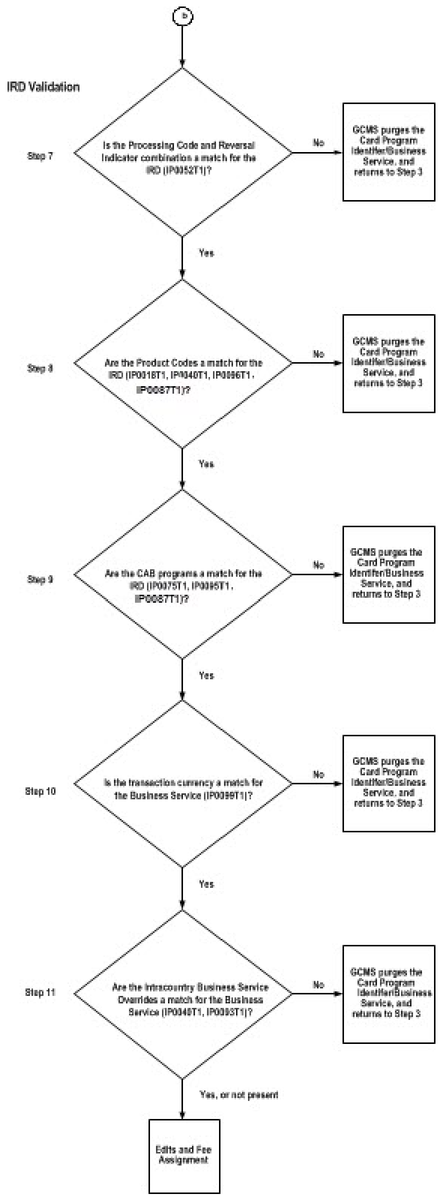


Figure 17: IRD validation



Data and message content validation by Global Clearing Management System

These steps describe the process of validating the data and message content.

Step 1: validate the elements used in the selection process

Certain elements must be present and valid in each message to begin the process of selecting the card program identifier and business service arrangement. These are the elements used to validate the qualification criteria for card program identifiers and business service arrangements.

The format requirements, syntax/attribute definitions, and content of these critical elements are defined by Mastercard.

Step 1a: validate format requirements

Global Clearing Management System validates that all the elements necessary for selection are present and valid using Table IP1102T1 Mandatory Field Edits.

The columns in the figure that follows show the elements used in the selection process. The rows in this figure show whether each of these elements is mandatory, conditional, or optional for each transaction function.

Figure 18: Table IP1102T1 format requirements for elements used in selection

Msg Type/ Message Reason Code	MTI	DE2	DE3	DE24	DE25	DE26	DE31	DE43	DE93	DE94	PDS0025*	PDS0026*	PDS0158	PDS0165
1240-200/all	M	M	M	M	O	M	M	M		M	C	•	C	M
1442-450,451, 453,454/all	M	M	M	M	M	M	M	M		M	C	•	C	M
1240-205,282/all	M	M	M	M	M	M	M	M		M	C	•	C	M
1644-603/all	M	M	M	M	M	O	M	O		M	C	•	O	M
1740-700/7614	M	M	M	M	M	O	M	O	O	M	C	•	O	M
1740-700/all except 7614	M	C	M	M	M	O	O	O	M	M	C	•	O	M
1740-780/all except 7614	M	C	M	M	M	O	O	O	M	M	C	•	O	M
1740-781/all except 7614	M	C	M	M	M	O	O	O	M	M	C	•	O	M
1740-782/all except 7614	M	C	M	M	M	O	O	O	M	M	C	•	O	M
1644-697/na	M	•	•	M	•	•	•	•	•	•	•	C	•	•
1644-695/na	M	•	•	M	•	•	•	•	•	•	•	•	•	•

*Message Reversal and File Reversal Indicators are present only if the message or file is a reversal.

If one of the elements shown in the previous figure is mandatory for a message but not present, Global Clearing Management System rejects the message with the following error message (where <fldname> represents the name of the missing element):

735 - <fldname> MUST BE PRESENT

Step 1b: validate syntax/attribute of selection elements

Global Clearing Management System edits the syntax/attribute requirements for all the elements used in the selection process.

- IP0006T1 Data Element Attributes
- IP0007T1 Data Element Subfield Attributes
- IP0008T1 PDS Attributes
- IP0009T1 PDS Subfield Attributes

Syntax/attribute requirements for elements used in the selection process[4]

[4] All of the above elements may not be present in all messages.

Name	Element	Syntax/Attribute	Table ID
MTI	First four positions	n-4	IP0006T1
PAN	DE 2	n...19; LLVAR	IP0006T1
Processing Code	DE 3	n-6	IP0007T1
Function Code	DE 24	n-3	IP0006T1
Message Reason Code	DE 25	n-4	IP0006T1
Acceptor Business Code	DE 26	n-4	IP0006T1
Acquirer Reference Data	DE 31	n-23; LLVAR	IP0007T1
Acceptor Name/ Location	DE 43	ans...99; LLVAR	IP0007T1
Transaction Destination Institution ID Code	DE 93	n...11; LLVAR	IP0006T1
Transaction Originator Institution ID Code	DE 94	n...11; LLVAR	IP0006T1
Message Reversal Indicator	PDS 0025	an...7; TAGLLLVAR	IP0009T1
File Reversal Indicator	PDS 0026	an...7; TAGLLLVAR	IP0009T1
Business Activity	PDS 0158	ans...30; TAGLLLVAR	IP0009T1
Settlement Method Indicator	PDS 0165	ans...30; TAGLLLVAR	IP0009T1

Step 1c: validate content of selection elements
Global Clearing Management System edits the content of the elements to ensure the values submitted are valid system values.

Name	Element	Table Name	Table ID
PAN	DE 2	Issuer Account Range Table	IP0040T1
Processing Code	DE 3, subfield 1	DE 3 Processing Code, subfield 1 Cardholder Transaction Type	IP2048T1
Cardholder From Account	DE 3, subfield 2	DE 3 Processing Code, subfield 2 Cardholder From Account Type Code	IP2054T1

Name	Element	Table Name	Table ID
Cardholder To Account	DE 3, subfield 3	DE 3 Processing Code, subfield 3, Cardholder To Account Type Code	IP2055T1
Acceptor Business (AB) Code[5]	DE 26	Acceptor Business Codes (MCCs)	IP0075T1
Acquirer Reference ID	DE 31, subfield 2	BIN Table	IP0041T1
Acceptor Country Code	DE 43, subfield 6	Country Codes Table	IP0028T1
Transaction Destination Institution ID Code	DE 93	Expanded Customer ID Master Table	IP0072T1
Transaction Originator Institution ID Code	DE 94	Expanded Customer ID Master Table	IP0072T1
Message Reversal Indicator	PDS 0025	PDS 0025 Message Reversal Indicator, subfield 1 Message Reversal Indicator	IP2059T1

The IP2nnnT1 series tables contain valid values based on card program identifier/business service arrangement combination. They contain some entries for which the Card Program Identifier field contains all spaces and the Business Service Arrangement Type and Business Service ID fields contain all zeros. These entries represent the default valid values. At this stage of validation, when Global Clearing Management System is trying to ensure that all of the mandatory fields are present and contain valid values, Global Clearing Management System uses these default valid values.

Later, after Global Clearing Management System assigns a specific card program identifier/ business service arrangement combination, Global Clearing Management System may perform edits that require a specific subset of valid values depending on the business service. For these types of edits, Global Clearing Management System uses the IP2nnnT1 table entries that contain specific values in the Card Program Identifier, Business Service Arrangement Type, and Business Service ID fields.

Step 2: determine whether the transaction requires business service processing

Not all messages require business service processing. Table IP0092T1 identifies the transaction functions that are eligible for business service processing. If the switch in the table is equal to Y

[5] The table includes acceptor business codes that are active and life cycled. If the AB code provided by the customer is in life cycle status, First Presentment/1240 non-reversal messages will be rejected.

for the transaction function, Global Clearing Management System performs business service processing.

Mastercard defines the following as the specific transaction functions that are eligible.

MTI	Function Code (DE 24)	Description	Requires Business Service Processing Switch
1240	200	First Presentments	Y
1644	695	File Trailer	N
1644	696	Financial Detail Addendum (inherits business service from associated First Presentment)	N
1644	697	File Header	N
1442	450, 453	First Chargebacks	Y
1240	205, 282	Second Presentments	Y
1442	451, 454	Arbitration Chargebacks	Y
1644	603	Retrieval Requests	Y
1740	700, 780, 781, 782, 783	Fee Collections	Y
1740	790	Fee Collection Fund Transfer	Y

Step 3: business service arrangement selection
There are two processes for selecting business service arrangements.

Step 3a (standard process): retrieve and match card program identifier and business service arrangement participation
Global Clearing Management System retrieves the card program identifier and business service arrangement participation information for both customers in the message.

To Retrieve Card Program Identifier and Business Service Arrangement Participation Combinations for the...	Use Element	Table Name	Table ID
Issuer (applies to Presentments, Chargebacks, and Fee Collection Retrieval Fee Billing messages)	DE 2 (expanded to 19 positions)	Issuer Account Range Card Program Identifier and Business Service Arrangement Participation	IP0090T1

To Retrieve Card Program Identifier and Business Service Arrangement Participation Combinations for the…	Use Element	Table Name	Table ID
Acquirer (applies to Presentments, Chargebacks, and Fee Collection Retrieval Fee Billing messages)	DE 31, subfield 2	Acquiring BIN Card Program Identifier and Business Service Arrangement Participation	IP0091T1
Receiver (applies only to Fee Collection messages other than Fee Collection Retrieval Fee Billing)	DE 93 (expanded to 11 positions)	Customer Business Service Arrangements	IP0056T1
Sender (applies only to Fee Collection messages other than Fee Collection Retrieval Fee Billing)	DE 94 (expanded to 11 positions)	Customer Business Service Arrangements	IP0056T1

Using the tables listed above, Global Clearing Management System finds all card program identifier/business service arrangement combinations in common between the two customers.

If none are in common, Global Clearing Management System rejects the transaction.

If the two customers have one or more card program identifier/business service arrangement combinations in common, Global Clearing Management System evaluates each card program identifier/business service arrangement combination that is in common between the customers against the characteristics of the transaction. This process begins with Step 4 as described in the Business Service Arrangement Validation subsection later in this section. If one arrangement fails the validation, Global Clearing Management System returns to Step 3a to evaluate the next higher priority issuer card program identifier/business service arrangement combination.

Step 3b (central acquiring process): retrieve and validate issuer card program identifier and business service arrangement participation

Central acquiring logic applies only to presentments, chargebacks, and ATM withdrawal transactions for which the issuer, the acquirer, and the acceptor are in the Europe region. Central acquiring logic does not apply to manual cash advance transactions, balance inquiries, PIN unlock, or PIN change.

For central acquiring, the acquiring bank identification numbers (BINs) do not show all the relevant intracountry business service arrangements in table IP0091T1. Such an approach would be too restrictive for acquirers as they would need to wait until they were set up in table IP0091T1 for a new intracountry arrangement before they could successfully submit transactions in that market. Therefore, for central acquiring situations, Global Clearing Management System considers only the issuing account range participation as defined in table IP0090T1.

Global Clearing Management System determines whether central acquiring logic applies to an intra-European transaction by comparing the acquiring BIN country code (found in table IP0041T1) with the merchant country code (found in DE 43 [Acceptor Name/Location], subfield 6 [Acceptor Country Code] of the transaction). If these country codes are the same, the standard process (defined in Step 3a above) applies. If the country codes are not the same, the central acquiring process applies, as defined in this subsection.

For the central acquiring process, Global Clearing Management System retrieves the card program identifier and business service arrangement participation information for the issuer only.

To Retrieve Card Program Identifier and Business Service Arrangement Participation Combinations for the...	Use Element	Table Name	Table ID
Issuer (applies to presentments and chargebacks)	DE 2 (expanded to 19 positions)	Issuer Account Range Card Program Identifier and Business Service Arrangement Participation	IP0090T1

Global Clearing Management System then evaluates each card program identifier/business service arrangement combination in which the issuer participates, in the sequence in which they are provided in table IP0090T1, to determine whether the acquirer accepts the card program identifier, and whether the geography and Central Acquiring permission are appropriate.

To determine whether the acquirer accepts the card program identifier of the card program identifier/business service arrangement combination being evaluated, Global Clearing Management System checks all the table IP0041T1 entries for the acquiring BIN. If the contents of the Card Program Identifier field in any of the acquiring BIN table IP0041T1 entries match the card program identifier of the card program identifier/business service arrangement combination being evaluated, Global Clearing Management System considers the arrangement eligible for further processing. Otherwise, Global Clearing Management System discards the current arrangement and returns to Step 3b to evaluate the next higher priority issuer card program identifier/business service arrangement combination.

NOTE: Table 94 is called only when the business service level equals 4 Intra or 3 Inter. It is not called for M2M.

To validate the geography of the arrangement, Global Clearing Management System looks up the issuer's card program identifier/business service arrangement combination in table IP0094T1 Geographic Restrictions. Table IP0094T1 restricts business service arrangements at either the country code level or the region level.

If table IP0094T1 has no entry for the card program identifier/business service arrangement combination, Global Clearing Management System considers the card program identifier/business service arrangement combination to have no geographic restrictions and, therefore, it is eligible for further processing.

If table IP0094T1 has at least one entry for the card program identifier/business service arrangement combination, the business service arrangement combination has at least one geographic restriction. Global Clearing Management System evaluates each of these entries to ensure that the transaction meets at least one of the table IP0094T1 geographic restrictions as follows:

- If the table IP0094T1 entry contains a country code in the Country field, Global Clearing Management System compares the merchant country code (found in DE 43, subfield 6 of the transaction) with the Country field in table IP0094T1.
- If the table IP0094T1 entry contains a region code on the Region field, Global Clearing Management System determines the region associated with the merchant country code of the transaction and compares it with the Region field in table IP0094T1.
- If the merchant country or region matches the table IP0094T1 country or region, Global Clearing Management System considers the card program identifier/business service arrangement combination eligible for further processing.
- If none of the table IP0094T1 entries for the business service arrangement matches the merchant country/region of the transaction, Global Clearing Management System discards the current arrangement and returns to Step 3b to evaluate the next higher priority issuer card program identifier/business service arrangement combination.

If the issuer arrangement being evaluated is not a Customer-to-Customer arrangement, Global Clearing Management System evaluates the issuer card program identifier/business service arrangement combination against the characteristics of the transaction. This process begins with Step 4 as described in the Business Service Arrangement Validation subsection later in this section.

If the arrangement fails the validation, Global Clearing Management System returns to Step 3b to evaluate the next higher priority issuer card program identifier/business service arrangement combination. If the issuer arrangement being evaluated is a Customer-to-Customer arrangement, Global Clearing Management System continues its Central Acquiring process by validating acquirer participation in this customer-to-customer business service arrangement. Global Clearing Management System does this by looking up the combination of Acquirer Reference ID, Customer-to-Customer business service arrangement, and card program identifier in table IP0091T1.

If no matching entry is in table IP0091T1, the acquirer does not participate in the Customer-to-Customer business service arrangement; therefore, it cannot be used. Global Clearing Management System discards the current Customer-to-Customer business service arrangement and returns to Step 3b to evaluate the next higher priority issuer card program identifier/business service arrangement combination. If a matching entry is in table IP0091T1 for the Customer-to-Customer business service arrangement, Global Clearing Management System continues its Central Acquiring process by validating Central Acquiring permission. To do this, Global Clearing Management System looks up the issuer's Customer-to-Customer business service arrangement in table IP0089T1 Business Service Switches.

- If the table IP0089T1 entry contains a Y in the Central Acquired Switch field, the Customer-to-Customer business service arrangement cannot be used, because an appropriate intracountry business service arrangement should be used instead for the centrally acquired transactions. Therefore, Global Clearing Management System discards the current Customer-to-Customer arrangement and returns to Step 3b to evaluate the next higher priority issuer card program identifier/business service arrangement combination.
- If the table IP0089T1 entry contains an N in the Central Acquired Switch field, or table IP0089T1 has no entry for the specified Customer-to-Customer business service

arrangement, Global Clearing Management System evaluates this M2M business service arrangement against the characteristics of the transaction beginning with Step 4, within the Central Acquiring process. If current M2M fails validation, Global Clearing Management System returns to Step 3B.

Global Clearing Management System validation of business service arrangement

Global Clearing Management System validates the qualification criteria for a card program identifier/business service arrangement combination.

If the transaction does not meet all of the qualification criteria for the arrangement, including criteria for the submitted IRD, Global Clearing Management System discards the current card program identifier/business service arrangement combination and returns to Step 3 to evaluate the next higher priority card program identifier/business service arrangement combination. This process continues until the transaction qualifies for an arrangement, or there are no more arrangements in common.

Global Clearing Management System evaluates business service arrangements according to the sequence in which the entries appear in the optimized table IP0090T1, because the entries are provided in this table in sequence by the correct priority. This process allows Global Clearing Management System to select the most appropriate card program identifier/business service combination for the transaction.

When the transaction satisfies all qualifying criteria for a card program identifier/business service arrangement combination, including IRD criteria, Global Clearing Management System assigns this information to the message in private data subelement (PDS) 0158 (Business Activity).

NOTE: Global Clearing Management System evaluates all original and reversal financial transactions, with the exception of global collection only transactions, against the qualification parameters for all eligible card program identifiers and business service arrangements unless otherwise noted.

NOTE: Global collection only transactions bypass all qualification criteria except for Message Reason Code validation. Selection of the card program identifier and business service arrangement for global collection only transactions is based only on issuing account range and Acquirer Reference ID (or sending and receiving customer ID) participation and priority, and message reason code validation.

When Global Clearing Management System is unable to select an arrangement for the message or to validate the customer-submitted arrangement information in PDS 0158, Global Clearing Management System rejects the message. Global Clearing Management System generates a Message Exception/1644 message with an error code indicating the fields in error and the reason for the error. Global Clearing Management System generates one Message Exception/1644 message with one error code for each card program identifier and business service arrangement combination evaluated (Or if IRD validation is required for the message, Global Clearing Management System generates one Message Exception/1644 message with an error code for each card program identifier/business service arrangement/IRD combination evaluated).

Step 4: validate the message reason code and reversal indicator for the card program identifier/business service arrangement combination

In some messages, such as First Presentment/1240 messages, DE 25 (Message Reason Code) is an optional field. If DE 25 is not present in the message, Global Clearing Management System performs this step using spaces for the message reason code.

Global Clearing Management System first looks up the combination of card program identifier, business service arrangement type, and business service ID in table IP0088T1 to determine whether it is masked to another business service arrangement.

- If table IP0088T1 has no entry that matches all of these values, the business service arrangement is not masked and Global Clearing Management System will perform all table lookups using the actual card program identifier and business service arrangement values.
- If table IP0088T1 has an entry that matches all of these values, Global Clearing Management System obtains the related masked card program identifier, masked business service arrangement type, and masked business service ID and will perform table IP0097T1 and IP0098T1 lookups using these masked values instead of the actual card program identifier and business service arrangement values.

Global Clearing Management System then looks up the combination of message type identifier (MTI), function code, message reason code, card program identifier, business service arrangement type, and business service ID, in table IP0097T1. When performing this lookup, Global Clearing Management System uses the masked card program identifier and business service arrangement values if table IP0088T1 indicates that the business service arrangement is masked.

If table IP0097T1 has no entry that matches all of these values, Global Clearing Management System discards the current arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.

If table IP0097T1 has an entry that matches all of these values, Global Clearing Management System obtains the value in the table IP0097T1 Reversal Indicator field.

- If this value is B, the table IP0097T1 entry is valid for both reversal and non-reversal transactions, and Global Clearing Management System continues processing with Step 5.
- If this value is R, the table IP0097T1 entry is valid only for reversal transactions. If the transaction is a reversal, indicated by PDS 0025 (Message Reversal Indicator), subfield 1 (Message Reversal Indicator) being present in the transaction and containing a value of R, Global Clearing Management System continues processing with Step 5. If the transaction is not a reversal, Global Clearing Management System discards the current arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.
- If this value is N, the table IP0097T1 entry is valid only for non-reversal transactions. If the transaction does not contain PDS 0025, subfield 1 with a value of R, it is not a reversal and Global Clearing Management System continues processing with Step 5. Otherwise, Global Clearing Management System discards the current arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.

Step 5: validate the processing code and reversal indicator for the card program identifier/ business service arrangement combination

Global Clearing Management System first looks up the value in DE 3 (Processing Code), subfield 2 (Cardholder From Account Type Code) of the transaction in table IP2054T1 and obtains its related masked value. The masked value is located immediately following the actual value. Global Clearing Management System will perform table IP0098T1 and IP0052T1 lookups using the masked DE 3, subfield 2 value in place of the actual DE 3, subfield 2 value.

Global Clearing Management System then looks up the combination of message type identifier (MTI), function code, processing code, card program identifier, business service arrangement type, and business service ID, in table IP0098T1. Global Clearing Management System uses the masked DE 3 and masked business service arrangement values where appropriate.

If table IP0098T1 has no entry that matches all of these values, Global Clearing Management System discards the current arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.

If table IP0098T1 has an entry that matches all of these values, Global Clearing Management System obtains the value in the table IP0098T1 Reversal Indicator field.

- If this value is B, the table IP0098T1 entry is valid for both reversal and non-reversal transactions, and Global Clearing Management System continues processing with Step 6.
- If this value is R, the table IP0098T1 entry is valid only for reversal transactions. If the transaction is a reversal, indicated by PDS 0025 (Message Reversal Indicator), subfield 1 (Message Reversal Indicator) being present in the transaction and containing a value of R, Global Clearing Management System continues processing with Step 6. If the transaction is not a reversal, Global Clearing Management System discards the current arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.
- If this value is N, the table IP0098T1 entry is valid only for non-reversal transactions. If the transaction does not contain PDS 0025, subfield 1 with a value of R, it is not a reversal and Global Clearing Management System continues processing with Step 6. Otherwise, Global Clearing Management System discards the current arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.

Step 6: determine whether IRD validation is required for the transaction

Global Clearing Management System looks at the table IP0098T1 entry found in Step 5 validation and checks the Requires IRD Validation Switch field.

- If this field contains Y, Global Clearing Management System performs IRD validation (beginning with Step 7) and determines the correct interchange fee using the IRD submitted in PDS 0158 (Business Activity), subfield 4 (Interchange Rate Designator) of the transaction.
- If this field contains N, Global Clearing Management System performs IRD validation (beginning with Step 8) and determines the correct interchange fee using an IRD value of spaces.

Interchange rate designator (IRD) validation

The interchange rate designator (IRD) must be validated.

Step 7: validate the processing code and reversal indicator for the IRD

If IRD validation is not required for the transaction, Global Clearing Management System omits Step 7 and continues processing with Step 8.

Otherwise, Global Clearing Management System looks up the combination of message type identifier (MTI), function code, processing code, card program identifier, business service arrangement type, business service ID, and interchange rate desigator (IRD), in table IP0052T1. To perform this lookup, Global Clearing Management System uses

- the masked value for DE 3 (Processing Code), subfield 2 (Cardholder From Account Type Code), as described in Step 5
- the actual (unmasked) values for the card program identifier/business service arrangement combination, and
- The actual interchange rate designator in the IRD field.

If table IP0052T1 has no entry that matches all of these values, Global Clearing Management System discards the current arrangement and returns to Step 3 to select the next card program identifier and business service arrangement combination.

If table IP0052T1 has an entry that matches all of these values, Global Clearing Management System obtains the value in the table IP0052T1 Reversal Indicator field.

- If this value is B, the table IP0052T1 entry is valid for both reversal and non-reversal transactions, and Global Clearing Management System continues processing with Step 8.
- If this value is R, the table IP0052T1 entry is valid only for reversal transactions. If the transaction is a reversal, indicated by PDS 0025 (Message Reversal Indicator), subfield 1 (Message Reversal Indicator) being present in the transaction and containing a value of R, Global Clearing Management System continues processing with Step 8. If the transaction is not a reversal, Global Clearing Management System discards the current arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.
- If this value is N, the table IP0052T1 entry is valid only for non-reversal transactions. If the transaction does not contain PDS 0025, subfield 1 with a value of R, it is not a reversal and Global Clearing Management System continues processing with Step 8. Otherwise, Global Clearing Management System discards the current arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.

Step 8: validate product codes for the IRD

Global Clearing Management System looks up the combination of card program identifier, business service arrangement type, business service ID, and interchange rate designator (IRD) in masked business services and interchange rate designators table (IP0087T1) to see whether it is masked to another business service arrangement and IRD.

Spaces are used in the IRD field for look-up when IRD validation is not required as described in Step 6.

- If there is no entry in table IP0087T1 that matches all of these values, the business service arrangement is not masked and Global Clearing Management System performs table IP0096T1 look-up using the actual card program identifier, business service arrangement type, business service ID, IRD, and Global Clearing Management System product ID values.
- If there is an entry in table IP0087T1 that matches all of these values, Global Clearing Management System obtains the related masked card program identifier, masked business service arrangement type, masked business service ID, masked interchange rate designator, and Global Clearing Management System product ID and performs table IP0096T1 look-up using these masked values instead of the actual card program identifier, business service arrangement, and IRD values.

NOTE: Product code validation process is bypassed when the message is a life cycle transaction and the product reassignment switch on table IP0040T1 is set to Y or the message is a first presentment and the first presentment reassignment switch on table IP0040T1 is Y.

Global Clearing Management System looks up the value in DE 2 (Primary Account Number) of the transaction in table IP0040T1 by finding the table entries for which the DE 2 PAN falls within the issuer account range: low and issuer account range: high values in table IP0040T1. There may be more than one entry in table IP0040T1 for the issuer account range. Global Clearing Management System chooses the table IP0040T1 entry for which the Card Program Identifier matches the card program identifier of the card program identifier/business service arrangement combination being evaluated. From this table IP0040T1 entry, Global Clearing Management System obtains the related Global Clearing Management System Product ID for use in table IP0096T1.

The product class feature provides the ability to vary interchange rates by product grouping, while maintaining common interchange structures. The product class override indicator is used in the interchange product override functionality. Override of interchange rates by product code is accomplished by assigning a product class override indicator to one or more product codes that would be associated with a given interchange rate value.

An example would be product class override indicator MCC (Consumer) being used to indicate a specific rate for a given IRD and product class override indicator. This product class override indicator MCC would be used for product codes MDS, MDH, MCE, MCC, MCG, MPL, and MDP, thereby avoiding the repetition of each of these product code rates in the appropriate tables in the member profile extract (MPE). This helps Mastercard to limit the number of entries in the MPE tables, reducing the delivery time to our customers.

Please refer to the *IPM Clearing Formats* manual to learn about the product class override indicator associated with each product code.

Global Clearing Management System looks up the combination of card program identifier, business service arrangement type, business service ID, IRD, and Global Clearing Management System product ID, in table IP0096T1. To perform this lookup, Global Clearing Management System uses

- the actual (unmasked) values for the card program identifier/business service arrangement combination or use masked values, if found

- the interchange rate designator in the IRD field (if IRD validation is required), or a space in the IRD field (if IRD validation is not required), as described in Step 6, and
- the Global Clearing Management System Product ID from table IP0040T1 in the product ID field.

IF...	THEN...
There is no entry in table IP0096T1 that matches all the values mentioned in the previous bullet list	Global Clearing Management System discards the current business service arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.
There is an entry in table IP0096T1 that matches all the values mentioned in the previous bullet list	Global Clearing Management System proceeds to Step 9 to continue validating the IRD.
There is an entry in table IP0096T1 that matches all the values mentioned in the previous bullet list, and • the Card Program Identifier associated with this entry is other than CIR, • the transaction is an ATM transaction (DE 3 [Processing Code], subfield 1 [Cardholder Transaction Type], value of 1), and • at least one entry for this account range in table IP0040T1 contains a Global Clearing Management System Product ID of MCE, MEC, or MBE (denoting a Mastercard Electronic account range).	Global Clearing Management System discards the current business service arrangement and returns to Step 3 to select the next Card Program Identifier/Business Service Arrangement combination. This is because ATM transactions involving Mastercard Electronic cards must qualify for a business service that supports Cirrus.

Step 9: validate AB programs for the IRD

Global Clearing Management System looks up the value in DE 26 (Acceptor Business Code/MCC) of the transaction in table IP0075T1. There may be more than one entry in table IP0075T1 for the DE 26 value.

For each entry in table IP0075T1 applicable to the DE 26 value, Global Clearing Management System obtains the related acceptor business (AB) program for use in table IP0095T1.

Global Clearing Management System then looks up the combination of card program identifier, business service arrangement type, business service ID, interchange rate designator (IRD), and acceptor business (AB) program, in table IP0095T1. As with Step 8 (Validate product codes for the IRD), GCMS searches for a masked value in table IP0087T1. If found, Global Clearing Management System uses masked card program identifier, masked business service arrangement type, masked business service ID, and masked interchange rate designator if found in step 8. Spaces are used in the IRD field for look up when IRD validation is not required as described in Step 6.

If there is no entry in table IP0087T1 that matches all of these values, the business service arrangement is not masked, and the Global Clearing Management System performs table IP0095T1 look-up using the actual card program identifier, business service arrangement type, business service ID, IRD, and acceptor business (AB) program values.

If table IP0095T1 has an entry that matches all of these values, Global Clearing Management System proceeds to Step 10 to continue validating the business service.

Otherwise, Global Clearing Management System returns to table IP0075T1 and obtains the next table IP0075T1 entry for the DE 26 value and looks up its acceptor business (AB) program and business service/IRD information in table IP0095T1.

If Global Clearing Management System does not find an entry in table IP0095T1 that matches the business service arrangement/IRD and any one of the acceptor business (AB) programs in the relevant table IP0075T1 entries, Global Clearing Management System discards the current business service arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.

Step 10: validate transaction currency for the business service

Currently, Global Clearing Management System performs Step 10 only when both the issuer and acquirer are in the Europe region. However, this functionality could be made available, if needed, to customers in other regions.

Global Clearing Management System looks up the combination of card program identifier, business service arrangement type, and business service ID, in table IP0099T1. To perform this lookup, Global Clearing Management System uses the actual (unmasked) values for the card program identifier/business service arrangement combination.

- If table IP0099T1 has no entry for the business service arrangement, Global Clearing Management System proceeds to Step 11 to continue validating the business service.
- If table IP0099T1 has an entry for the business service arrangement, Global Clearing Management System obtains the value in the transaction currency code field and compares it to DE 49 (Currency Code, Transaction) in the message.

If the transaction currencies match, Global Clearing Management System proceeds to Step 11 to continue validating the business service.

Otherwise, Global Clearing Management System discards the current business service arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.

Step 11: check for intracountry business service overrides

Currently, Global Clearing Management System performs Step 11 only when both the issuer and acquirer are in the Europe region. However, this functionality could be made available, if needed, to customers in other regions.

For intracountry business services, Global Clearing Management System looks up the combination of business service arrangement type, business service ID, issuer account range:

low, and issuer account range: high, in table IP0093T1. To perform this lookup, Global Clearing Management System uses

- the actual (unmasked) values for the business service arrangement combination, and
- the issuer account range: low and issuer account range: high fields from the relevant table IP0040T1 entry.

If table IP0093T1 has no entry that matches all of these values, Global Clearing Management System continues processing as described in the Edits and Fee Assignment section of this chapter.

If table IP0093T1 has an entry that matches all of these values and the Card Program Identifier of the card program identifier/business service arrangement being validated is MSI (Maestro) or CIR (Cirrus), Global Clearing Management System discards the current business service arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.

If table IP0093T1 has an entry that matches all of these values and the Card Program Identifier being validated is other than MSI or CIR, Global Clearing Management System checks that the issuing account range country code (found in table IP0040T1) and the merchant country code (found in DE 43 [Acceptor Name/Location], subfield 6 [Acceptor Country Code] of the transaction) are the same.

- If so, Global Clearing Management System continues processing as described in the Edits and Fee Assignment subsection of this section.
- Otherwise, Global Clearing Management System discards the current business service arrangement and returns to Step 3 to select the next card program identifier/business service arrangement combination.

Enforcement of business service arrangements

Mastercard will enforce the use of the business service arrangement for First Presentment/1240 and optionally life cycled transactions between acquirers and issuers.

If all customers in a country have agreed to participate in the pricing agreement, Mastercard is obliged to ensure that applicable transactions receive that pricing.

The business service selection enforcement code will be set to F (business service arrangement is mandatory for First Presentment/1240 messages) for designated business service arrangements.

This means that First Presentment/1240 transactions occurring between an Acquirer Reference ID and an issuer account range associated with the intracountry business service arrangements whose business service selection enforcement code has been set to F (mandatory business service arrangement) must be submitted for an interchange program that is valid for that intracountry business service arrangement.

If Global Clearing Management System processes a First Presentment/1240 transaction occurring between an acquirer and an issuer, and it is submitted with an IRD that does not qualify for the intracountry business service arrangement but qualifies for a less restrictive business service such as the regional business service arrangement, Global Clearing Management System will reject the transaction with error codes

- 2425: PDS 0158 (Business Activity), subfield 4 (Interchange Rate Designator) is not valid for enforced business service arrangement and acceptance brand ID code, and
- 2451: submitted business service arrangement is not valid. Must be submitted for enforced business service arrangement.

First Chargeback/1442, Second Presentment/1240, or Arbitration Chargeback/1442 transactions that contain an IRD that applies to the respective regional business service arrangement will still be permitted.

The business service selection enforcement code does not apply to the following transactions:

- Fee Collection/1740 messages. Existing functionality as it pertains to Fee Collection/1740 messages remains unchanged.
- Global collection only (On-Us and intraprocessor) transactions
- Transactions qualifying for an intracountry business service arrangement submitted with an airline acceptor business code (MCC in the range of 3000 to 3299)

Countries with established business service arrangements fall into one of two business service arrangement categories: default or non-default.

Default business service arrangements

Intracountry business service arrangements have been set up in Global Clearing Management System. These arrangements are established as default, which means that all acquiring BINs and all issuing account ranges identified for this country are automatically included as participants.

Their participation in the enforced intracountry business service arrangement program will be finalized once the business service arrangement enforcement code has been updated from space (default value, not a mandatory business service arrangement) to F (mandatory business service arrangement).

Life cycle processing supported by Global Clearing Management System

Global Clearing Management System supports life cycle activity processing when changes are made to certain system parameters or qualification parameters for card program identifiers, business service arrangements, and interchange rate designators (IRDs). This allows reversals and exception items such as chargebacks and retrievals to continue to be processed with the original settings, while new activity (such as First Presentment-originals) is processed using the new settings.

A life cycle indicator is associated with specific qualification parameters, which Global Clearing Management System uses to determine the valid messages (MTI/function code/processing code/reversal indicator combinations) for a given parameter. The life cycle indicator codes associated with each parameter are as follows.

Code	Description
A	All transaction types are valid.
L	Only Life Cycle transactions are valid.

A life cycle indicator parameter exists in the following IPM MPE tables and associated parameters.

Table ID	Name	Life cycle indicator added to parameter
IP0036T1	Default Business Service	For combination of card program identifier/ business service arrangement type/business service arrangement ID
IP0056T1	Customer Business Service Arrangement Participation	For combination of card program identifier/ business service arrangement type/business service arrangement ID/customer ID
IP0075T1	Acceptor Business Codes (MCCs)	Acceptor Business Code
IP0075T1	Acceptor Business Codes (MCCs)	Acceptor Business Program
IP0076T1	Mastercard Assigned IDs	Mastercard Assigned IDs
IP0090T1	Issuer Account Range Card Program Identifier and Business Service Arrangement Participation	For combination of card program identifier/ business service arrangement type/business service arrangement ID/issuer account range-low/ issuer account range-high
IP0091T1	Acquiring BIN Card Program Identifier and Business Service Arrangement Participation	For combination of card program identifier/ business service arrangement type/business service arrangement ID/acquiring BIN
IP0096T1	Card Program Identifier/Product Restrictions	Global Clearing Management System Product ID For combination of card program identifier/ business service arrangement type/business service arrangement ID/interchange rate designator
IP0094T1	Geographic Restrictions for Card Program Identifier/Business Service Arrangement	Country Code For combination of card program identifier/ business service arrangement type/business service arrangement ID

Table ID	Name	Life cycle indicator added to parameter
IP0094T1	Geographic Restrictions for Card Program Identifier/Business Service Arrangement	Region For combination of card program identifier/ business service arrangement type/business service arrangement ID
IP0095T1	Acceptor Business Program Restrictions (new)	Acceptor Business (AB) Program For combination of card program identifier/ business service arrangement type/business service arrangement ID/interchange rate designator

When a parameter has a life cycle indicator of L, only life cycle transactions, as defined by Mastercard, are valid for the parameter value.

Example

A business service arrangement has the following setup for AB programs:

AB program setup for business service arrangement 4/123456

AB Program	Life Cycle Indicator
V001	A = All
A001	L = Life Cycle Only

In the above example, the AB program value for A001 has a life cycle indicator value of L-life cycle only. In this instance, Global Clearing Management System will accept transactions that are defined as life cycle transactions only if the acceptor business code in DE 26 is assigned to the A001 AB program.

The following table indicates the transaction types that are defined by Mastercard as life cycle transactions:

MTI	Function Code	Processing Code	Reversal Indicator
1240	200	All Processing Codes	R
1240	205	All Processing Codes	All Reversal Indicator values
1240	282	All Processing Codes	All Reversal Indicator values
1442	450	All Processing Codes	All Reversal Indicator values
1442	451	All Processing Codes	All Reversal Indicator values

MTI	Function Code	Processing Code	Reversal Indicator
1442	453	All Processing Codes	All Reversal Indicator values
1442	454	All Processing Codes	All Reversal Indicator values
1644	603	All Processing Codes	All Reversal Indicator values
1740	700	All Processing Codes	All Reversal Indicator values
1740	780	All Processing Codes	All Reversal Indicator values
1740	781	All Processing Codes	All Reversal Indicator values
1740	782	All Processing Codes	All Reversal Indicator values

Global Clearing Management System edits, fee assignments, and fee calculation

This section describes Global Clearing Management System edits, fee assignments, and fee calculation.

Edits

The IP2nnT1 series tables contain valid values based on card program identifier/business service arrangement combination. After Global Clearing Management System assigns a specific card program identifier/business service arrangement combination, Global Clearing Management System may perform edits that require specific valid values depending on the business service. For these types of edits, Global Clearing Management System uses the IP2nnnT1 table entries that contain specific values in the card program identifier, business service arrangement type, and business service ID fields. Valid-value edits that are not specific to a business service arrangement are performed using the default values of spaces and zeros in the card program identifier/business service arrangement combination fields.

Global Clearing Management System also performs other edits, depending on the business service assigned, and does not use the IPM MPE for these edits.

If the transaction fails any edits, Global Clearing Management System rejects the transaction. Otherwise, Global Clearing Management System continues processing and determines the fees applicable to the transaction.

Fee assignment

Global Clearing Management System looks up the transaction and business service information in table IP0052T1. Table IP0052T1 contains pointers to tables IP0053T1 and IP0057T1. Table IP0053T1 contains the fee groups that are assigned to the transaction. Table IP0057T1 contains override pointers to table IP0053T1.

Global Clearing Management System already looked up the card program identifier, business service arrangement type, business service ID, IRD, message type identifier (MTI), function code, and processing code information in table IP0052T1, in step 7 of this process. Global Clearing

Management System now looks at the fee code pointer information in the table IP0052T1 entry.

If the IP0052T1 field Product Class: Acceptor Override Pointer contains all zeros, Global Clearing Management System disregards it and instead looks up the value from table IP0052T1 Fee Code Pointer in the Fee Code Pointer field in table IP0053T1. Global Clearing Management System then calculates the fees as described in the Fee Calculation section of this article.

If the IP0052T1 field product class: acceptor override pointer contains a non-zero value, it indicates that an override may exist for the interchange rate and represents a pointer to table IP0057T1.

Global Clearing Management System searches table IP0057T1 in accordance with the pointer obtained from table IP0052T1. Each pointer may have multiple entries. The multiple entries represent a number of different override rates that can be applied. On the basis of a predetermined hierarchy, Global Clearing Management System searches until the first matching entry is found. If no match is found, no override applies.

The criteria combinations are listed below in hierarchical order of selection:

1. The Mastercard Assigned ID, in combination with the product class and MCC
2. The Mastercard Assigned ID, in combination with the product class and acceptor business type
3. The Mastercard Assigned ID, in combination with the product class
4. The Mastercard Assigned ID, in combination with MCC
5. The Mastercard Assigned ID, in combination with the acceptor business type
6. The Mastercard Assigned ID
7. The product class, in combination with MCC
8. The product class, in combination with the acceptor business type
9. MCC
10. The acceptor business type
11. The product class

If Global Clearing Management System finds an entry in table IP0057T1 that matches the combination of one of the criteria listed in the hierarchy above, Global Clearing Management System then looks up the value from that table IP0057T1 entry's fee code pointer in the fee code pointer field in table IP0053T1. Global Clearing Management System then applies the appropriate rate types and calculates the fees as described in the Fee Calculation section of this manual.

If Global Clearing Management System does not find an entry in table IP0057T1 that matches the combination of one of the criteria listed in the hierarchy above, Global Clearing Management System uses the base rate. Global Clearing Management System then calculates the fees as described in the Fee Calculation section of this manual.

A refund service fee on European commercial transactions is applied a fixed percentage of the corresponding commercial purchase rate.

This will apply to all commercial refund transactions that are cleared within the European business service agreements (BSAs) having a value of Y in the exception rate override switch field in IPM MPE table IP0098T1.

Refunds on European commercial products will use the basis of product class override to look up the percentage that will apply to the commercial purchase rate.

If no match is found, no override applies and the Global Clearing Management System uses the base rate as the fixed percentage of the commercial purchase rate.

Fee calculation

Table IP0053T1 contains multiple entries for the same fee code pointer. Each entry contains the payment party (issuer, acquirer, or internal entity), the interchange rate (if applicable) and rate direction, the interchange unit fee (if applicable) and its direction, the currency code and exponent for the unit fee (if applicable), and any minimum or maximum fee limits and direction.

NOTE:

The IPM MPE file does not provide the rates and fees for all business service arrangements, because this information is proprietary. The business service arrangement and IRD parameters are stored in the IPM MPE file, but the fee code pointer and product class: acceptor override pointer fields in table IP0052T1 that normally point to the correct fee entries in tables IP0057T1, IP0053T1, or both, contain all zeros.

The table IP0053T1 entries are grouped by rate type. For example, Rate Type 001 is the interchange fee and Rate Type 014 is the first-level corporate incentive discount (currently applies only to intra-European and inter-European transactions). For rate types other than 001, Global Clearing Management System determines whether to apply the fees according to internal programming logic. For example, Global Clearing Management System applies the Rate Type 014 first-level corporate incentive discount only if the transaction is accompanied by the required addendum elements. Participating customers understand the conditions in which the various rate types apply to business service arrangements in which they participate.

The rate types are as follows:

- 000: Cash Advance Fee (applies to manual cash disbursement transactions)
- 001: Interchange Fee
- 002: Merchant Investment Fee
- 003: Pay by Account Rate Adjustment Increase
- 004: Pay by Account Rate Adjustment Decrease
- 010: IVA on interchange fee (specific to Mexico processing)
- 013: ATM Late Presentment Fee (Currently specific to Europe processing. Applies to non-reversal First Presentment ATM transactions for which the transaction date is older than 45 days.
- 014: First-level Corporate incentive discount (applies when one corporate IRD can have different rates, depending on the presence of valid addendum data. Currently specific to Europe processing)

- 015: Purchase with Cash Back (applies only to the cash back portion of a purchase with cash back transaction)
- 016: Rewards Program
- 017: Second-level Corporate Incentive discount (applies when the transaction qualifies for neither the First-level Corporate incentive discount nor the U.K. Summary VAT Incentive discount, but the acquirer provides information in PDS 0502 [Custom Identifier]. Currently specific to Europe processing)
- 018: New UK Summary VAT Incentive Interchange (applies when the transaction does not qualify for the First-level Corporate Incentive discount, but the acquirer submits the data needed for Mastercard to generate the U.K. Summary VAT Invoice on behalf of the merchant. Required data is
  - PDS 0508 [Customer Code]
  - PDS 0596 [Acceptor Tax ID], in which subfield 1 [Acceptor Tax ID] contains the correct tax ID and subfield 2 [Acceptor Tax ID Provided Code] contains value Y
  - PDS 0597 [Total Tax Amount]
  - PDS 0600 [Acceptor Reference Number]
  - PDS 0641 [Product Code]
  - PDS 0642 [Item Description]
  - PDS 0647 [Extended Item Amount], with a non-zero value, and
  - PDS 0682 [Detail Tax Amount 1]).
- 019: Merchant Interchange
- 020: Europe Enhanced Value

Chapter 14 Settlement service

This chapter defines the settlement service, various settlement service levels, and how Global Clearing Management System supports the settlement services.

Definition of settlement service

Mastercard's settlement services provide the method by which Mastercard and customers transfer funds to complete settlement for clearing and billing activities.

A settlement service is a facility within which funds are exchanged between customers and Mastercard to settle transaction and fee amounts Each settlement service supports a reconciliation currency that Mastercard and its customers may exchange. Refer to the *Settlement Manual* for details about each settlement service.

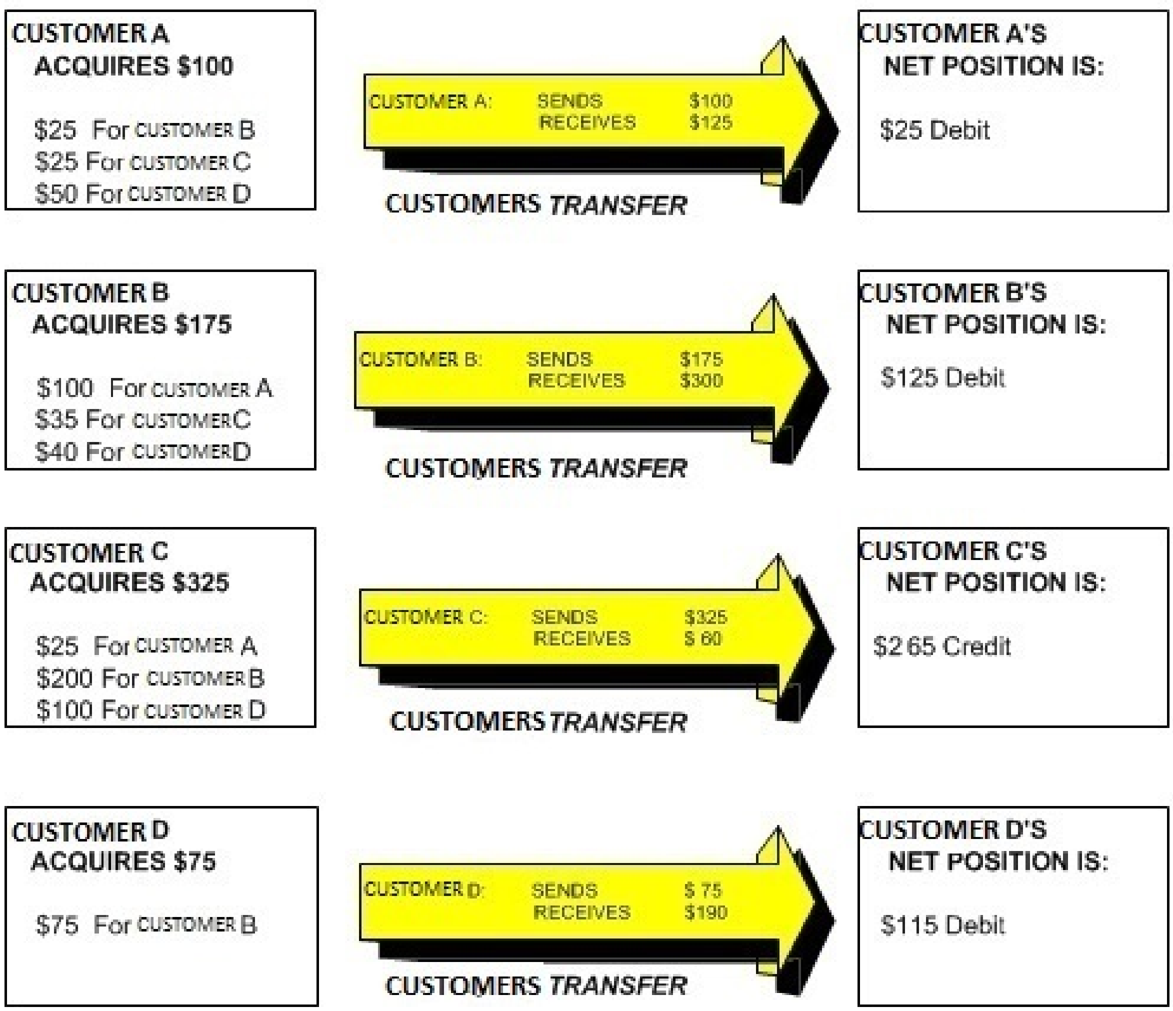
Reconciliation currency is the currency in which a customer is paid or pays for the settlement of its activity. Reconciliation currency also is referred to as payment currency or settlement currency.

Calculating net positions

This diagram shows how Mastercard settles transactions among four customers: A, B, C, and D.

MasterCard receives incoming transaction data from each member between 08:00 and the end of the sixth clearing (08:00) the next day. In the below example, settlement occurs after 08:00 . MasterCard applies the interchange fees during each clearing to each applicable transaction. The boxes below show the net amount that each customer has submitted during processing.

After the Settlement Service cutoff MasterCard advises the global settlement bank of each member's net position and advises customers of their positions.



Settlement service levels

Mastercard requires each customer to select the settlement service levels in which it wants to participate and to maintain a settlement account in the appropriate currency. The following explains settlement service functionality, which allows customers to customize settlement processing criteria for their transaction data.

The Global Clearing Management System will determine the settlement service, account, and associated currency for each payment party according to customer selected options.

Customers choose the settlement service levels and corresponding reconciliation currency that they want to support their specific settlement needs. Customers optionally may designate their participation in specific settlement services; however, all customers are required to participate in at least one regional settlement service. Clearing activity between two customers usually is settled at the lowest possible common settlement service level. If a customer pair does not settle in a common settlement service, the customers settle at their respective regional settlement service accounts. The defined regional default service for the customer will be used if no other settlement service can be applied to the transaction.

Global Clearing Management System supports the settlement service levels listed in the following table.

Settlement Service Level	Description
Bilateral	Customers participating in a bilateral agreement instruct Mastercard to clear their transactions through Global Clearing Management System applying all appropriate business rules. The customers settle these transactions directly rather than through the Mastercard Settlement Account Management (S.A.M.) system.

Settlement Service Level	Description
Intracurrency	Customers participating in an intracurrency settlement service adhere to a common settlement calendar, settlement cutoff, and reconciliation currency for their transactions. Mastercard settles these transactions for both parties on the same day. Interchange fees are calculated in the reconciliation currency, minimizing currency conversion impacts to the customers participating in the intracurrency settlement agreement. Customers that participate in intracountry interchange may settle transactions through intracurrency settlement services or regional settlement services. Transactions that qualify for intracountry interchange, but not intracurrency settlement service, are processed as regional settlement transactions; however, intracountry interchange is still applied. A customer ID may participate in multiple intracurrency settlement services. The participating customers must all agree on one reconciliation currency for each intracurrency service. Intracurrency settlement is an optional settlement service, and Mastercard must approve any agreements.
Regional	A settlement agreement involving customers that may settle in different currencies and that may use different settlement banks. This is the default agreement; that is, transactions settled by Mastercard that do not qualify for intracurrency settlement are automatically settled in a regional settlement service. Transactions that qualify for regional settlement are settled in U.S. dollars or a local currency approved by Mastercard, at a settlement bank defined by Mastercard. Each customer ID must participate in at least one regional settlement service. If a customer participates in more than one regional settlement service, it must designate one regional settlement service as the default service, with no selection criteria. For the other regional settlement services, the customer must define specific settlement service selection criteria to indicate the circumstances in which Global Clearing Management System should select each of the other regional services.

Base currency is the currency that Mastercard uses as the basis for settlement calculations. All transaction currencies are converted against this currency when determining the customer reconciliation amount in the reconciliation currency. Summing all reconciliation amounts in base reconciliation currency will net to zero.

Customers may specify more than one account within each settlement service to segregate settlement activity according to criteria within the transaction, such as card program, account range, or BIN. However, each account must be in the currency supported by the agreement.

NOTE: The Global Settlement Services department must approve all settlement arrangements requested by a customer.

Settlement service selection process

The hierarchy for settlement service selection is bilateral, intracurrency, then regional.

The settlement service selection process evaluates customer participation in this order. If no intracurrency settlement service agreement exists in which both customers participate, Mastercard assigns each payment party's regional settlement service and account information.

Transactions are qualified for a settlement service agreement that is in effect at the time that Global Clearing Management System processes the transaction. For financial exception items (chargebacks, second presentments, and fee collections) this may result in the assignment of a different settlement service from the time that Global Clearing Management System originally processed the transaction as a first presentment.

If, during the settlement service selection process, it is determined that the transaction qualifies for multiple settlement services within the same level, Global Clearing Management System will use the parameters with the most specific matching criteria; otherwise, the parameters with the most recent effective date and time are used.

To illustrate the settlement service selection process, assume that the following customers participate in settlement service agreements, with no additional criteria specified, as shown in the following table.

Customer	Intracurrency	Regional
001234	X	X
005678	X	X
009876		X

Assume that customers 001234 and 005678 participate in the same intracurrency settlement agreement.

According to the information above, the following settlement services would be selected:

Transactions from 001234 to/from 005678⇛ Intracurrency settlement

Transactions from 005678 to/from 009876⇛ Regional settlement

Transactions from 009876 to/from 001234⇛ Regional settlement

Settlement service selection

Customers optionally may use the following elements to specify how Global Clearing Management System should select the settlement service and associated account for their submitted clearing data.

- PDS 0158 (Business Activity), subfield 1 (Card Program Identifier)

- Account Range (DE 2 [Primary Account Number])
- DE 31 (Acquirer Reference Data), subfield 2 (Acquirer Reference ID)
- Issuing/Acquiring Activity (message type identifier [MTI] plus DE 24 [Function Code])

Settlement service selection criteria are communicated to Mastercard through the Net Settlement Information Form (Form 0339). These options may be applied for either of the Global Clearing Management System supported settlement service levels: intracurrency and regional.

NOTE: Global Clearing Management System does not perform settlement service selection for Global Collection Only transactions because these transactions are submitted for reporting purposes only.

Settlement service parameters

Customers may use optional parameters to specify how Global Clearing Management System should select the settlement account associated to the settlement service for their submitted clearing data.

IPM Parameter	Element	Usage
Card Program Identifier	PDS 0158 (Business Activity), subfield 1 (Card Program Identifier)	If selected by the customer, this may be used for settlement service/TAA selection.
Account Range	Derived from DE 2 (Primary Account Number [PAN])	If selected by the customer, this may be used for the settlement service/TAA selection. This element identifies the account range associated with the cardholder account number of the transaction.
Acquiring BIN	DE 31 (Acquirer Reference Data), subfield 2 (Acquirer Reference ID)	If selected by the customer, this may be used for settlement service/TAA selection. This element identifies the acquiring BIN associated with the acquirer of the transaction.
Issuing/Acquiring/Both Activity	Transaction Function (MTI plus DE 24 [Function Code])	If selected by the customer, this may be used for settlement service/TAA selection. The transaction function is used to classify a transaction as issuing and acquiring activity. Fee collection messages are considered an acquirer transaction for the sending ICA when this option is used.

NOTE: The customer's transfer agent (TA) may be the customer or a separate entity that the customer authorizes to settle with Mastercard on its behalf.

A TAA is a combination of the customer's transfer agent (TA) and the customer bank account number.

The following is an example of the settlement service selection process. Assume both customers participate in an intracurrency service using Canada Dollars (CAD) as the reconciliation currency. Customer ID 001234 is both an issuer and an acquirer. This customer has criteria established for the Intracurrency 1 settlement service. The customer chooses to settle only its issuing activity submitted with an assigned card program identifier of Mastercard Credit (MCC). Customer ID 005678 is an issuer only and has not specified criteria in order for transactions to qualify in this service.

The transaction is a First Presentment/1240 message and assigned a card program identifier of MCC. The transaction is sent by customer ID 001234 and received by customer ID 005678.

Customer	Settlement Service	CPI	Acct Rg	Acq BIN	Iss/Acq Act	TAA	Txn Qualify
001234	Intracurrency 1 CAD	MCC	—	—	Issuing	11111	No
005678		—	—	—	—	22222	Yes
Transaction meets criteria for each customer?		✓	—	—	No	—	No

Global Clearing Management System determines the classification of acquiring activity or issuing activity based on customer ID (sending or receiving) within the message:

- Sending: DE 94 (Transaction Originator Institution ID Code)
- Receiving: DE 93 (Transaction Destination Institution ID)

In first presentments the sending customer is identified as the acquirer and the receiving customer is identified as the issuer.

In the example above, the transaction does not qualify for the service, because it did not meet the criteria of customer ID 001234 that only its issuing activity should be settled within this service. Since customer ID 001234 is sending the first presentment, it is acting in the capacity of an acquirer.

In first chargebacks, the sending customer is identified as the issuer and the receiving customer is identified as the acquirer.

In the example above, the transaction qualifies for the service, because it meets the customer's criteria that only its issuing activity should be settled within this service. Since customer ID 001234 is sending the first chargeback, it is acting in the capacity of an issuer.

Settlement service participation and criteria selection

Customers designate new or changed settlement account information using the Net Settlement Information Form (NSIF) (Form 0339). Customers may also select criteria by which Mastercard will select an appropriate settlement service and transfer agent assignment for their transactions.

These criteria will be on the NSIF. Selection criteria for existing settlement services or accounts may be submitted using the NSIF. The Net Settlement Agreement (NSA) is in the *Settlement Manual*.

The bilateral and intracurrency settlement agreement information is distributed to customers through the Integrated Product Messages (IPM) Mastercard Parameter Extract (MPE). Customers can use this information as the selection criteria in their own settlement service selection process. For example, by using the selection criteria, customers determine when they can submit chargeback transactions in their local currency as opposed to U.S. dollars.

Intracurrency settlement service selection

Global Clearing Management System will verify the possible intracurrency settlement services in which both the sending and receiving customers participate. All criteria associated with each customer's participation are also used in the selection process.

The following information is applicable for customers participating in an intracurrency settlement service agreement. Customers who do not participate in an intracurrency settlement service agreement may disregard this section.

Intracurrency settlement service level specific features include

- a common settlement currency used for all payment parties
- a common settlement calendar used for all payment parties
- a common settlement cutoff(s) used for all payment parties
- a common settlement date interval used for all payment parties, and
- a common value date interval used for all payment parties.

Step 1: settlement service selection

Global Clearing Management System compares the possible intracurrency settlement services in which both the sender and receiver participate to determine whether there are any common intracurrency settlement service agreements, as follows:

- If the customer pair has only one common intracurrency settlement service agreement, that service is selected and used in the subsequent validation process.
- If the customer pair has multiple common intracurrency settlement service agreements, the common settlement service agreement with the most specific matching criteria is selected. Otherwise, the common settlement service agreement with the most recent effective date is selected and used in the subsequent validation process.

Example 1

Customer 001234 and customer 005678 both participate in intracurrency settlement agreements with the specified criteria in the following table.

Customer	Settlement Service ID	CPI	Acct Rg	Acq BIN	Iss/Acq Act	Effective Date
001234	Intracurrency 1	Not Specified	Not Specified	Not Specified	Not Specified	1 Dec 2003
	Intracurrency 2	MCC	Not Specified	Not Specified	Not Specified	15 May 2004
005678	Intracurrency 1	Not Specified	Not Specified	Not Specified	Not Specified	1 Dec 2003
	Intracurrency 2	MCC	Not Specified	Not Specified	Not Specified	15 May 2004
009012	Intracurrency 3	Not Specified	Not Specified	Not Specified	Not Specified	1 Dec 2003

Transactions submitted between customer 001234 and customer 005678 with an assigned card program identifier of MCC and processed on or after May 15th 2004, will be qualified for the intracurrency 2 settlement agreement. These transactions could be qualified for either the intracurrency 1 or the intracurrency 2 settlement service agreement. However, the intracurrency 2 agreement specifying all transactions with an assigned card program identifier of MCC contains more specific criteria, and is thus the selected settlement service agreement.

Transactions submitted between customer 001234 and customer 005678 with an assigned card program identifier other than MCC will be qualified for the intracurrency 1 settlement agreement.

Transactions submitted between customer 001234 and customer 009012 do not have an intracurrency settlement agreement in common and, therefore, would use the regional settlement service selection.

Example 2

Customer 001234 and customer 005678 both participate in intracurrency settlement agreements with the specified criteria in the following table.

Customer	Settlement Service ID	CPI	Acct Rg	Acq BIN	Iss/Acq Act	Effective Date
001234	Intracurrency 1	Not Specified	Not Specified	Not Specified	Not Specified	1 Dec 2003
	Intracurrency 2	Not Specified	Not Specified	Not Specified	Not Specified	15 May 2004

Customer	Settlement Service ID	CPI	Acct Rg	Acq BIN	Iss/Acq Act	Effective Date
005678	Intracurrency 1	Not Specified	Not Specified	Not Specified	Not Specified	1 Dec 2003
	Intracurrency 2	Not Specified	Not Specified	Not Specified	Not Specified	15 May 2004

Transactions submitted between customer 001234 and customer 005678 on or after 15 May 2004 could be qualified for either the intracurrency 1 or the intracurrency 2 settlement agreement. There are no criteria for either service to help the system decide. Therefore, the selection process will use the most recent effective date and qualify transactions between these customers in the intracurrency 2 service.

The above example (example 2) is included to explain Global Clearing Management System functionality. In reality, customers would add specific criteria to one of these settlement service selection setups, or delete one, instead of defining two settlement services with no selection criteria.

Step 2: settlement service and TAA selection

For each payment party (the sender and the receiver), identify all transfer agent assignments that meet each customer's criteria specified within the common settlement services identified in step 1.

Step 2a: settlement service and issuer TAA selection

Settlement service is assigned according to one of the following:

- If there is only one intracurrency settlement service in common and only one TAA for each payment party that matches the transaction data, Global Clearing Management System assigns that settlement service and TAA combination to the transaction for each payment party.
- If there are multiple settlement services and/or TAA combinations with customized assignment criteria that match the transaction data, the issuing customer's assignment that has the most specific criteria matching the transaction is used to determine the service and the issuing customer TAA.
- If there are multiple TAA assignments for the issuing customer that match the transaction data, the assignment with the most recent effective date is used.

Step 2b: acquirer TAA selection

Once the settlement service and TAA are assigned for the issuing customer, the acquiring customer's TAA is selected from those identified within the selected settlement service that match the transaction criteria:

- If there is only one TAA for the acquirer within the selected settlement service, that assignment is used for the acquirer's settlement.

- If there are multiple TAA combinations with customized assignment criteria that match the transaction data, the assignment that has the most specific criteria matching the transaction is used to determine the acquiring customer's TAA.
- If there are multiple TAA assignments for the acquiring customer that match the transaction data, the assignment with the most recent effective date is used.

Example

To illustrate the TAA selection process, assume that both customers participate in the intracurrency 1 service and that customer 001234 is the issuing customer with the specified criteria shown in the following table.

Settlement Service ID	Customer	TAA Acct and Cur	CPI	Acct Rg	Acq BIN	Iss/ Acq Act	Effective Date
Intracurrency 1	001234	XXXX, HKD	DMC	Not Specified	Not Specified	Not Specified	1 Dec 2004
Intracurrency 2	001234	YYYY, HKD	MCC	Not Specified	Not Specified	Not Specified	1 Jan 2004
Intracurrency 2	001234	ZZZZ, HKD	MCC, MSI	Not Specified	Not Specified	Not Specified	1 Feb 2004
Intracurrency 1	005678	AAAA, HKD	MCC, MSI	Not Specified	Not Specified	Not Specified	1 Mar 2004
Intracurrency 2	005678	BBBB, HKD	MCC	Not Specified	Not Specified	Not Specified	1 Jan 2004
Intracurrency 2	005678	CCCC, HKD	Not Specified	Not Specified	Not Specified	Not Specified	1 Feb 2004

Transactions submitted with a transaction currency of HKD that are assigned a card program identifier of MCC will be assigned the settlement service ID intracurrency 2 for both customers, and TAA of ZZZ for customer 001234 because it is the assignment with the most recent effective date. Because the transaction meets both of the acquirer's TAA criteria for the intracurrency 2 agreement, the TAA of BBBB would be chosen because it has the acquirer's most specific criteria that match the transaction.

Step 3: transaction amount and fee calculation

The transaction amount is converted to the intracurrency account currency (reconciliation currency), if necessary. Additionally, the interchange fees are calculated in the intracurrency account currency (reconciliation currency).

Regional settlement service selection

Regional settlement services are qualified independently and do not require both the sender and receiver to participate in the same regional level settlement service. If the transaction does not qualify for intracurrency settlement, it is qualified for settlement at the regional level.

The regional settlement service level specific features include

- each regional service specifies a settlement calendar.
- each regional service specifies settlement cutoff time(s)
- each regional service specifies a settlement date interval, and
- each regional service specifies a settlement value date interval.

Step 1: settlement service and transfer agent assignment (TAA) selection

The settlement service selection process described in the previous section does not apply to transactions processed at the regional settlement service level. Regional level services are qualified independently for the sender and receiver against the customer's specified criteria, as follows:

- If only one regional settlement service and TAA combination is established for a payment party that matches the transaction data, Global Clearing Management System assigns that TAA and account currency to the transaction.
- If multiple settlement services and/or TAAs are established with customized assignment criteria for a payment party that matches the transaction data, Global Clearing Management System assigns the settlement service and TAA combination with the most specific criteria. If more than one settlement service and TAA combination have the same level of specificity, the TAA with the most recent effective date is selected.
- The default settlement service and TAA are selected when no selection criteria are defined that match the transaction.

Example 1

To illustrate the service selection process, assume that a customer participates in settlement service agreements with the specified selection criteria shown in the following table.

Customer	Settlement Service ID	TAA Acct and Cur	CPI	Acct Rg	Acq BIN	Iss/Acq Act
001234	Regional 1	XXXX, USD	Not Specified	Not Specified	Not Specified	Not Specified
001234	Regional 2	YYYY, CAD	MCC	Not Specified	Not Specified	Not Specified

Transactions submitted with an assigned card program identifier of MCC will be assigned the settlement service ID regional 2 and account YYYY because it has the most specific criteria that match the transaction. Transactions submitted with an assigned card program identifier other than MCC would be assigned to the settlement service ID regional 1 and account XXXX.

Example 2

To illustrate the settlement service TAA account selection process, assume that a customer participates in the regional settlement service agreements as specified in the following table.

Customer	Settlement Service ID	TAA Acct and Cur	CPI	Acct Rg	Acq BIN	Iss/Acq Act	Effective Date
005678	Regional 1	VVVV, USD	MCC	Not Specified	Not Specified	Issuing	1 Jan 2004
	Regional 1	XXXX, USD	DMC	Not Specified	Not Specified	Issuing	15 Jan 2004
	Regional 2	YYYY, CAD	Not Specified	Not Specified	Not Specified	Acquiring	1 Jan 2004
	Regional 2	ZZZZ, CAD	Not Specified	Not Specified	Not Specified	Acquiring	15 Jan 2004
	Regional 3	AAAA, USD	Not Specified	Not Specified	Not Specified	Not Specified	1 Jan 2004

The optional settlement service selection criteria defined above can have multiple occurrences per customer and are used to determine or restrict settlement account selection. Each unique grouping represents the criteria used to select a specific customer ID, TA, and TAA combination. The more specific the criteria defined by the customer, the more combinations of customer ID, TA, and TAA will exist.

Customer 005678 is an issuer or acquirer. In this example, all issuing transactions with a card program identifier of MCC or DMC and a transaction currency of USD will be settled in USD through the Regional 1 service. However, transactions with a card program identifier of MCC will be settled using VVVV and transactions with DMC will be settled using account XXXX. All acquiring transactions will be settled in CAD through the Regional 2 service in account YYYY before 15 Jan 2004 and will be settled in account ZZZZ on or after 15 Jan 2004. All other issuing transactions will settle in USD through the Regional 3 Service in account AAAA.

Step 2: transaction amount and fee calculation

The transaction amount is converted through U.S. dollars to the TAA account currency (reconciliation currency). Interchange fees are calculated in U.S. dollars and converted to each TAA account currency.

Settlement date cycle calculation

Once the appropriate settlement service has been identified for each payment party, the settlement date is assigned.

The settlement date is the date on which the Mastercard Settlement Account Management (S.A.M.) system determines the customers' final net settlement positions and generates the settlement advisements for customers and transfer agents.

A single transaction may qualify for a different regional settlement service for each payment party, which may result in the use of a different settlement date for each customer. Transactions qualifying for the same intracurrency agreements will always result in the same settlement date for each customer. The settlement date rules include the following:

- If the settlement bank is closed, Global Clearing Management System will not assign that date as a settlement date. For regional services, the U.S. settlement holidays are used.
- Settlement holiday dates are expressed in relation to Central Site time, from a St. Louis, Missouri, USA perspective.
- Certain settlement agreements may optionally delay their settlement. Two methods are used to delay settlement:
  - Generate the settlement advisements a specific number of days after the transactions have been processed. The delayed settlement advisements result in delayed funds movement.
  - Generate the settlement advisements as scheduled, but delay the funds movement by a specific number of days after the advisement.

NOTE: In addition to the six primary clearing cycles, a seventh clearing cycle exists for Mexico domestic switching transactions. For more information on the seven clearing cycles, refer to the Daily Clearing Cycle Schedule section.

Fee calculation routines for settlement service levels

Global Clearing Management System uses the settlement service level to determine the currency in which to calculate fees. The following table describes how Global Clearing Management System calculates fees for each settlement service level.

Settlement Service Level	Fee Calculation Method
Intracurrency	• Transaction amounts and fixed fees are converted to the reconciliation currency (if necessary). • Fees are calculated in the reconciliation currency. • Fees are converted to U.S. dollars for reporting purposes.

Settlement Service Level	Fee Calculation Method
Regional	• Transaction amounts and fixed fees are converted to U.S. dollars (if necessary). • Fees are calculated in U.S. dollars. • Transaction amounts and calculated fees are converted to each customer's reconciliation currency and remain in U.S. dollars for reporting purposes.

System-provided data in PDS 0159 (Settlement Data)

Global Clearing Management System creates PDS 0159 (Settlement Data) in IPM-format messages sent to the receiving customer to provide reconciliation and settlement information for each clearing transaction that has settlement impact. This element contains nine subfields.

PDS 0159 Data that GCMS will Provide	Description		
Settlement Service Transfer Agent ID Code	Populated according to the Transfer Agent ID selected for the receiving customer		
Settlement Service Transfer Agent Account	Populated according to the Transfer Agent Assignment bank account number for the receiving customer		
Settlement Service Level Code	1	=	Regional
	3	=	Intracurrency
Settlement Service ID Code	Populated according to the settlement service ID selected for the receiving customer		
Settlement Foreign Exchange Rate Class Code	Populated according to the currency conversion rate type used:		
	F	=	Fixed; indicates that a fixed rate was used to convert from base currency to receiver's payment currency
	M	=	Market; indicates that a market rate was used to convert from base currency to receiver's payment currency
	N	=	Not applicable; no conversion performed
Reconciliation Date	Populated with the Global Clearing Management System processing date (located in PDS 0158 [Business Activity], subfield 5 [Business Date]) associated with the message		

PDS 0159 Data that GCMS will Provide	Description
Reconciliation Cycle	Populated with the Global Clearing Management System processing cycle (located in PDS 0158 [Business Activity], subfield 6 [Business Cycle]) associated with the message
Settlement Date	Populated with the date on which net settlement positions are determined. This date matches the date of the corresponding Settlement Advisement generated from the Mastercard Settlement Account Management (S.A.M.) system. If Global Clearing Management System assigns a settlement service in which the customer does not provide the settlement date, this field contains the appropriate settlement service date, as calculated by Global Clearing Management System for the receiving customer. If Global Clearing Management System assigns a settlement service in which the customer is required to provide the settlement date, this field contains the customer submitted settlement date. This date is adjusted for each settlement service level and settlement service ID.
Settlement Cycle	Populated with the appropriate settlement service settlement cycle determined by Global Clearing Management System

Settlement service advisements

Mastercard offers settlement reporting to the customer, the transfer agent, or both. The customer advisement provides a settlement report for each settlement date and settlement service. The transfer agent advisement provides a settlement report for each settlement date and settlement service and itemizes settlement positions by customer.

A unique settlement advisement is generated for each transfer agent assignment (TAA) within a settlement service. If a customer has the same settlement account designated for multiple intracurrency and regional settlement services, a unique settlement advisement is generated for each settlement service.

Customer settlement advisements

Customers optionally receive settlement advisements for all settlement positions for clearing activity resulting from one settlement service date and cutoff cycle.

Customer settlement advisements serve as notification to a customer of outstanding settlement positions resulting from a settlement service cutoff. This either provides the customer a method to ensure that appropriate funds are in place to effect settlement or notifies the customer about funds that will be available.

NOTE: For more information about settlement advisements and the Net Settlement Information Form (NSIF), refer to the *Settlement Manual*.

Chapter 15 Currency conversion

This chapter describes the currency conversion process, including how Global Clearing Management System calculates and rounds amounts during currency conversion.

Overview of currency conversion service performed during clearing process

Currency conversion is a service that Mastercard performs to convert transaction amounts to cardholder billing amounts and reconciliation amounts whenever the transaction currency is different from the currency of the cardholder or the currency of reconciliation.

This process enables customers to:

- Acquire transactions in multiple currencies and issue cards that are billed in currencies preferred by cardholders. For each transaction, Mastercard converts the acquired transaction amounts from the transaction currency to the issuer-designated cardholder billing currency.
- Settle in currencies that best align with local business practices of acquirers and issuers. Mastercard buys and sells currencies to support settlement in multiple currencies for customers. Mastercard uses currency conversion rates for calculating acquirer and issuer reconciliation amounts.

Mastercard guarantees the Mastercard-Issued currency conversion rates (refer to definitions that follow) for each supported currency.

The following are terms used in this manual.

Term	Description
Base Amount	Transaction amount converted to U.S. dollars.
Computed Cross Rates	An exchange rate between two non-U.S. dollar currencies computed by reference to the U.S. dollar.
Mastercard-Issued Cross Rates	Buy, mid, and sell rates for certain non-U.S. dollar currency pairs set by Mastercard (Applies to regional settlement service only).
Mastercard-Issued USD Rates	Buy, mid, and sell rates against the U.S. dollar set by Mastercard.
Reference Currency	Reference currency is quoted as one unit per a certain amount of foreign currency.

NOTE: Currency conversion and foreign exchange are used interchangeably in the context of the information presented in this chapter.

Reconciliation and settlement are used interchangeably in the context of the information presented in this chapter.

Amount and currency definitions

Definitions of cardholder billing amount and transaction amount are defined here.

- Cardholder Billing Amount: The International Organization for Standardization (ISO) name for DE 6. Although Mastercard adheres to the ISO name for this data element, the cardholder billing amount is actually the transaction amount in the currency that has been designated as the cardholder billing currency by the issuer, which Mastercard transmits to the issuer in this data element. Issuers have the relationship with the cardholder and determine the eventual billing to the cardholder.
- Transaction Amount: The ISO name for DE 4, in which Mastercard transmits the transaction amount. The transaction amount is in the currency appearing on the Transaction Information Document (TID) in a first presentment. If no currency is identified on the TID, the transaction is deemed to have occurred in the currency that is legal tender at the point of interaction.

Refer to the *Mastercard Dictionary* on Mastercard Connect for other currency-related definitions.

Rates used for currency conversion

Except as otherwise provided in the Mastercard Standards, Mastercard will convert all transaction amounts processed through Global Clearing Management System into the equivalent reconciliation currency amount for settlement. When necessary, Mastercard will convert the transaction using the appropriate rates to calculate acquirer reconciliation, cardholder biling, and issuer reconciliation amounts.

NOTE: There may be other arrangements defined for those customers participating in bilateral agreements. For more information about participation in bilateral agreements, refer to the *Settlement Manual*.

Mastercard-issued USD rates

The Mastercard-Issued USD Rates support currency conversion involving currencies that are managed against the U.S. dollar. In this case, the U.S. dollar is considered as the reference currency. With this manual, the Rate Class M (value M) description will indicate that a Mastercard-issued USD rate was used in the currency conversion process (for example, to convert from the transaction currency to the cardholder billing and/or reconciliation currency). For all Mastercard-issued USD rates, the U.S. dollar is the reference currency whereby the rates are quoted in units of foreign currency per U.S. dollar.

Mastercard-issued cross rates

The Mastercard-issued cross rates support currency conversion involving currencies that are managed against currencies other than the U.S. dollar. For each cross rate, there is a non-U.S. dollar reference currency (for example, EUR and GBP) whereby the cross rates are quoted in units of foreign currency per reference currency. The Rate Class F (value F) will indicate that a Mastercard-issued cross rate was used in the currency conversion process.

In addition to enhancing the global capabilities of the Mastercard Network, this rate class aids Mastercard in complying with the following monetary policies.

- European Monetary Union (EMU) regulations requiring conversion of currencies transitioning to the euro at the fixed rate to the euro that is established by the EMU for the transition period.
- Other policies as defined from time to time by the monetary authorities in the countries where Mastercard does business and Mastercard has been informed of said policies.

The T057 production and T058 test bulk files contain the Currency Conversion Rate Detail Records; Mastercard-issued cross rates (Rate Class F) and Mastercard-issued USD rates (Rate Class M). For each Mastercard-issued rate, the reference currency is indicated in field 3 of the T057 file.

Mastercard will communicate availability of any new Mastercard-issued cross rates through a *Global Operations Bulletin*.

Global Clearing Management System selects the Mastercard-issued cross rates, class record (Rate Class F) only, when the source and target currencies match the source and reference currency pair identified in the rate record.

All other currency conversions occur using the Mastercard-Issued USD Rates, class records (Rate Class M), for the source currency to the target currency. In cases where the target currency is not USD, the source currency is converted to USD and then to the target currency (for example, a computed cross rate).

Example

Assume that Global Clearing Management System processes a transaction in which

- transaction currency is GBP
- acquirer's reconciliation currency is USD, and
- cardholder billing currency is EUR.

Also assume that a Mastercard-issued cross rate has been established for the currency pair GBP: EUR and that EUR is the reference currency for this currency pair.

Global Clearing Management System will calculate:

- USD acquirer's reconciliation amount using the GBP: USD Mastercard-Issued USD Rate.
- EUR cardholder billing amount using the GBP: EUR Mastercard-Issued Cross Rate.

Refer to examples further in this chapter for calculations.

Application of currency conversion rates

The Global Clearing Management System uses the currency conversion rates in effect at the time of authorization for eligible transactions requiring currency conversions.

Under certain circumstances, transactions will not be eligible for use of the rates in effect at the time of authorization. The following table provides an explanation of the special cases that can apply.

Special Case	Description	Impact
Special Case 1: Delayed clearing submissions	Transactions submitted for clearing for a Central Site Business Date more than 9 calendar days (not including the original authorization day).	These transactions will not be eligible for the rates effective at the time of authorization The Mastercard-issued rates as published in the Currency Conversion Rate File T057 for the current clearing processing day will apply. PDS 0015, subfield 1 (Currency Conversion Date) = Date of Currency Conversion Rate File T057 for current clearing process day. PDS 0015, subfield 2 (Currency Conversion Indicator) = Value 2
Special Case 2: Multiple authorizations, one clearing message	Transaction contains multiple authorizations, for example, an initial authorization and subsequent incremental authorizations.	If the clearing record was submitted within nine calendar days of the initial authorization, the Mastercard-issued rates as published in the Currency Conversion Rate File T057 used for the initial authorization will apply. PDS 0015, subfield 1 (Currency Conversion Date) = Date of Currency Conversion Rate File T057 at the time of authorization. PDS 0015, subfield 2 (Currency Conversion Indicator) = Value 1

Special Case	Description	Impact
Special Case 3: One authorization, multiple clearing messages	There are multiple clearing messages associated with a single authorization message. For example, a transaction for GPB 100 is authorized, but two messages are presented for clearing: one for GBP 80 and one for GPB 20.	If any of the clearing messages were presented within nine calendar days of the authorization, the Global Clearing Management System will use the currency conversion rates from the Currency Conversion Rate File T057 in effect at the time of the authorization. PDS 0015, subfield 1 (Currency Conversion Date) = Date of Currency Conversion Rate File T057 at the time of authorization. PDS 0015, subfield 2 (Currency Conversion Indicator) = Value 1. If a clearing record is submitted after the nine calendar day (U.S. Central date) period from authorization, the Mastercard-issued rates as published in Currency Conversion Rate File T057 on the day of clearing, will apply for this clearing record. PDS 0015, subfield 1 (Currency Conversion Date) = Date of Currency Conversion Rate File T057 for current clearing process day. PDS 0015, subfield 2 (Currency Conversion Indicator) = Value 2.
Special Case 4: Cleared, not authorized	Transaction was presented for clearing without authorization (that is, transaction was cleared but not authorized).	The Mastercard-Issued rates as published in the Currency Conversion Rate File T057 on the day of clearing will apply. PDS 0015, subfield 1 (Currency Conversion Date) = Date of Currency Conversion Rate File T057 for current clearing process day. PDS 0015, subfield 2 (Currency Conversion Indicator) = Value 2.

Special Case	Description	Impact
Special Case 5: Partial authorizations	The transaction was partially authorized.	If any of the clearing messages were presented within nine calendar days of the authorization, the clearing system will use the currency conversion rates from the Currency Conversion Rate File T057 in effect at the time of the authorization. PDS 0015, subfield 1 (Currency Conversion Date) = Date of Currency Conversion Rate File T057 at the time of authorization. PDS 0015, subfield 2 (Currency Conversion Indicator) = Value 1 .
Special Case 6: Specific MCCs, transaction types, and authorization types	Transactions classified under certain MCCs, authorization types or transaction types.	At this time, all MCCs, transaction types and authorization types for first presentment transactions will benefit from the rates effective at the time of authorization. Chargebacks and second presentments will continue to use the rates applicable at the time of clearing.

Special Case	Description	Impact
Special Case 7: Transactions submitted for clearing for a Central Site Business Date within 9 calendar days (not including the original authorization day) but are unmatched to authorization records.	Clearing transactions submitted with an invalid trace ID and/or does not match an authorization record.	These transactions will not be eligible for the rates effective at the time of authorization, which require the matching of the clearing record to the authorization record to determine the applicable date of the currency conversion rate. Therefore, acquirers must submit all clearing records with identical trace IDs from the authorization record. PDS 0015, subfield 1 (Currency Conversion Date) = Date of Currency Conversion Rate File T057 for current clearing process day. PDS 0015, subfield 2 (Currency Conversion Indicator) = Value 2

Additional information for special case 1: delayed clearing submissions

Transactions presented for clearing within 9 calendar days (not including the original authorization day) and the Central Site Business Date will be eligible for the rate at the time of authorization. See the chart below for the eligibility window.

Table 21: Transaction eligibility window

Transactions Authorized Between 00:00 St Louis Time to 23:59 St. Louis Time	And submitted for clearing for the Central Site Business Date will utilize the rate from the time of authorization
Sunday	Tuesday (Authorization date+9)
Monday	Wednesday (Authorization date+9)
Tuesday	Thursday (Authorization date+9)
Wednesday	Friday (Authorization date+9)
Thursday	Saturday (Authorization date+9)
Friday	Sunday (Authorization date+9)
Saturday	Monday (Authorization date+9)

Example

Transaction A was authorized on Tuesday, 1 December 2020 at 23:00 St. Louis time. Transaction B was authorized on Wednesday, 2 December 2020 at 01:00 St. Louis time. Both Transaction A and B were submitted for the clearing Central Site Business Date of Friday, 11 December 2020.

Transaction A will not be eligible for the rate at the time of authorization because the transaction was submitted more than 9 calendar days (not including the original authorization day) (that is, Tuesday, 1 December 2020) and the Central Site Business Date (that is, Friday, 11 December 2020). Therefore, the Mastercard-issued rates as published in the Currency Conversion Rate File T057 for the current clearing business day will apply to Transaction A.

Transaction B will utilize the rate at the time of authorization because the transaction was submitted within 9 calendar days (not including the original authorization day) (that is, Wednesday, 2 December 2020) and the Central Site Business Date (that is, Friday, 11 December 2020).

Data elements calculated during currency conversion process

Global Clearing Management System calculates a number of data elements for each transaction during the currency conversion process to calculate issuer and acquirer reconciliation amounts and cardholder billing amounts.

Currency conversion for first presentments qualifying for regional settlement service

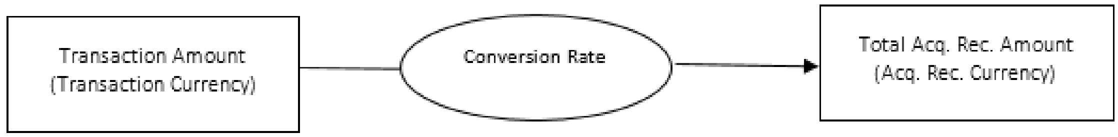
This section provides details and some examples related to the currency conversion approach used for transactions processed under a regional settlement service. To see a full list of the currencies that Mastercard offers for regional settlement, refer to the *Settlement Manual*.

Acquirer side data elements

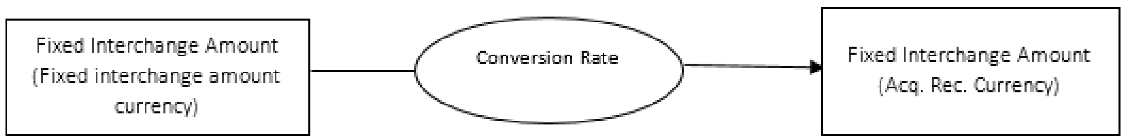
To calculate the acquirer settlement amount, Global Clearing Management System calculates and uses various data elements.

- Transaction Amount: Each transaction is conducted in a currency agreed upon by a merchant and a cardholder. The value of the transaction in the transaction currency is referred to as the Transaction Amount.
- Total Acquirer Reconciliation Amount: The Transaction Amount is converted to acquirer reconciliation currency using the applicable rate associated with the transaction currency and the acquirer reconciliation currency. The Transaction Amount in acquirer reconciliation currency is referred to as the Total Acquirer Reconciliation Amount.

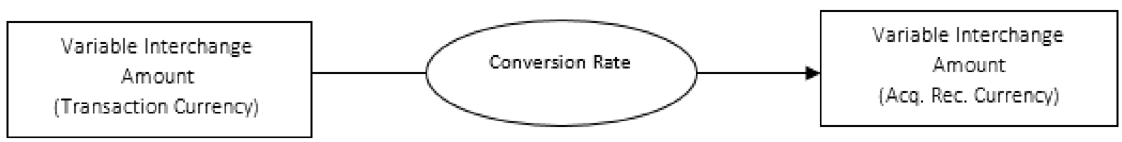
Figure 19: Transaction Amount conversion flow



- Fixed Interchange Amount: Fixed component of interchange fee applicable for a transaction is referred to as Fixed Interchange Amount in fixed interchange amount currency. This portion of the interchange fee does not change with the Transaction Amount. The Fixed Interchange Amount is converted from fixed interchange currency to acquirer reconciliation currency.



- Variable Interchange Amount: Variable component of interchange fee applicable for a transaction is referred to as Variable Interchange Amount. This amount is calculated in transaction currency by multiplying the percentage Interchange Rate and the Transaction Amount. The calculated Variable Interchange Amount is then converted from transaction currency to acquirer reconciliation currency.



- Total Interchange Amount: Fixed Interchange Amount and Variable Interchange Amount in acquirer reconciliation currency are added to calculate Total Interchange Amount in acquirer reconciliation currency.
- Acquirer Net Reconciliation Amount: Total Interchange Amount is subtracted/added from Total Acquirer Reconciliation Amount to calculate Acquirer Net Reconciliation Amount in acquirer reconciliation currency.

NOTE: Mastercard provides the T057 Currency Conversion Rate File, the Acquirer Currency Conversion Files (TQQ4: Regional First Presentments, TQQ8: Regional Second Presentments, and TQX2: Intracurrency Presentments), and the Clearing Detail File (IP755120-AA) to facilitate acquirer reconciliation. The Acquirer Currency Conversion Rate File provides the effective currency conversion rate of all possible ISO currency codes between the transaction currency code and the acquirer reconciliation currency code and is available at the same time as the T057 file. The Clearing Detail File provides transaction-level details for the acquirer after each clearing cycle. Details regarding all the data elements provided in these files and how customers can register for them are provided at the end of this chapter.

All above mentioned data elements are shown in the Clearing Detail File (IP755120-AA) as follows.

Description	Data Element/Private Data Subelement
Transaction Amount	DE 4 (Amount, Transaction)
Total Acquirer Reconciliation Amount	DE 5 (Amount, Reconciliation)
Total Interchange Amount in acquirer reconciliation currency	PDS 0146 (Amounts, Transaction Fee), subfield 7 (Amount, Fee, Reconciliation)
Effective Currency Conversion Rate: Transaction Amount to Acquirer Reconciliation Amount	DE 9 (Conversion Rate, Reconciliation)
Currency Conversion Date	PDS 0015 (Clearing Currency Conversion Identifier), subfield 1 (Currency Conversion Date)
Currency Conversion Indicator	PDS 0015 (Clearing Currency Conversion Identifier), subfield 2 (Currency Conversion Indicator)

Timing of the applicable Mastercard-issued rates used in the clearing calculations will align with the Mastercard-issued rates applied during the authorization of the transaction based on transaction eligibility as described in section "Application of Currency Conversion Rates."

The following example illustrates two methods that can be used in determining the applicable currency conversion rate.

Example

An acquirer submits two transactions to Mastercard Clearing for GCMS processing date 3 December 2020 which were authorized successfully on 1 December 2020 at 17:00 St. Louis time.

- Based on the nature of the transaction, Transaction A is eligible for use of the rates in effect at the time of authorization for clearing.
- Based on the nature of the transaction, Transaction B is not eligible to use the rates in effect at the time of authorization for clearing.

Acquirers can use the following methods to determine which effective date rates are applied for currency conversion during clearing processing.

Acquirers that use the IP755120-AA Clearing Detail Report

For each transaction cleared, refer to PDS 0015 in the report to determine the date of the rate file used by the Global Clearing Management System during clearing processing and the reason why that date was used. In this example, PDS 0015 will contain the following:

Table 22: Example

Transaction	PDS 0015, Subfield 1	PDS 0015, Subfield 2
Transaction A	201201	Value 1 Matched with authorization information and authorization date rates applied for currency conversion.
Transaction B	201202	Value 0 Not Applicable (for example, transaction not eligible/ applicable for currency conversion rate effective at the time of authorization) and GCMS Central site processing date rates applied for currency conversion.

All other acquirers that reconcile using internal methods

For each transaction cleared, match with its corresponding authorization message. Acquirers should determine the most effective method for matching; one approach would be to use the Banknet Reference Number found in CIS DE 63, subfield 2.

If the transaction is eligible to use the rate in effect at the time of authorization, then use DE 16 of the corresponding authorization message to determine which day's rate file to use for clearing message reconciliation.

If not, the rate files in effect on the clearing business processing date applies. The date in DE 16 is not used in this case.

Table 23: Example

Transaction	Value to Use	Explanation
Transaction A	201201 from DE 16	The currency conversion rates in effect on 1 December 2020 will be applicable in clearing (even though the clearing business processing date is 3 December 2020).
Transaction B	Clearing business processing date 3 Dec 2020	Because the transaction is not eligible to use the rates in effect at the time of authorization, the currency conversion rates effective on the clearing business processing date will be applied.

The following are examples showing currency conversion calculations on the acquirer side of transactions with each using Mastercard-Issued USD Rates and Mastercard-Issued Cross Rates.

NOTE: For simplicity, all examples are presented with rounding to the second decimal point. To see precise rounding conventions and calculations of the system, refer to the Rounding of Global Clearing Management System Currency Conversion section of this manual.

Example 1: acquirers currency conversion examples for Point-of-Sale transactions, transaction and reconciliation currency are the same

The following example illustrates currency conversion calculations for a point-of-sale (POS) card transaction where the transaction currency and acquirer reconciliation currency are the same. In this case, the transaction currency and acquirer reconciliation currency are the Canadian dollar (CAD). Other assumptions are listed as follows.

Assumptions

- Transaction Amount: CAD 50.00
- Acquirer Reconciliation Currency: CAD
- Fixed Interchange Amount: CAD 0.10
- Mastercard-Issued USD Rate (USD-CAD): 1 USD = 1.25 CAD; Reference Currency: USD
- Interchange Rate = 1.00%

Operation method using Clearing Detail File

The following table contains the transaction-level details through the Clearing Detail File.

Data Element/Private Data Subelement	Value
DE 4	CAD 50.00
DE 5	CAD 50.00
PDS 0146, subfield 7	CAD 0.60
DE 9	1.0000

1. Obtain DE 4 and DE 9 from the Clearing Detail File.
2. Determine Total Acquirer Reconciliation Amount (DE 5) by multiplying DE 4 and DE 9. Total Acquirer Reconciliation Amount (DE 5) = Transaction Amount (DE 4) x Conversion Rate (DE 9)

   CAD 50.00 x 1.0000 = CAD 50.00

Operational method using acquirer Currency Conversion Rate File

Field 2 (Transaction Currency Code)	Field 3 (Acquirer Recon Currency Code)	Field 5 (Effective Currency Conversion Rate)
CAD	CAD	1.00

1. Locate the record in the Acquirer Currency Conversion Rate File where the Transaction Currency matches the currency in field 2 and the Acquirer Reconciliation Currency matches the currency in field 3 and extract the corresponding Conversion Rate in field 5.
   Conversion Rate (field 5) = 1.00
2. Determine the total acquirer reconciliation amount (DE 5) by multiplying the transaction amount (DE 4) by the conversion rate (field 5)
   Total Acquirer Reconciliation Amount (DE 5) = Transaction Amount (DE 4) x Conversion Rate (field 5)

   CAD 50.00 x 1.0000 = CAD 50.00

Illustrative method with formulas

1. Total Acquirer Reconciliation Amount

   NOTE: Since transaction currency and acquirer reconciliation currency are the same, Total Acquirer Reconciliation Amount and Transaction Amount are equal.

   Total Acquirer Reconciliation Amount = Transaction Amount = CAD 50.00
2. Variable Interchange Amount

   NOTE: Since transaction currency and acquirer reconciliation currency are the same, Variable Interchange Amount in acquirer reconciliation currency is same as the amount in transaction currency.

   Variable Interchange Amount in acquirer reconciliation currency = Variable Interchange Amount in transaction currency = Transaction Amount x Interchange Rate

   CAD 50.00 x 1.00% = CAD 0.50
3. Fixed Interchange Amount

   NOTE: Since fixed interchange amount currency and acquirer reconciliation currency are the same, Fixed Interchange Amount in acquirer reconciliation currency is same as the amount in fixed interchange amount currency.

   Fixed Interchange Amount in acquirer reconciliation currency = Fixed Interchange Amount in fixed interchange amount currency = CAD 0.10
4. Total Interchange Amount
   Total Interchange Amount in acquirer reconciliation currency = Variable Interchange Amount in acquirer reconciliation currency + Fixed Interchange Amount in acquirer reconciliation currency

   CAD 0.50 + CAD 0.10 = CAD 0.60
5. Acquirer Net Reconciliation Amount
   Acquirer Net Reconciliation Amount = Total Acquirer Reconciliation Amount – Total Interchange Amount

   CAD 50.00 – CAD 0.60 = CAD 49.40

Example 2: acquirers Point-of-Sale transactions (Mastercard issued rates), the transaction currency and the reconciliation currency are different, the transaction currency is the reference currency

The following example illustrates currency conversion calculations for a POS card transaction where the transaction currency does not equal the acquirer reconciliation currency. In this case, the transaction currency is in British pounds (GBP), and the acquirer reconciliation currency is in Australian dollars (AUD).

The calculations in this example would apply for any transaction where a Mastercard-Issued Rate (USD and Cross Rate) and the transaction amount are in the Reference Currency (in this case, GBP), and the reconciliation amount is not in the Reference Currency. This includes any transactions where the transaction amount is in U.S. dollars, and the reconciliation currency is something other than U.S. dollars, since the U.S. dollar is the Reference Currency for all Mastercard-Issued USD Rates (Rate Class M currency pairs).

In such cases, Mastercard uses the currency conversion rate in field 7 of the T057 file (that is, the buy rate) to convert from transaction currency to reconciliation currency. In the example below, the GBP-AUD rate of 2.0000 AUD per 1 GBP represents the rate in field 7 of the Rate Class F table in the T057 file. This same rate will also be seen in the corresponding matching record in the Acquirer Currency Conversion Rate File delivered during the same period as the T057 file and in DE 9 for the transaction as presented in the Clearing Detail File once the transaction is processed.

Other assumptions are listed as follows.

Assumptions

- Transaction Amount: GBP 30.00
- Acquirer Reconciliation Currency: AUD
- Mastercard-Issued Cross Rate (GBP-AUD): GBP 1 = AUD 2.0000; Reference Currency GBP
- Interchange Rate = 1.20%
- Fixed Interchange Amount = AUD 0.10

Operation method using Clearing Detail File

The following table contains the transaction level details through the Clearing Detail File.

Data Element/Private Data Subelement	Value
DE 4	GBP 30.00
DE 5	AUD 60.00
PDS 0146, subfield 7	AUD 0.82
DE 9	2.0000

1. Obtain DE 4 and DE 9 from the Clearing Detail File.

2. Determine Total Acquirer Reconciliation Amount (DE 5) by multiplying DE 4 and DE 9.

Total Acquirer Reconciliation Amount (DE 5) = Transaction Amount (DE 4) x Conversion Rate (DE 9)

GBP 30.00 x 2.0000 = AUD 60.00

Operational method using acquirer Currency Conversion File

The following table contains the effective currency conversion rate in the Acquirer Currency Conversion Rate File

Field 2 (Transaction Currency Code)	Field 3 (Acquirer Recon Currency Code)	Field 5 (Effective Currency Conversion Rate)
GBP	AUD	2.00

1. Locate the record in the Acquirer Currency Conversion Rate File where the Transaction Currency (GBP) matches the currency in field 2 and the Acquirer Reconciliation Currency (AUD) matches the currency in field 3 and extract the corresponding Conversion Rate in field 5.
   Conversion Rate (field 5) = 2.00
2. Determine Total Acquirer Reconciliation Amount (DE 5) by multiplying Transaction Amount (DE 4) by Conversion Rate (field 5)
   Total Acquirer Reconciliation Amount (DE 5) = Transaction Amount (DE 4) x Conversion Rate (field 5)

   GBP 30.00 x 2.0000 = AUD 60.00

Illustrative method with formulas

1. Total Acquirer Reconciliation Amount
   Total Acquirer Reconciliation Amount = Transaction Amount x Conversion Rate (GBP-AUD)

   GBP 30.00 x GBP-AUD 2.0000 = AUD 60.00
2. Variable Interchange Amount
   Variable Interchange Amount in transaction currency = Transaction Amount x Interchange Rate

   GBP 30.00 x 1.20% = GBP 0.36

   Variable Interchange Amount in acquirer reconciliation currency = Variable Interchange Amount in transaction currency x Conversion Rate (GBP-AUD)

   GBP 0.36 x GBP-AUD 2.0000 = AUD 0.72
3. Fixed Interchange Amount

   NOTE: Since fixed interchange amount currency and acquirer reconciliation currency are the same, Fixed Interchange Amount in acquirer reconciliation currency is same as the amount in fixed interchange amount currency.

Fixed Interchange Amount in acquirer reconciliation currency = Fixed Interchange Amount in fixed interchange amount currency = AUD 0.10

4. Total Interchange Amount
   Total Interchange Amount in acquirer reconciliation currency = Variable Interchange Amount in acquirer reconciliation currency + Fixed Interchange Amount in acquirer reconciliation currency

   AUD 0.72 + AUD 0.10 = AUD 0.82
5. Acquirer Net Reconciliation Amount
   Acquirer Net Reconciliation Amount = Total Acquirer Reconciliation Amount – Total Interchange Amount in acquirer reconciliation currency

   AUD 60.00 – AUD 0.82 = AUD 59.18

Example 3: acquirers Point-of-Sale transactions (Mastercard issued rates), the transaction currency and the reconciliation currency are different, the reconciliation currency is the reference currency

The following example illustrates currency conversion calculations for a POS card transaction where a Mastercard-Issued Rate was applied and the transaction currency does not equal the acquirer reconciliation currency. In this case, the transaction currency is in Japanese yen (JPY), and the acquirer reconciliation currency is in U.S. dollars (USD).

The calculations in this example would apply for any transaction where the Reconciliation amount is in the Reference Currency (in this case, USD), and the Transaction Amount is not in the Reference Currency (in this case, JPY).

In such cases, in calculating the acquirer reconciliation amount on transactions for which Mastercard does offer a regional settlement currency, Mastercard uses the currency conversion rate in field 9 of the T057 file (that is, the sell rate) to convert from transaction currency to reconciliation currency. In the example below, the USD-JPY rate of 108.3300 JPY per 1 USD represents the rate in field 9 of the Rate Class M table in the T057 file.

Otherwise, in calculating the acquirer reconciliation amount on transactions for which Mastercard does not offer a regional settlement currency, Mastercard uses the currency conversion rate in field 8 of the T057 file (that is, the mid rate) to convert from transaction currency to reconciliation currency. In both cases, this same rate will also be seen in the corresponding matching record in the Acquirer Currency Conversion Rate File delivered during the same period as the T057 file and in DE 9 for the transaction as presented in the Clearing Detail File once the transaction is processed.

Assumptions

- Transaction Amount: JPY 3,500
- Acquirer Reconciliation Currency: USD
- Mastercard-Issued USD Rate: USD 1 = JPY 108.3300; Reference Currency USD
- Interchange Rate = 1.20%
- Fixed Interchange Amount = USD 0.15

Operation Method Using Clearing Detail File

The following table contains the transaction level details through the Clearing Detail File.

Data Element/Private Data Subelement	Value
DE 4	JPY 3,500
DE 5	USD 32.31
PDS 0146, subfield 7	USD 0.54
DE 9	0.009231

1. Obtain DE 4 and DE 9 from the Clearing Detail File.
2. Determine Total Acquirer Reconciliation Amount (DE 5) by multiplying DE 4 and DE 9.

Total Acquirer Reconciliation Amount (DE 5) = Transaction Amount (DE 4) x Conversion Rate (DE 9)

JPY 3,500 x 0.009231 = USD 32.31

Operational method using acquirer currency conversion file

Field 2 (Transaction Currency Code)	Field 3 (Acquirer Recon Currency Code)	Field 5 (Effective Currency Conversion Rate)
JPY	USD	0.009231

1. Locate the record in the Acquirer Currency Conversion Rate File where the Transaction Currency (JPY) matches the currency in field 2 and the Acquirer Reconciliation Currency (USD) matches the currency in field 3 and extract the corresponding Conversion Rate in field 5.
   Conversion Rate (field 5) = 0.009231
2. Determine Total Acquirer Reconciliation Amount (DE 5) by multiplying Transaction Amount (DE 4) by Conversion Rate (field 5)
   Total Acquirer Reconciliation Amount (DE 5) = Transaction Amount (DE 4) x Conversion Rate (field 5)

   JPY 3,500 x 0.009231 = USD 32.31

Illustrative method with formulas

1. Total Acquirer Reconciliation Amount
   Total Acquirer Reconciliation Amount = Transaction Amount / Conversion Rate (USD-JPY)

   JPY 3,500 / USD-JPY 108.3300 = USD 32.31
2. Variable Interchange Amount

Variable Interchange Amount in transaction currency = Transaction Amount x Interchange Rate

JPY 3,500 x 1.20% = JPY 42

Variable Interchange Amount in acquirer reconciliation currency = Variable Interchange Amount in transaction currency / Conversion Rate (USD-JPY))

JPY 42 / USD-JPY 108.3300 = USD 0.39

3. Fixed Interchange Amount

   NOTE: Since fixed interchange amount currency and acquirer reconciliation currency are the same, Fixed Interchange Amount in acquirer reconciliation currency is same as the amount in fixed interchange amount currency.

   Fixed Interchange Amount in acquirer reconciliation currency = Fixed Interchange Amount in fixed interchange amount currency = USD 0.15
4. Total Interchange Amount
   Total Interchange Amount in acquirer reconciliation currency = Variable Interchange Amount in acquirer reconciliation currency + Fixed Interchange Amount in acquirer reconciliation currency

   USD 0.39 + USD 0.15 = USD 0.54
5. Acquirer Net Reconciliation Amount
   Acquirer Net Reconciliation Amount = Total Acquirer Reconciliation Amount – Total Interchange Amount in acquirer reconciliation currency

   USD 32.31 – USD 0.54 = USD 31.77

Other acquirer calculation considerations: computed cross rates and fixed interchange

For transactions where a Mastercard Issued Rate is not applicable (that is, none of the currencies are U.S. dollar or the currency pair is not a Mastercard Issued Cross Rate), the Clearing system will perform currency conversion by going through the U.S. dollar and using two Mastercard-Issued Rates to calculate a cross rate (computed cross rate).

First, for transactions where Mastercard offers a regional settlement currency, the cross rate is calculated by dividing the currency conversion rate for the reconciliation currency as published in Field 7 of the T057 file by the currency conversion rate for the transaction currency as published in Field 9. For transactions where Mastercard does not offer a regional settlement currency, the cross rate is calculated by dividing the currency conversion rate for the reconciliation currency as published in Field 7 of the T057 file by the currency conversion rate for the transaction currency as published in Field 8.

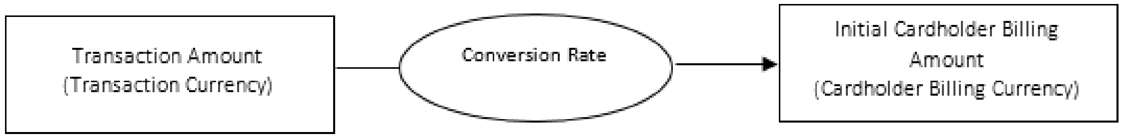
Then, this computed cross rate will be used to multiply the transaction amount to obtain the reconciliation amount in the reconciliation currency. Similarly, the computed cross rate will be used to convert the variable interchange from the transaction currency to the reconciliation currency. The computed cross rate is also provided in the Acquirer Currency Conversion Rate File. In addition, the Clearing Detail File provides the computed cross rate for each transaction in DE 9 and can be used for reconciliation.

Regarding fixed interchange, any time the fixed interchange currency is different from the acquirer reconciliation currency, the currency conversion process will follow the same process as described in the examples above where the fixed interchange amount will be converted as any other transaction amount.

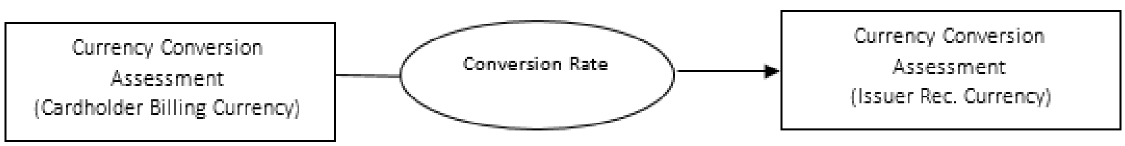
Issuer side data elements

To calculate the issuer reconciliation and cardholder billing amounts, Global Clearing Management System calculates various data elements.

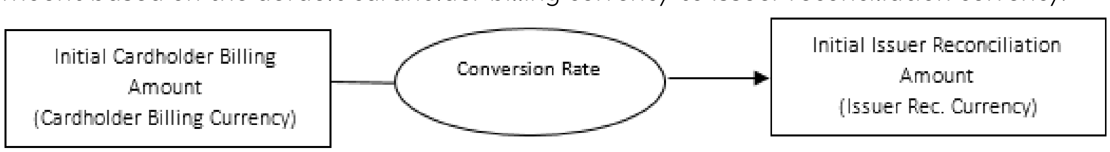
- Transaction Amount: Each transaction is conducted in a currency agreed upon by a merchant and a cardholder. The value of the transaction in the transaction currency is referred to as the Transaction Amount.
- Initial Cardholder Billing Amount: This amount is calculated by converting Transaction Amount from transaction currency to cardholder billing currency.



- Currency Conversion Assessment: Initial Cardholder Billing Amount is multiplied by the Currency Conversion Assessment Rate (CCA Rate) to calculate the Currency Conversion Assessment in cardholder billing currency. This amount is then converted to issuer reconciliation currency.

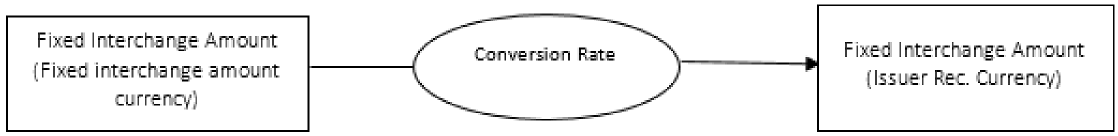


- Issuer Currency Conversion Amount: This amount is calculated in cardholder billing currency by multiplying Initial Cardholder Billing Amount and Issuer Currency Conversion Rate (ICCR or Cross Border Fee Manager Rate).
- Total Cardholder Billing Amount: This amount is calculated in cardholder billing currency by adding Initial Cardholder Billing Amount and Issuer Currency Conversion Amount.
- Initial Issuer Reconciliation Amount: This amount is calculated by converting cardholder billing amount based on the default cardholder billing currency to issuer reconciliation currency.

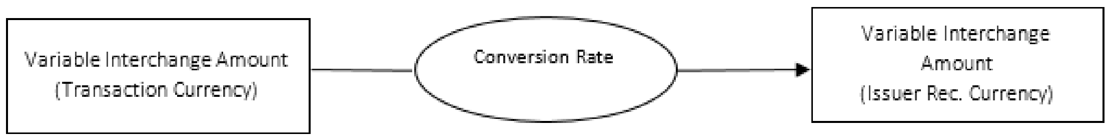


- Total Issuer Reconciliation Amount: This amount is calculated in issuer reconciliation currency by adding Initial Issuer Reconciliation Amount and Currency Conversion Assessment in issuer reconciliation currency.
- Fixed Interchange Amount: Fixed component of interchange fee applicable for a transaction is referred to as Fixed Interchange Amount in fixed interchange amount currency. This portion

of the interchange fee does not change with the Transaction Amount. The Fixed Interchange Amount is converted from fixed interchange currency to issuer reconciliation currency.



- Variable Interchange Amount: Variable component of interchange fee applicable for a transaction is referred to as Variable Interchange Amount. This amount is calculated in transaction currency by multiplying the percentage Interchange Rate and the Transaction Amount. The calculated Variable Interchange Amount is then converted from transaction currency to issuer reconciliation currency.



- Total Interchange Amount: Fixed Interchange Amount and Variable Interchange Amount in issuer reconciliation currency are added to calculate Total Interchange Amount in issuer reconciliation currency.
- Issuer Net Reconciliation Amount: Total Interchange Amount in issuer reconciliation currency is subtracted/added from Total Issuer Reconciliation Amount to calculate Issuer Net Reconciliation Amount in issuer reconciliation currency.

The above-mentioned data elements are shown in the IPM File as follows.

Description	Data Element/Private Data Subelement	Notes
Transaction Amount	DE 4	
Total Issuer Reconciliation Amount	DE 5	Inclusive of CCA if applicable
Total Cardholder Billing Amount	DE 6	Inclusive of Issuer Currency Conversion Rate (ICCR) Amount or Cross Border Fee Manager Amount if applicable
Currency Conversion Rate: Transaction Amount to Issuer Reconciliation Amount	DE 9 (Conversion Rate, Reconciliation)	Effective conversion rate (inclusive of CCA if applicable)
Currency Conversion Rate: Transaction Amount to Cardholder Billing Amount	DE 10 (Conversion Rate, Cardholder Billing)	Effective conversion rate (Inclusive of Issuer Currency Conversion Rate [ICCR] Amount or Cross Border Fee Manager Amount if applicable)

Description	Data Element/Private Data Subelement	Notes
Currency Conversion Assessment in issuer cardholder billing currency	DE 111 (Amount, Currency Conversion Assessment)	
Total Interchange Amount in issuer reconciliation currency	PDS 0146, subfield 7	
Currency Conversion Date	PDS 0015 (Clearing Currency Conversion Identifier), subfield 1 (Currency Conversion Date)	
Currency Conversion Indicator	PDS 0015 (Clearing Currency Conversion Identifier), subfield 2 (Currency Conversion Indicator)	

For issuers using the T112 Bulk File Type to reconcile, the applicable currency conversion rate and related data elements (for example, DE 9 [Conversion Rate, Reconciliation] and DE 10 [Conversion Rate, Cardholder Billing]) will be included in this file.

Timing of the applicable Mastercard-issued rates used in the clearing calculations will align with the Mastercard-issued rates applied during the authorization of the transaction based on transaction eligibility as described in the section titled "Application of Currency Conversion Rates."

For issuers that want to determine the date of the rate file used by the Global Clearing Management System during clearing processing for each transaction, and the reason why that date was used, refer to PDS 0015. Below is an example of how PDS 0015 may be populated.

Example

An acquirer submits two transactions to Mastercard Clearing for GCMS processing date 3 December 2020 which were authorized successfully on 1 December 2020.

- Based on the nature of the transaction, Transaction A is eligible for use of the rates in effect at the time of authorization for clearing processing.
- Based on the nature of the transaction, Transaction B is not eligible for use of the rates in effect at the time of authorization for clearing processing.

In this example, PDS 0015 will contain the following:

Table 24: Examples

Transaction	PDS 0015, subfield 1 (Currency Conversion Date)	PDS 0015, subfield 2 (Currency Conversion Indicator)
Transaction A	201201	Value 1 (Matched with authorization information and authorization date rates applied for currency conversion.)
Transaction B	201202	Value 0 Not Applicable (for example, transaction not eligible/ applicable for currency conversion rate effective at the time of authorization) and GCMS Central site processing date rates applied for currency conversion.

The following are examples that illustrate how interchange, CCA, and ICCR or Cross Border Fee Manager Rates are calculated throughout the transaction flow. For the specific currency conversion rates for any transaction scenario, issuers can use the transaction IPM message, in particular DE 9 and DE 10 as described above. The currency conversion rates in these data elements will be the same, or derived from, the rates in the T057 file, which are wholesale market rates.

Example 4: issuers currency conversion examples for Point-of-Sale transactions, Mastercard-issued USD rates

The following example illustrates currency conversion calculations for a POS transaction where the transaction currency does not equal the cardholder billing currency. In this case, the transaction currency is in Mexican pesos (MXN), and the cardholder billing currency is in U.S. dollars (USD). Other assumptions are listed as follows.

Assumptions

- Transaction Amount: MXN 180.00
- Cardholder Billing Currency Default: USD
- Issuer Reconciliation Currency: USD
- Mastercard-Issued USD Rate (USD-MXN): USD 1 = MXN 18.0000
- CCA Rate = 0.20%
- ICCR or Cross Border Fee Manager Rate = 0%
- Interchange Rate = 1.00%
- Fixed Interchange Amount = USD 0.10

The following table contains the transaction level details through Mastercard's outbound IPM file.

Data Element/Private Data Subelement	Value	Notes
DE 4	MXN 180.00	
DE 5	USD 10.02	Inclusive of CCA if applicable
DE 6	USD 10.00	Inclusive of Issuer Currency Conversion Rate (ICCR) Amount or Cross Border Fee Manager Amount if applicable
DE 9	0.055667	Effective conversion rate (inclusive of CCA if applicable)
DE 10	0.055556	Effective conversion rate (Inclusive of Issuer Currency Conversion Rate [ICCR] Amount or Cross Border Fee Manager Amount if applicable)
DE 111	USD 0.02	
PDS 0146, subfield 7	USD 0.20	

Operational method

1. Obtain DE 4, DE 9 and DE 10 from the outbound IPM file.
2. Determine Total Cardholder Billing Amount (DE 6) by multiplying DE 4 and DE 10.
   Total Cardholder Billing Amount (DE 6) = Transaction Amount (DE 4) x Conversion Rate (DE 10)

   MXN 180.00 x 0.055556 = USD 10.00 (Inclusive of Issuer Currency Conversion Rate [ICCR] Amount or Cross Border Fee Manager Amount if applicable)
3. Determine Total Issuer Reconciliation Amount (DE 5) by multiplying DE 4 and DE 9.
   Total Issuer Reconciliation Amount (DE 5) = Transaction Amount (DE 4) x Conversion Rate (DE 9)

   MXN 180.00 x 0.055667 = USD 10.02006, rounded to USD 10.02 (inclusive of CCA if applicable)

Illustrative method with formulas

1. Variable Interchange Amount
   Variable Interchange Amount in transaction currency = Transaction Amount x Interchange Rate

   MXN 180.00 x 1.00% = MXN 1.80

   Variable Interchange Amount in issuer reconciliation currency = Variable Interchange Amount in transaction currency / Conversion Rate (USD-MXN)

   MXN 1.80 / USD-MXN 18.0000 = USD 0.10
2. Fixed Interchange Amount

NOTE: Since fixed interchange amount currency and issuer reconciliation currency are the same, Fixed Interchange Amount in issuer reconciliation currency is same as the amount in fixed interchange amount currency.

Fixed Interchange Amount in issuer reconciliation currency = Fixed Interchange Amount in fixed interchange amount currency = USD 0.10

3. Total Interchange Amount
   Total Interchange Amount = Variable Interchange Amount + Fixed Interchange Amount

   USD 0.10 + USD 0.10 = USD 0.20
4. Initial Cardholder Billing Amount
   Initial Cardholder Billing Amount in cardholder billing currency = Transaction Amount / Conversion Rate (USD-MXN)

   MXN 180.00 / USD-MXN 18.0000 = USD 10.00
5. Currency Conversion Assessment
   Currency Conversion Assessment in cardholder billing currency = Initial Cardholder Billing Amount x CCA Rate

   USD 10.00 x 0.20% = USD 0.02
6. Issuer Currency Conversion Amount
   Issuer Currency Conversion Amount in cardholder billing currency = Initial Cardholder Billing Amount x ICCR or Cross Border Fee Manager Rate

   USD 10.00 x 0.00% = USD 0.00
7. Total Cardholder Billing Amount
   Total Cardholder Billing Amount in cardholder billing currency = Initial Cardholder Billing Amount + Issuer Currency Conversion Amount

   USD 10.00 + USD 0.00 = USD 10.00
8. Initial Issuer Reconciliation Amount

   NOTE: Since cardholder billing currency and issuer reconciliation currency are the same, Initial Issuer Reconciliation Amount in issuer reconciliation currency is same as Initial Cardholder Billing Amount in cardholder billing currency.

   Initial Issuer Reconciliation Amount in issuer reconciliation currency = Initial Cardholder Billing Amount in cardholder billing currency = USD 10.00
9. Currency Conversion Assessment in issuer reconciliation currency

   NOTE: Since cardholder billing currency and issuer reconciliation currency are the same, Currency Conversion Assessment in issuer reconciliation currency is same as Currency Conversion Assessment in cardholder billing currency.

   Currency Conversion Assessment in issuer reconciliation currency = Currency Conversion Assessment in cardholder billing currency = USD 0.02
10. Total Issuer Reconciliation Amount
    Total Issuer Reconciliation Amount = Initial Issuer Reconciliation Amount + Currency Conversion Assessment in issuer reconciliation currency

USD 10.00 + USD 0.02 = USD 10.02

11. Issuer Net Reconciliation Amount
    Issuer Net Reconciliation Amount = Total Issuer Reconciliation Amount – Total Interchange Amount in issuer reconciliation currency

    USD 10.02 – USD 0.20 = USD 9.82

Example 5: issuers currency conversion examples, Point-of-Sale transactions, Mastercard-issued cross rates

The following example illustrates currency conversion calculations for a POS card transaction where the transaction currency does not equal the cardholder billing currency. In this case, the transaction currency is in Polish zloty (PLN), and the cardholder billing currency is in euros (EUR). Other assumptions are listed as follows.

Assumptions

- Transaction Amount: PLN 600.00
- Cardholder Billing Currency Default: EUR
- Issuer Reconciliation Currency: EUR
- Mastercard-Issued Cross Rate (EUR-PLN): EUR 1 = PLN 5.0000; Reference Currency is EUR
- ICCR or Cross Border Fee Manager Rate = 3.00%
- CCA Rate = 0.20%
- Interchange Rate = 1.20%
- Fixed Interchange Amount = EUR 0.10

The following table contains the transaction level details through Mastercard's outbound IPM file.

Data Element/Private Data Subelement	Value	Notes
DE 4	PLN 600.00	
DE 5	EUR 120.24	Inclusive of CCA if applicable
DE 6	EUR 123.60	Inclusive of Issuer Currency Conversion Rate (ICCR) Amount or Cross Border Fee Manager Amount if applicable
DE 9	0.20040	Effective conversion rate (inclusive of CCA if applicable)
DE 10	0.20600	Effective conversion rate (Inclusive of Issuer Currency Conversion Rate [ICCR] Amount or Cross Border Fee Manager Amount if applicable)
DE 111	EUR 0.24	

Data Element/Private Data Subelement	Value	Notes
PDS 0146, subfield 7	EUR 1.54	

Operational method

1. Obtain DE 4, DE 9, and DE 10 from the outbound IPM file.
2. Determine Total Cardholder Billing Amount (DE 6) by multiplying DE 4 and DE 10.
   Total Cardholder Billing Amount (DE 6) = Transaction Amount (DE 4) x Conversion Rate (DE 10)

   PLN 600.00 x 0.20600 = EUR 123.60 (Inclusive of Issuer Currency Conversion Rate [ICCR] Amount or Cross Border Fee Manager Amount if applicable)
3. Determine Total Issuer Reconciliation Amount (DE 5) by multiplying DE 4 and DE 9.
   Total Issuer Reconciliation Amount (DE 5) = Transaction Amount (DE 4) x Conversion Rate (DE 9)

   PLN 600.00 x 0.20040 = EUR 120.24 (inclusive of CCA if applicable)

Illustrative method with formulas

1. Variable Interchange Amount
   Variable Interchange Amount in transaction currency = Transaction Amount x Interchange Rate

   PLN 600.00 x 1.20% = PLN 7.20

   Variable Interchange Amount in issuer reconciliation currency = Variable Interchange Amount in transaction currency / Conversion Rate (EUR-PLN)

   PLN 7.20 / EUR-PLN 5.0000 = EUR 1.44
2. Fixed Interchange Amount

   NOTE: Since fixed interchange amount currency and issuer reconciliation currency are the same, Fixed Interchange Amount in issuer reconciliation currency is same as the amount in fixed interchange amount currency.

   Fixed Interchange Amount in issuer reconciliation currency = Fixed Interchange Amount in fixed interchange amount currency = EUR 0.10
3. Total Interchange Amount
   Total Interchange Amount = Variable Interchange Amount + Fixed Interchange Amount

   EUR 1.44 + EUR 0.10 = EUR 1.54
4. Initial Cardholder Billing Amount
   Initial Cardholder Billing Amount in cardholder billing currency = Transaction Amount / Conversion Rate (EUR-PLN)

   PLN 600.00 / EUR-PLN 5.0000 = EUR 120.00
5. Currency Conversion Assessment

Currency Conversion Assessment in cardholder billing currency = Initial Cardholder Billing Amount x CCA Rate

EUR 120.00 x 0.20% = EUR 0.24

6. Issuer Currency Conversion Amount
Issuer Currency Conversion Amount in cardholder billing currency = Initial Cardholder Billing Amount x ICCR or Cross Border Fee Manager Rate

EUR 120.00 x 3.00% = EUR 3.60

7. Total Cardholder Billing Amount
Total Cardholder Billing Amount in cardholder billing currency = Initial Cardholder Billing Amount + Issuer Currency Conversion Amount

EUR 120.00 + EUR 3.60 = EUR 123.60

8. Initial Issuer Reconciliation Amount

NOTE: Since cardholder billing currency and issuer reconciliation currency are the same, Initial Issuer Reconciliation Amount in issuer reconciliation currency is same as Initial Cardholder Billing Amount in cardholder billing currency.

Initial Issuer Reconciliation Amount in issuer reconciliation currency = Initial Cardholder Billing Amount in cardholder billing currency = EUR 120.00

9. Currency Conversion Assessment in Issuer Reconciliation Currency

NOTE: Since cardholder billing currency and issuer reconciliation currency are the same, Currency Conversion Assessment in issuer reconciliation currency is same as Currency Conversion Assessment in cardholder billing currency.

Currency Conversion Assessment in issuer reconciliation currency = Currency Conversion Assessment in cardholder billing currency = EUR 0.24

10. Total Issuer Reconciliation Amount
Total Issuer Reconciliation Amount = Initial Issuer Reconciliation Amount + Currency Conversion Assessment in issuer reconciliation currency

EUR 120 + EUR 0.24 = EUR 120.24

11. Issuer Net Reconciliation Amount
Issuer Net Reconciliation Amount = Total Issuer Reconciliation Amount – Total Interchange Amount in issuer reconciliation currency

EUR 120.24 – EUR 1.54 = EUR 118.70

Rounding of Global Clearing Management System currency conversion

When Global Clearing Management System performs multiple currency conversion calculations before deriving a final amount, Global Clearing Management System performs the calculations on the interim amounts using the full six positions to the right of the decimal. Global Clearing Management System determines the final/target amount by rounding the amount to the currency exponent.

The Member Parameter Extract (MPE) T067 (daily updates) and T068 (full file replacement), table IP0017T1: Currency Code and Exponents table provide customers with currency codes and associated currency exponents for each currency supported by Mastercard. The currency exponent indicates the number of significant digits to the right of the decimal point that are displayed when communicating amounts in the associated currency. This position (underlined in the examples that follow) will be referred to as the minor currency unit position.

Table 25: Examples of currency exponent positioning

Currency Description	Currency Code	Currency Exponent	Currency Amount
Japanese Yen	392/JPN	0	0
U.S. Dollar	840/USD	2	0.00
Tunisian Dinar	788/TND	3	0.000

- If the number in the low order position is equal to or greater than 5, the number in the minor currency position is increased by a value of 1 to round the amount. For example, 17.55**9**048 results in 17.5**6**.
- If the number in the low order position is less than 5, the low order positions are truncated without rounding the amount. For example, 17.53**0**011 results in 17.5**3**.

Global Clearing Management System only rounds amounts to the number of positions to the right of the decimal point specified by the currency exponent, once they are calculated in the final (issuer/acquirer reconciliation currency, cardholder billing currency) currency, as shown below:

- After Global Clearing Management System calculates the currency conversion assessment in cardholder billing currency.
- After Global Clearing Management System completes the calculation of the total cardholder billing amount (Inclusive of Issuer Currency Conversion Rate [ICCR] Amount or Cross Border Fee Manager Amount if applicable).
- After Global Clearing Management System completes the calculation of acquirer and issuer reconciliation amounts in acquirer/issuer reconciliation currency.
- After Global Clearing Management System completes the calculation of an interchange fee in reconciliation currency.

Customer currency conversion for chargebacks (all cycles)

Customers must meet specific requirements for submission of chargeback amounts (including currency conversion of chargeback amounts) depending on the phase of the chargeback life cycle.

Customer requirements for submitting first chargeback amounts

These requirements apply to the amount that issuers may submit in first chargebacks.

- An issuer must not chargeback a transaction for an amount that exceeds the full amount of the transaction presented by the acquirer. The only exception is when the disputed amount must be converted to U.S. dollars, in which case, the chargeback may be for an amount greater than the transaction amount originally presented by the acquirer.
- An issuer may chargeback a transaction for less than the full amount of the transaction.
- The issuer should include the amount resulting from a currency conversion assessment (if applicable) in the chargeback amount that the issuer presents to Mastercard.
- Full chargebacks for ATM transactions (identified by a value of 01 in DE 3, subfield 1):
  - May include the processing fee (less the decline fee).
  - Should include the surcharge amount (access fee, direct charging fee, or convenience fee), when applicable in DE 54 (Amounts Additional), subfield 2 (Additional Amount, Amount Type), value 42. When DE 54 is in a chargeback message, the surcharge amount must be provided in the same currency of the chargeback message as indicated in DE 49 (Currency Code, Transaction).
  - Should not include switch fees.
- Partial chargebacks for ATM transactions should not include
  - transaction processing fees (including the decline fee)
  - surcharge amounts (such as, ATM access fees, direct charging fees, or convenience fees), or
  - switch fees.

Customer requirements and guidelines for charging back a partial amount

The rules and guidelines that customers charging back a transaction for less than its full amount must abide by are as follows.

To chargeback a transaction for an amount less than the full amount of the transaction, customers should submit a First Chargeback/1442 message containing DE 24 (Function Code), value 453. This identifies the first chargeback as a partial chargeback, which indicates that the first chargeback amount differs from the original transaction amount. Customers must identify subsequent second presentments and arbitration chargebacks as partial when the previous transaction was a partial first chargeback or a partial second presentment. The customer must include the partial currency conversion assessment in the chargeback amount.

Customer requirements for charging back a purchase with cash back transaction

A purchase with cash back transaction is a Debit Mastercard® transaction in which a purchase was conducted, and cash was dispensed by the acceptor at the point of interaction.

In the First Presentment/1240 messages, the total amount of the transaction (purchase plus cash) must be submitted in DE 4 (Amount, Transaction). The cash back portion of the transaction must be identified in DE 54 (Amounts, Additional), subfield 5 (Additional Amount, Amount) in the same currency as the transaction amount contained in DE 4.

Customers should follow the chargeback procedures for Purchase with Cash Back transactions described in Processing Chargeback Messages. To chargeback all or part of the purchase amount but not the cash back amount of a purchase with cash Back transaction, the customer must subtract the cash back portion from the cardholder billing amount. If the currency of the cash back portion differs from the currency of the cardholder billing amount, the customer must perform the following calculation:

- Remove any assessments or fees added to the cardholder billing amount.
- Use the process described in the Currency Conversion Calculations section to convert the cash back portion in DE 54 to the cardholder billing currency, applying the same exchange rates used by Global Clearing Management System.
- Subtract the converted DE 54 amount from the DE 4 amount of the First Presentment/1240 message to obtain the purchase amount.
- The revised DE 4 will now contain the purchase amount only.

When charging back all or a part of the purchase portion but not the cash back portion of a Purchase with Cash Back transaction, the customer must submit a First Chargeback/1442 message containing DE 24 (Function Code), value 453.

Currency conversion for customers in the U.S. region processing a chargeback message

A U.S. issuer processing a chargeback message will not convert the message nor indicate any conversion therein but will process it in U.S. dollars through the First Chargeback/1442 message.

The chargeback amount submitted in DE 4 should not exceed the transaction amount previously provided to the issuer in DE 4 of the First Presentment/1240 message.

For partial chargebacks, the chargeback amount submitted in DE 4 of the chargeback message should be less than the transaction amount previously provided to the issuer in DE 4 of the first presentment. If an issuer submits multiple partial chargebacks for one first presentment, the total of the partial chargebacks must not exceed the transaction amount previously provided to the issuer in DE 4 of the first

Currency conversion for customers outside the U.S. region processing a chargeback message

An issuer not in the U.S. region processing a chargeback message will determine the currency of the chargeback amount as follows.

Table 26: Chargeback processing currency determination process

If...	And...	Then...
The issuer sending the chargeback and the acquirer receiving the chargeback participate in the same intracurrency settlement agreement and the transaction qualifies for the intracurrency agreement based on customer specified criteria.	The disputed amount is in the intracurrency reconciliation currency.	The issuer processes the chargeback in the currency of the intracurrency settlement agreement.
	The disputed amount is not in the intracurrency reconciliation currency (for example, it is stated in the transaction currency or in the issuer billing currency).	The issuer is required to pre-convert the disputed amount to U.S. dollars and then to the intracurrency reconciliation currency. The rate used for the pre-conversion should be the current or previous day's mid rate.
The issuer sending the chargeback and the acquirer receiving the chargeback do not participate in the same intracurrency settlement agreement, or if the issuer is in region D and the transaction is not intra-Europe.	The disputed amount is in U.S. dollars.	The issuer processes the chargeback in U.S. dollars.
	The disputed amount is not in U.S. dollars (for example, it is stated in the transaction currency or in the issuer billing currency).	The issuer is required to pre-convert the disputed amount to U.S. dollars. The rate used for the pre-conversion should be the current or previous day's mid rate.

For intra-European and inter-European transactions only, issuers may process a chargeback for the same or lesser amount of the original presentment received from the acquirer either:

- In the original presentment reconciliation currency, as specified in DE 5 (Amount, Reconciliation) of the First Presentment/1240 message.
- In the amount debited in the issuer's payment currency used for settlement of the original presentment, as specified in DE 6 (Amount, Cardholder Billing) of the First Presentment/ 1240 message.

For example, if the transaction is in EUR and the cardholder's currency is GBP, the chargeback amount may be in either EUR or GBP.

Rates To Be used for pre-conversion in chargeback processing

Customers should use the following rates when pre-converting chargeback amounts.

NOTE: Customers must use Mastercard-published rates when pre-converting chargeback amounts.

Table 27: Pre-conversion chargeback rates

Chargeback Submitted for Global Clearing Management System Processing Day	FX Rate File Received Calendar Day	Currency Update/1644 Messages Received in Clearing Transmission with Processing Day
Monday	Saturday	Saturday
Tuesday	Monday	Monday
Wednesday	Tuesday	Tuesday
Thursday	Wednesday	Wednesday
Friday	Thursday	Thursday
Saturday	Friday	Friday

Pre-conversion calculation for a chargeback in intracurrency reconciliation currency

If the issuer sending a chargeback and the acquirer receiving the chargeback participate in the same intracurrency settlement agreement, and the transaction qualifies for the agreement according to customer specified criteria, and the disputed amount is in the reconciliation currency, no pre-conversion is required.

The issuer may process the chargeback using the amount in intracurrency reconciliation currency.

If the disputed amount is not in the intracurrency reconciliation currency, the issuer should use the intracurrency reconciliation amount (represented in DE 5 [Amount, Reconciliation]).

To calculate a chargeback in the intracurrency reconciliation currency, the issuer first converts the disputed amount to U.S. dollars by dividing it by the appropriate mid rate. The issuer then multiplies the resulting U.S. dollar amount by the mid rate associated with the intracurrency reconciliation currency.

Pre-conversion calculation for a chargeback in U.S. dollars

To perform a pre-conversion calculation of a chargeback in U.S. dollars, the issuer divides the disputed amount by the mid rate associated with the disputed amount.

NOTE: The chargeback amount presented by the issuer to Mastercard in U.S. dollars should include amounts resulting from a Currency Conversion Assessment, if applicable.

Acquirer processing of second presentments

An acquirer processes a second presentment for the same or lesser amount of the chargeback received from the issuer in U.S. dollars, without any further currency conversion.

For intra-European and inter-European transactions only, an acquirer may process a second presentment for the same or lesser amount of the chargeback received from the issuer either:

- In the currency of the chargeback, as specified in DE 4 (Amount Transaction) of the First Chargeback/1442 message, or
- In the acquirer payment currency used for reconciliation of the chargeback, as specified in DE 5 (Amount, Reconciliation) of the First Chargeback/1442 message.

Acquirers cannot process a second presentment for an amount greater than the issuer's chargeback, but the acquirer may process a second presentment for a lesser amount.

Acquirers can initiate partial amount second presentments when an issuer has charged back the full amount of the original financial presentment and, through communication with the merchant, the acquirer is accepting responsibility for a portion of the disputed amount. Acquirers notify Mastercard and issuers that the second presentment is for less than the full amount of the initial chargeback by providing value 282 in DE 24 (Function Code) of the Second Presentment/1240 message.

Processing of pre-arbitration and arbitration case filings

A pre-arbitration or arbitration case filing should use the same currency as the currency used in the second presentment unless the second presentment currency is listed in the table below. If the currency of the second presentment is listed in the table, the amount should be converted to USD by utilizing the Mastercard published midrate from the day prior to the submission of the first chargeback.

A pre-arbitration or arbitration case filing may not be for an amount in excess of the acquirer’s second presentment, but it may be for a lesser amount.

Mastercom Unsupported Case Filing Currencies

ALPHA	NAME	ENTITY	NUMCODE	EXPONENT
DZD	Algerian Dinar	Algeria	12	0
BHD	Bahraini Dinar	Bahrain	48	3
XOF	*CFA Franc BCEAO	Benin	952	0
XOF	*CFA Franc BCEAO	Burkina Faso	952	0
BIF	Burundi Franc	Burundi	108	0
XAF	*CFA Franc BEAC	Cameroon	950	0
XAF	*CFA Franc BEAC	Central African Republic	950	0
XAF	*CFA Franc BEAC	Chad	950	0
CLP	Chilean Peso	Chile	152	0
KMF	Comoro Franc	Comoros	174	0
XAF	*CFA Franc BEAC	Congo	950	0
XOF	*CFA Franc BCEAO	Côte D Ivoire	952	0
DJF	Djibouti Franc	Djibouti	262	0
XAF	*CFA Franc BEAC	Equatorial Guinea	950	0
XPF	*CFP Franc	French Polynesia	953	0
XAF	*CFA Franc BEAC	Gabon	950	0
GNF	Guinea Franc	Guinea	324	0
XOF	*CFA Franc BCEAO	Guinea-Bissau	952	0
IQD	Iraqi Dinar	Iraq	368	3
JPY	Yen	Japan	392	0
JOD	Jordanian Dinar	Jordan	400	3
KRW	Won	Korea, Republic Of	410	0
KWD	Kuwaiti Dinar	Kuwait	414	3
LAK	Kip	Lao People S Democratic Republic	418	0
LYD	Libyan Dinar	Libyan Arab Jamahiriya	434	3
XOF	*CFA Franc BCEAO	Mali	952	0
XPF	*CFP Franc	New Caledonia	953	0
XOF	*CFA Franc BCEAO	Niger	952	0
OMR	Rial Omani	Oman	512	3
PYG	Guarani	Paraguay	600	0
RWF	Rwanda Franc	Rwanda	646	0
STD	Dobra	Sao Tome and Principe	678	0
XOF	*CFA Franc BCEAO	Senegal	952	0
XOF	*CFA Franc BCEAO	Togo	952	0
TND	Tunisian Dinar	Tunisia	788	3
UGX	Uganda Shilling	Uganda	800	0
VUV	Vatu	Vanuatu	548	0
VND	Dong	Vietnam	704	0
XPF	*CFP Franc	Wallis and Futuna	953	0

Notes:

* CFA	West African Franc
* CFP	Central Pacific Franc
* BCAEO	Central Bank of West African States
* BEAC	Bank of the Central African States

Currency conversion for settlement of fee collection messages

When transaction currency is not equal to the sender/receiver reconciliation currency, the transaction amount will be converted to appropriate reconciliation currency.

Customers may find the currency conversion rate used in DE 9 of the Clearing Detail File if the customer is the message originator, or in DE 9 of the IPM file if the customer is the message receiver.

Currency conversion for reversals

This section includes details about the currency conversion of reversal transactions, including how the conversion rate type is determined and the elements in which customers must provide the original Global Clearing Management System processing date.

The currency conversion rate types (buy, mid, and sell) used for processing reversal transactions are determined using the same rules outlined earlier in this chapter for presentments, chargebacks, and fee collection messages.

Acquirers submitting first presentment reversal messages are required to provide the original Global Clearing Management System processing date when submitting a first presentment reversal transaction in

- PDS 0025 (Message Reversal Indicator), subfield 2 (Central Site Processing Date of Original Message) (if reversing an individual message), or
- PDS 0026 (File Reversal Indicator), subfield 2 (Central Site Processing Date of Original File) (if reversing an entire file)

If the current GCMS processing date is within 7 processing days (excluding the original processing date) of the historical GCMS processing date, GCMS will use the historical currency conversion rate that was applied during the original clearing of the transactions.

If the current GCMS processing date is more than 7 processing days (excluding the original processing date) before the historical GCMS processing date, GCMS will use the currency conversion rates on the current processing day (for example, the currency conversion rates available at the reversal submission date, when processing the reversals).

For all reversals other than first presentments, GCMS will continue to use the current processing day's currency conversion rates.

For chargeback and fee collection reversals, Global Clearing Management System uses the current processing day's currency conversion rates when calculating the settlement value of the reversal.

Currency Update/1644-640 Messages

The Currency Update/1644-640 messages provide Mastercard-Issued USD Rates. These rates are published rates (as opposed to cross-rates).

Customers may request Currency Update/1644-640 messages from Mastercard as part of their inbound clearing files. This option is available at the processor level with the ability to specify the clearing cycle in which the processor should receive the messages.

NOTE: Global Clearing Management System sends the Currency Update/1644-640 messages once per processor endpoint to the lowest (first) occurring customer ID in the logical file. Global Clearing Management System does not provide a set of these messages for each customer ID associated with the same processor. Only one set will be provided in a delivery file. For example, if the customer elects to have clearing cycles 3 and 4 delivered as one file after the fourth clearing, only one set of rate messages will be sent, not one each from 3 and 4.

Delivery options for the Currency Update/1644-640 messages are

- do not deliver Currency Update/1644-640 messages
- deliver mid rate Currency Update/1644-640 messages
- deliver buy and sell rate Currency Update/1644-640 messages only, and
- deliver buy, sell, and mid rate Currency Update/1644-640 messages.

The customer or processor will receive the Currency Update/1644-640 messages in the delivery cycles for which the customer or processor has elected to receive the rates. The clearing system will not generate Currency Update/1644-640 messages for customers when there is no financial activity for that customer for a processing day.

T057 Currency Conversion Rate File

The Currency Conversion Rate File provides customers with Mastercard-Issued USD Rates and Mastercard-Issued Cross Rates, in effect for a given processing day.

Customers may choose to receive the Currency Conversion Rate File through

- MIP (production bulk file T057, test bulk file T058)
- CONNECT:Direct, or
- Mastercard File Express.

Currency conversion rate effective day and time

The currency conversion rates used by Global Clearing Management System are guaranteed for each Global Clearing Management System processing day for transactions not eligible for rates effective at the time of authorization. For transactions eligible for rates effective at time of authorization, refer to the Transaction Eligibility Window table in Rates used for currency conversion.

Table 28: Effective day and time for currency conversion rates not qualified for FX rates at the time of authorization

Rates Effective for Global Clearing Management System Processing Day	FX Rate File Received Calendar Day	Rates Effective for Calendar Day/ Time			
		From		To	
Monday	Sunday	Sunday	08:00	Monday	08:00
Tuesday	Monday	Monday	08:00	Tuesday	08:00
Wednesday	Tuesday	Tuesday	08:00	Wednesday	08:00
Thursday	Wednesday	Wednesday	08:00	Thursday	08:00
Friday	Thursday	Thursday	08:00	Friday	08:00
Saturday	Friday	Friday	08:00	Saturday	08:00
Sunday	Saturday	Saturday	08:00	Sunday	08:00

NOTE: Calendar days and times are expressed in Central Standard Time in the table above.

Customers interested in receiving the currency conversion rate file should contact the Global Customer Service team for additional information.

The currency conversion rate file detail record provides the rate class in field 5. The values for rate class are defined in the following table.

Valid Value	Description	Comments
M = Mastercard-Issued USD Rate	Buy, mid, and sell rates against the U.S. dollar	The Mastercard-Issued USD Rates will reside in the Currency Conversion Rate File Detail Record as follows. • Field 7 will contain the BUY Currency Conversion Rate. • Field 8 will contain the MID Currency Conversion Rate. • Field 9 will contain the SELL Currency Conversion Rate.

Valid Value	Description	Comments
F = Master-Issued Cross Rate	Buy, mid, and sell rates against non-U.S. dollar currencies	The cross rates will reside in all three rate type fields. • Field 7 will contain the BUY Currency Conversion Rate. • Field 8 will contain the MID Currency Conversion Rate. • Field 9 will contain the SELL Currency Conversion Rate.

Currency conversion rate file format

The currency conversion rate file header, detail, and trailer record layouts are shown in the following tables.

Table 29: Currency conversion rate file header record

Field Number and Name	Position	Length	Format	Comments and Values
1 Header Description	1	1	an	Constant: H
2 Date	2-9	8	n	File creation date. YYYYMMDD
3 Time	10-15	6	n	The time the file was created. Coordinated Universal time (UTC); six digits in military format HHMMSS. For example, 3:30:30 p.m. would show as 153030.
4 Rate File Format Version	16	1	an	This field identifies the file format version. The initial version will be 1 and will be incremented each time the file format changes.
5 Filler	17-125	109	an	Spaces

Table 30: Currency conversion rate file detail record

Field Number and Name	Position	Length	Format	Comments and Values
1 Detail Description	1	1	an	Constant: D
2 Source Currency Code	2-4	3	n	ISO currency code for the currency for which rates are being provided.

Field Number and Name	Position	Length	Format	Comments and Values
3 Reference Currency Code	5-7	3	n	ISO code for the reference currency against which rates are quoted. **NOTE: This field will continue to always contain a value of U.S. dollars (840) for Mastercard-Issued USD Rates (Rate Class = M). However, for Mastercard-Issued Cross Rates (Rate Class = F), this field may contain any valid currency code.**
4 Source Currency Exponent	8	1	n	Exponent of the currency code in field 2, positions 2-4.
5 Rate Class	9	1	an	M = Mastercard-Issued USD Rates F = Mastercard-Issued Cross Rate
6 Rate Format Indicator	10	1	an	Constant—D = Direct (only rate format currently supported)
7 BUY Currency Conversion Rate	11-25	15	n	Eight numbers to the left of the decimal, seven numbers to the right of the decimal.
8 MID Currency Conversion Rate	26-40	15	n	Eight numbers to the left of the decimal, seven numbers to the right of the decimal.
9 SELL Currency Conversion Rate	41-55	15	n	Eight numbers to the left of the decimal, seven numbers to the right of the decimal.
10 Reserved Field	56-70	15	n	Nine-filled
11 Filler	71-125	55	an	Spaces

Table 31: Currency Conversion Rate File Trailer Record

Field Number and Name	Position	Length	Format	Comments and Values
1 Trailer Description	1	1	an	Constant: T
2 Record Count	2-7	6	n	Total number of detail records. This count does not include the header or trailer records.

Field Number and Name	Position	Length	Format	Comments and Values
3 Hash Total	8-24	17	n	Hash total of all MID Currency Conversion Rate fields presented in the detail records. Ten numbers to the left of the decimal, seven numbers to the right of the decimal.
4 Filler	25-125	101	an	Spaces

Acquirer Currency Conversion Rate File

The Acquirer Currency Conversion Rate File provides the effective currency conversion rate of all possible ISO currency codes between the transaction currency code and the acquirer reconciliation currency code.

The files are provided for the following presentments:

- Regional First Presentments (production bulk file TQQ4, test bulk file TQQ6)
- Regional Second Presentments (production bulk file TQQ8, test bulk file TQR0)
- Intracurrency Presentments (production bulk file TQX2, test bulk file TQX4)

Customers may choose to receive the file through

- Mastercard Interface Processor (MIP) (production bulk files TQQ4, TQQ8, and TQX2; and test bulk files TQQ6, TQR0, and TQX4)
- CONNECT:Direct®, and
- Mastercard File Express.

NOTE: The Acquirer Currency Conversion Rate File is applicable only to determine the acquirer reconciliation amount from the transaction currency. This file does not replace the existing T057 Currency Conversion Rate File. Customers will continue to receive T057 rate files the same as before.

Acquirer Currency Conversion Rate effective day and time

The conversion rates in Acquirer Currency Conversion Rate File follow the same effective times as the T057 Currency Conversion Rate File.

Customers interested in receiving the updated Acquirer Currency Conversion Rate File should contact the Global Customer Service team for additional information.

Please refer to Chapter 26—Acquirer Currency Conversion Rate File Format for full details regarding the Acquirer Currency Conversion Rate File format.

Originating Institution Payment Transaction Currency Conversion Rate File

The Originating Institution Payment Transaction Currency Conversion Rate File gives customers the ability to determine the funding amount needed to reconcile with Mastercard specifically for cross-border payment transactions. To assist customers in reconciling their payment transactions (DE 3, Processing Code, subfield 1, Cardholder Transaction Type Code, value 28), this rate file contains all possible currency conversion rates from the transaction currency to the Originating Institution's reconciliation currency code for regional First Presentment payment transactions.

Customers may receive this new file through

- Mastercard Interface Processor (MIP) (production bulk files TS40, and test bulk files TS42)
- CONNECT:Direct, and
- Mastercard File Express.

NOTE: The Originating Institution Payment Transaction Currency Conversion Rate File is applicable only for determining the Originating Institution's reconciliation amount to support cross-border payment transactions. This file will not replace the existing T057 Currency Conversion Rate File. Customers will continue to receive T057 rate files.

Receiving institutions that reconcile must continue reconciling using currency conversion rate information provided in the First Presentment message and must not use the Originating Institution Payment Transaction Currency Conversion Rate File.

Originating Institution Payment Transaction Currency Conversion Rate effective day and time

The Originating Institution Payment Transaction Currency Conversion Rate File conversion rates follow the same effective times as the T057 Currency Conversion Rate File conversion rates.

Originating Institution Payment Transaction Currency Conversion Rate File format

Mastercard provides the Originating Institution Payment Transaction Currency Conversion Rate File for regional First Presentment Payment Transactions in production bulk file TS40, and test bulk file TS42.

Please refer to Chapter 27—Originating Institution Payment Transaction Currency Conversion Rate File Format for full details regarding the rate file format.

Clearing Detail File (IP755120-AA) to facilitate acquirer reconciliation

The Clearing Detail Report (IP755120-AA) is offered to acquirers to facilitate acquirer reconciliation. Customers can sign up for this report delivered through bulk file TN70 (Production) and TN72 (Test).

The report will be generated and sent after each clearing cycle, including cycle seven.

The report (in the form of a raw data file) provides acquirers transaction-level details from the Global Clearing Management System (GCMS) including the currency conversion rate DE 9 (Conversion Rate, Reconciliation) used to convert the transaction amount to the acquirer reconciliation amount.

Per transaction, the report will contain the following Detail Record. For the corresponding data element and private data subelement, refer to the *IPM Clearing Formats* manual.

To register for this file, acquirers must send an email to Global Customer Service at customer_support@mastercard.com designating which ICA(s) and endpoint(s) they would like to be set up for bulk file TN70/TN72 Clearing Detail Report IP755120-AA.

Table 32: Select data elements from the Clearing Detail File

Data Element	Description
DE 5 (Amount, Reconciliation)	Acquirer Reconciliation Amount
DE 9 (Conversion Rate, Reconciliation)	Currency Conversion Rate: Transaction Amount to Acquirer Reconciliation Amount
PDS 0146 (Amounts, Transaction Fee), subfield 7 (Amount, Fee, Reconciliation)	Total Interchange in Acquirer Reconciliation Currency
PDS 0015 (Clearing Currency Conversion Identifier), subfield 1 (Currency Conversion Date)	Currency conversion date
PDS 0015 (Clearing Currency Conversion Identifier), subfield 2 (Currency Conversion Indicator)	Currency conversion indicator

Refer to the Acquirer Clearing Detail Reporting chapter for the layout of a Clearing Detail File.

Header record

Field ID	Length	Comments
4	ans-639	Filler of spaces

Detail record

Detail	DE	PDS	Subfield	Length	Starting position
Original Transaction Information - SLI	-	0052	-	3	672

Trailer record

Field ID	Length	Comments
5	ans-627	Filler of spaces

Chapter 16 ICCR service

Issuers in the Europe region have the option to enroll in the Issuer Currency Conversion Rate (ICCR) service, which charges the cardholder an additional fee for transactions that require currency conversion.

ICCR service overview

The Issuer Currency Conversion Rate (ICCR) is a parameter-based system that charges cardholders by applying a mark-up called ICCR in clearing.

Issuers in the Europe region can add this supplemental fee to a transaction amount when the transaction currency is different from the cardholder billing currency. This fee is listed under DE 6 (Amount Cardholder Billing).

Issuers will be able to set their issuer currency conversion rate by account range, which will apply to First Presentment messages. Issuers can also apply ICCR to First Presentment Reversals and Credits.

Issuers have the option to apply a back-out process for the ICCR amount on First Chargebacks (and reversals) in cases where the ICCR amount is included in the DE 4 amount on Chargebacks.

Issuers can receive daily audit report files of the clearing transactions where the ICCR was applied. A new bulk file type will be introduced in support of the daily audit report files.

ICCR applies to POS and ATM transactions acquired worldwide.

In the dual message system, all payment transactions (processing code = 28) will be bypassed for ICCR.

ICCR enrollment

All issuers in the Europe region that choose to enroll in the ICCR service must submit the correct enrollment form.

The *ICCR Service Enrollment Form*, available on Mastercard Connect™, must be completed and submitted before issuers can participate in the ICCR service.

Forms should be submitted to the issuer's local customer delivery manager.

ICCR reports

Issuers can choose to receive daily audit report files that align with each clearing cycle from Global Clearing Management System.

This audit report will be available for the clearing transactions for which the ICCR calculation was performed.

Bulk File TN70 On Request Report Data File Transfer raw format

Header record

Field ID	Length	Comments
1	an-17	Value 'HIP830010'
2	an-11	ICA
3	an-07	Endpoint

Detail record

Field ID	Length	Comments
1	a-01	Value 'D'
2	an-11	ICA
3	an-04	MTI Code
4	an-03	Function Code
5	an-08	Processing Date
6	an-19	PAN
7	n-02	Process Code
8	n-11	Issuer ICA
9	an-01	Reversal Indicator
10	an-03	Filler
11	an-06	Transaction Date
12	an-04	Transaction Time
13	an-03	Merchant Country Code
14	an-09	Banknet Reference Number
15	n-12	Transaction Amount
16	an-03	Transaction Currency Code
17	an-01	Transaction Currency Exponent
18	n-12	Reconciliation Amount
19	an-03	Reconciliation Currency Code
20	an-01	Reconciliation Currency Exponent
21	an-12	Cardholder Billing Amount
22	an-03	Cardholder Billing Currency Code
23	an-01	Cardholder Billing Currency Exponent

Field ID	Length	Comments
24	an-08	Filler
25	n-12	ICCR Amount
26	n-15	ICCR Rate

Trailer record

Field ID	Length	Comments
1	an-17	Value of 'TIP830010'
2	an-11	ICA
3	an-07	Endpoint
4	an-12	Total of detail records only

Audit report fields included in raw data

The following table shows audit report fields that will be included in the raw data from the Bulk File TN70. Depending on the receiver of the file, a linend character may be inserted after each record.

1st Presentment Field Description	1st Chargeback (Full and Partial) Field Description	Position	Length	Format
MTI	MTI	1	4	an
Func Code_DE24	Func Code_DE24	5	3	an
DW_PROCESS_DATE	DW_PROCESS_DATE	8	8	an
DE2_CARD_NBR	DE2_CARD_NBR	16	19	an
DE3_CARDHOLDER_TXN_TYPE	DE3_CARDHOLDER_TXN_TYPE	35	2	an
DE93_ISSUER_ID	DE94_SEND_ICA	37	11	an
PDS25_REVERSAL_IND	PDS25_REVERSAL_IND	48	1	an
FILLER_REV_IND_MDS	FILLER_REV_IND_MDS	49	3	an
DE12_TXN_DATE	DE12_TXN_DATE	52	6	an
DE12_TXN_TIME		58	4	an
DE43_MERCH_COUNTRY_CD	DE43_MERCH_COUNTRY_CD	62	3	an

1st Presentment Field Description	1st Chargeback (Full and Partial) Field Description	Position	Length	Format
DE63_BANKNET_REF_NBR	DE63_BANKNET_REF_NBR	65	9	an
DE4_TXN_AMT	DE4_TXN_AMT	74	12	n
DE49_TXN_CURR_CD	DE49_TXN_CURR_CD	86	3	an
PDS148_TXN_CURR_EXP	DE49_TXN_CURR_EXP	89	1	an
DE5_SETTLEMENT_AMT	DE5_SETTLEMENT_AMT	90	12	n
DE50_SETTLEMENT_CURR_CD	DE50_SETTLEMENT_CURR_CD	102	3	an
PDS148_SETTLEMENT_CURR_EXP	PDS148_SETTLEMENT_CURR_EXP	105	1	an
DE6_CARDHOLDER_BILLING_AMT		106	12	n
DE51_CH_BILLING_CURR_CD		118	3	an
PDS148_ISSUER_CURR_EXP		121	1	an
FILLER_DE10_MDS	FILLER_DE10_MDS	122	8	an
PDS863_ICCR_AMT	PDS863_ICCR_AMT	130	12	n
PDS863_ICCR_RATE	PDS863_ICCR_RATE	142	15	n

ICCR bulk files

Mastercard will create a new bulk file layout, Bulk File TN70 (On Request Report Data File Transfer Raw Format), to replace bulk file type TAV8.

Chapter 17 Reconciliation

This section describes the Global Clearing Management System messages and reports and how they can be used in the reconciliation process.

Options for reconciliation of clearing and settlement data

The Global Clearing Management System provides several options to assist customers with reconciling their clearing and settlement data:

- Reconciliation messages provide detail and summary information of the customer's clearing and settlement financial activity totals.
- Reconciliation reports provide detail and summary information of the customer's clearing and settlement financial activity totals.
- Early Reconciliation allows customers to receive errors and acknowledgment reconciliation messages earlier than clearing cycle cutoff.
- Reconciliation Utility allows customers to submit the contents of amount fields in individual customer outgoing and incoming Integrated Product Messages (IPMs).

Each option is available for customers depending on the type of financial transaction activity received.

Option	Clearing financial transactions	Settlement financial transactions
Reconciliation Messages	Yes	Yes
Reconciliation Reports	Yes	
Early Reconciliation	Yes	Yes
Reconciliation Utility	Yes	Yes

For more information about the Reconciliation Utility, refer to the *Clearing Optimizer: Mainframe* manual.

IPM reconciliation messages for clearing and settlement data

Reconciliation messages generated by the Global Clearing Management System

Reconciliation messages are optional for customers and are generated for each clearing cycle in which there was applicable transaction data.

Reconciliation messages available to customers are

- the IPM File Currency Summary/1644-680 message
- the IPM Financial Position Detail/1644-685 message, and
- the IPM Settlement Position Detail/1644-688 message.

The Global Clearing Management System generates these messages as an acknowledgment message, a notification message, or both, depending on the type of data being accumulated and the options elected by the customer.

The messages include a four-position DE 25 (Message Reason Code), which identifies it as either an acknowledgment or a notification reconciliation message.

IF DE 25 contains a value of...	THEN this message is a...
6861	Acknowledgment Reconciliation message
6862	Notification Reconciliation message

Acknowledgment is a type of IPM reconciliation message confirming the customer's outbound activity that Global Clearing Management System processed.

Notification is a type of IPM reconciliation message confirming the customer's inbound activity that Global Clearing Management System processed.

Financial messages considered in reconciliation

Only some of the IPM messages available for customer use have a financial impact on reconciliation.

For example, retrieval request messages are not considered financial activity and therefore are not included in the reconciliation message amount totals.

Financial activity messages that contribute to reconciliation message amount totals are

- 1240-200 First Presentments
- 1442-450 First Chargebacks (Full)
- 1442-453 First Chargebacks (Partial)
- 1240-205 Second Presentments (Full)
- 1240-282 Second Presentments (Partial)
- 1442-451 Arbitration Chargebacks (Full)
- 1442-454 Arbitration Chargebacks (Partial)
- 1740-700 Fee Collection (Retrieval Fee Billing), and
- 1740-700, 1740-780, 1740-781, 1740-782, 1740-783 Fee Collection (Other): all cycles.

Acknowledgment messages created by Global Clearing Management System

Customers may optionally choose to receive acknowledgment messages based on the activity received from the customer.

If Mastercard receives clearing files from the customer, Global Clearing Management System creates clearing acknowledgment messages for each customer’s logical files, regardless of whether the files contain financial clearing data.

If the files that Mastercard receives from the customer contain financial activity, Global Clearing Management System may create clearing acknowledgment messages, settlement acknowledgment messages, or both for each customer's logical files. If no financial activity is received, no settlement acknowledgment messages are created.

Table 33: Clearing acknowledgment messages

IF Mastercard...	AND the files...	THEN the Global Clearing Management System...
Receives clearing files from the customer	Do not contain financial clearing data (for example, if all messages between the file header and file trailer messages are retrieval requests)	Creates clearing acknowledgment reconciliation messages containing zeros in the amount and count fields, and U.S. dollars in the corresponding currency code fields. This advises the customer that the Global Clearing Management System received and processed the non-financial logical file. Does not create settlement acknowledgment messages.
	Contain financial clearing data	Creates clearing and settlement acknowledgment reconciliation messages for the financial data.
Does not receive any clearing files from the customer		Will not generate any acknowledgment messages.

Notification messages

Mastercard generates notification messages only when there is notification data to transmit.

Location of reconciliation totals

Based on the reconciliation categories that the customer chooses, Global Clearing Management System will include the totals in the following private data subelements of the 1644-680 File Currency Summary, 1644-685 Financial Position Detail, or 1644-688 Settlement Position Detail messages.

Refer to the three columns to the right to determine when the private data subelements are mandatory or conditional within the 1644-680, 1644-685 and 1644-688 messages.

			Presence of this PDS in [6]		
PDS	**Will include reconciliation totals for...**	**In...**	**1644-680 message**	**1644-685 message**	**1644-688 message**
0360	Reconciled, Transaction Sequence Identifier	This indicates that there a split has occurred in the reconciliation total reported in reconciliation messages. The subfields indicate the sequence and the total number of message splits.	C	C	C
0380	Debits, transaction amount	Transaction currency	M	C	N/A
0381	Credits, transaction amount	Transaction currency	M	C	N/A
0384	Amount, net transaction	Transaction currency	M	C	N/A
0390	Debits, transaction amount	Reconciliation currency	N/A	M	M
0391	Credits, transaction amount	Reconciliation currency	N/A	M	M
0392	Debits, fee amounts	Reconciliation currency	N/A	M	M
0393	Credits, fee amounts	Reconciliation currency	N/A	M	M
0394	Amount, net transaction	Reconciliation currency	N/A	M	M
0395	Amount, net fee	Reconciliation currency	N/A	M	M
0396	Amount, net total	Reconciliation currency	N/A	M	M
0400	Debits, transaction number	This is a record count of all bilateral, and Global Collection Only transactions settled by Mastercard.	M	M	N/A
0401	Credits, transaction number	This is a record count of all bilateral, and Global Collection Only transactions settled by Mastercard.	M	M	N/A
0402	Total, transaction number	This is a record count of all bilateral, and Global Collection Only transactions settled by Mastercard.	M	M	N/A

[6] **C = Conditional: The data element is present in the message if the conditions described in the accompanying text are applicable. M = Mandatory: The data element is always present in the message.**

List of optional reconciliation categories

The Reconciliation Message Categories table lists optional reconciliation categories.

Customers may select or change these reconciliation categories by contacting their account manager or Mastercard Customer Implementation Specialist.

These definitions are used in the table.

- Transactions cleared and settled by Mastercard: Financial activity from customer to customer, from customer to Mastercard, and from Mastercard to customer for which the Mastercard settlement system completes settlement.
- Bilateral transactions: Transactions submitted for clearing that Mastercard does not settle because customers settle them through an interface outside of the Mastercard settlement system. These transactions are reported only in transaction currency; they are not reported in reconciliation currency, because they are not settled through Mastercard.
- Global collection only transactions: On-Us or intraprocessor transactions that customers cleared and settled outside of the Mastercard Global Clearing Management System. Customers send these transactions to Global Clearing Management System for reporting purposes only (Customers will never receive notification reconciliation messages with global collection only totals because Global Clearing Management System does not forward the global collection only messages; therefore, only acknowledgment reconciliation messages are created). These transactions are reported only in transaction currency; they are not reported in reconciliation currency, because they are not settled through Mastercard.
- In addition, full business service selection does not occur on global collection only. Therefore, the global collection only transactions are reported within the lowest level card program identifier, business service type, and business service ID in common for both customers.

Customers that want to receive reconciliation totals for Mastercard settled, bilateral settlement, and global collection only activity should request both the transaction currency option and the settlement indicator option for IPM financial position detail reconciliation messages to differentiate amount totals for each of these types of transactions.

Reconciliation message categories

				Available for: [7]		
	Reconciliation Message Category	Provides Totals of Reconciliation Amounts by:	Additional Information about this Reconciliation Category	1644-685 Fin Pos Dtl		1644-688 Smt Pos Dtl
				Ack	Not	Ack/Not
1	PDS 0300 (Reconciled, File ID)	PDS 0105 (Sending File ID)	The file originator must create a unique File ID for each File Header/ 1644-697 message in and across transmissions. The file originator accomplishes this by using unique values in the file ID in each File Header/1644-697 message and corresponding File Trailer/ 1644-695 message. This value appears in PDS 0300 of the reconciliation message. The value provided in the customer acknowledgment messages identifies the file ID in PDS 0105 submitted by the customer. [8] The value provided in the customer notification messages identifies the clearing cycle and the delivery cycle within the file ID in PDS 0105 sent to the customer. These values can be used for reconciliation to the Settlement Advisement totals.	R	R	D

[7] **D = Default: If the customer elects to receive reconciliation messages, this category will be provided automatically. O = Optional: The category is not required but may be included at the customer's option. R = Recommended: Unless the customer specifies otherwise, this category will be provided.**

[8] Customers sending a full file reversal using the same file ID, within the same clearing, may receive reconciliation messages with amount totals that net to zero as a result of the original file and the reversal file processing in the same clearing.

	Reconciliation Message Category	Provides Totals of Reconciliation Amounts by:	Additional Information about this Reconciliation Category	Available for: [7] 1644-685 Fin Pos Dtl Ack	1644-685 Fin Pos Dtl Not	1644-688 Smt Pos Dtl Ack/Not
2	PDS 0165 (Settlement Indicator)	• Transactions cleared and settled by Mastercard • Bilateral transactions • Global Collection Only transactions	Each reconciliation message contains totals only for a single settlement indicator, not a combined total for transactions settled by Mastercard, bilateral transactions, and global collection only transactions. Global Clearing Management System reports bilateral and global collection only transactions only in transaction currency because they are not settled through Mastercard. Global Clearing Management System reports only transactions settled through Mastercard in reconciliation currency, and additionally may report them in transaction currency or transaction counts depending on the reconciliation message type.	R	R	N/A
3	PDS 0378 (Original/ Reversal Totals Indicator)	• Original transactions • Reversal transactions	Customers receiving this category will receive amount totals for original transaction activity and reversal transaction activity, each in separate reconciliation messages.	R	R	N/A

[7] **D = Default: If the customer elects to receive reconciliation messages, this category will be provided automatically. O = Optional: The category is not required but may be included at the customer's option. R = Recommended: Unless the customer specifies otherwise, this category will be provided.**

				Available for: [7]		
				1644-685 Fin Pos Dtl		1644-688 Smt Pos Dtl
	Reconciliation Message Category	Provides Totals of Reconciliation Amounts by:	Additional Information about this Reconciliation Category	Ack	Not	Ack/Not
4	PDS 0374 (Reconciled Processing Code)	Processing Code	Processing Code describes the effect of a transaction on a customer account and the type of account affected. Customers that receive this reconciliation category will receive amount totals for all processing codes for which there is activity. Customers cannot specify amount totals for only certain processing codes. Currently supported processing codes are:	R	R	N/A

00	=	Purchase (goods and services) transaction
01	=	ATM transaction
09	=	Purchase with cash back transaction
12	=	Cash disbursement transaction
17	=	Convenience check (Global Collection Only specific)
18	=	Unique transaction
19	=	Fee collection (credit originator)
20	=	Credit transaction
28	=	Payment transaction
29	=	Fee collection (debit originator)

[7] **D = Default: If the customer elects to receive reconciliation messages, this category will be provided automatically. O = Optional: The category is not required but may be included at the customer's option. R = Recommended: Unless the customer specifies otherwise, this category will be provided.**

				Available for: [7]		
				1644-685 Fin Pos Dtl		1644-688 Smt Pos Dtl
	Reconciliation Message Category	Provides Totals of Reconciliation Amounts by:	Additional Information about this Reconciliation Category	Ack	Not	Ack/Not
			30 = Balance Inquiry[9]			
			50 = Payment/balance transfer (global collection only specific)			
			91 = PIN Unblock[4]			
			92 = PIN Change[4]			
5	DE 49 (Currency Code, Transaction Currency)	Transaction currency	Customers that receive this reconciliation category will receive amount totals for each unique combination of reconciliation and transaction currency pair.	O	O	O
6	PDS 0370 (Reconciled Account Range)	Issuing account ranges	Customers may receive amount totals only for their own issuing account ranges up to 11 positions, as established at Mastercard. Customers selecting this category also must select the Member Activity category to receive complete reconciliation information for their:	O	O	O
			• Issuing account ranges • Acquiring activity (at the member ID level), and • Fee collection activity (at the member ID level).			

[7] **D = Default: If the customer elects to receive reconciliation messages, this category will be provided automatically. O = Optional: The category is not required but may be included at the customer's option. R = Recommended: Unless the customer specifies otherwise, this category will be provided.**

[9] Although these transactions are traditionally considered to be non-financial with respect to the processing code, they are classified as financial transactions when they are originated containing an access fee collected by the ATM provider.

				Available for: [7]		
	Reconciliation Message Category	Provides Totals of Reconciliation Amounts by:	Additional Information about this Reconciliation Category	1644-685 Fin Pos Dtl Ack	1644-685 Fin Pos Dtl Not	1644-688 Smt Pos Dtl Ack/Not
			When this category is selected, the issuer will receive messages for each account range established for its member ID that had activity in the applicable file, clearing cycle, or both. Additional information on this reconciliation category is located in the following section titled Account Range Reconciliation Category.			
7	PDS 0302 (Reconciled, Member Activity)	Any or all of the following: • Acquiring activity • Issuing activity • Fee collection activity	If the customer selects the Account Range reconciliation category, the customer also must select this category so that the Global Clearing Management System can provide the customer with complete reconciliation information. If the customer selects the account range or Acquirer Reference ID settlement reconciliation categories, the customer activity will automatically be included as a settlement reconciliation category.	O	O	C

[7] **D = Default: If the customer elects to receive reconciliation messages, this category will be provided automatically. O = Optional: The category is not required but may be included at the customer's option. R = Recommended: Unless the customer specifies otherwise, this category will be provided.**

				Available for: [7]		
				1644-685 Fin Pos Dtl		1644-688 Smt Pos Dtl
	Reconciliation Message Category	**Provides Totals of Reconciliation Amounts by:**	**Additional Information about this Reconciliation Category**	**Ack**	**Not**	**Ack/Not**
8	PDS 0358 (Reconciled Business Activity)	All of the following: • Card Program Identifier • Business service level • Business service ID • Interchange rate designator • Business Date • Business Cycle • Acceptor Classification Override Indicator • Product Class Override Indicator • Corporate Incentive Rates Apply Indicator • Special Conditions Indicator • Mastercard Assigned ID Override Indicator	Customers that receive this reconciliation category will receive amount totals for all business activity categories for which there is activity. Customers cannot specify to receive amount totals for only certain Business Activity categories. The Global Clearing Management System takes this data from the business activity element of the original transaction. For customers processing transactions such as product class overrides or special conditions, if business activity is one of the reconciliation message categories being received, amount totals are based on the product class and special conditions being received.	O	O	N/A

[7] **D = Default: If the customer elects to receive reconciliation messages, this category will be provided automatically. O = Optional: The category is not required but may be included at the customer's option. R = Recommended: Unless the customer specifies otherwise, this category will be provided.**

				Available for: [7]		
	Reconciliation Message Category	Provides Totals of Reconciliation Amounts by:	Additional Information about this Reconciliation Category	1644-685 Fin Pos Dtl Ack	1644-685 Fin Pos Dtl Not	1644-688 Smt Pos Dtl Ack/Not
9	PDS 0359 (Reconciled, Settlement Activity)	• Settlement service level • Settlement Service ID • Transfer agent • Transfer agent account • Foreign exchange rate class • Reconciliation date and cycle • Settlement date and cycle	Customers that elect to receive the settlement reconciliation messages will always receive Settlement Position Detail/ 1644-688 messages grouped by this category. Customers will receive settlement position detail totals based on the information that Global Clearing Management System populates in PDS 0159 (Settlement Activity) of each transaction settled by Mastercard.	N/A	N/A	D
10	PDS 0372 (Reconciled Transaction Function)	Transaction functions that represent financial activity	Currently, the Global Clearing Management System supports the financial transaction functions noted in the table titled Currently Supported Transaction Functions. The Global Clearing Management System takes this data from the message type indicator (MTI) and function code of the original transaction. Additional information on this reconciliation category is located in the following section titled Transaction Function Reconciliation Category.	R	R	N/A

[7] **D = Default: If the customer elects to receive reconciliation messages, this category will be provided automatically. O = Optional: The category is not required but may be included at the customer's option. R = Recommended: Unless the customer specifies otherwise, this category will be provided.**

				Available for: [7]		
				1644-685 Fin Pos Dtl		1644-688 Smt Pos Dtl
	Reconciliation Message Category	**Provides Totals of Reconciliation Amounts by:**	**Additional Information about this Reconciliation Category**	**Ack**	**Not**	**Ack/Not**
11	PDS 0375 (Member Reconciliation Indicator 1)[10]	Customers that select this as an acknowledgment reconciliation option, and populate PDS 0375 in outgoing messages, will receive totals based on the contents of PDS 0375 in Acknowledgment Financial Position Detail/1644 messages.	Customers can populate PDS 0375 in their customer outgoing messages with any proprietary value up to 50 positions in length. When using this option, all financial records that do not contain PDS 0375 upon submission, will be accumulated and returned in acknowledgment reconciliation messages in which PDS 0375 contains the value undefined. Business service arrangements that qualify for the Extended Decimal Precision service will have PDS 0375 populated with the value undefined. Additional information on this reconciliation category is located in the following section titled Member Reconciliation Indicator 1.	O	N/A	N/A
12	PDS 0367 (Reconciled Card Program Identifier)	Card Program Identifier	Customers that select this as a settlement reconciliation option will receive totals based on the contents of PDS 0367 in Acknowledgment Settlement Position/1644 message. Global Clearing Management System will populate PDS 0367 based on PDS 0158 (Business Activity), subfield 1 (Card Program Identifier).	N/A	N/A	O

[7] **D = Default: If the customer elects to receive reconciliation messages, this category will be provided automatically. O = Optional: The category is not required but may be included at the customer's option. R = Recommended: Unless the customer specifies otherwise, this category will be provided.**

	Reconciliation Message Category	Provides Totals of Reconciliation Amounts by:	Additional Information about this Reconciliation Category	Available for: [7] 1644-685 Fin Pos Dtl Ack	1644-685 Fin Pos Dtl Not	1644-688 Smt Pos Dtl Ack/Not
13	PDS 0368 (Reconciled Transaction Function Group Code)	Totals are provided for each unique Transaction Function group.	Customers that select this as a settlement reconciliation option will receive totals based on the contents of PDS 0368 in Acknowledgment Settlement Position/1644 message.	N/A	N/A	O
14	PDS 0369 (Reconciled Acquirer Reference ID)	Acquirer Reference ID	Customers may receive amount totals only for their own Acquirer Reference ID as established by Mastercard. Customers that select this as a settlement reconciliation category will receive complete reconciliation information for their: • Acquirer Reference ID • Issuing activity (at the customer ID level), and • Fee collection activity (at the customer ID level) When this category is selected, the acquirer will receive messages for each BIN range established for its member ID that had activity in the applicable file, clearing file, or both. The initial population of BIN uses the customer's BIN.	N/A	N/A	O

Account range reconciliation category

The initial population of account ranges uses the customer's issuer account range.

Account range building

[7] **D = Default: If the customer elects to receive reconciliation messages, this category will be provided automatically. O = Optional: The category is not required but may be included at the customer's option. R = Recommended: Unless the customer specifies otherwise, this category will be provided.**

[10] Note: For customers using this Financial Reconciliation option, the totals within a business service arrangement subject to the Extended Decimal Precision Service will be accumulated and returned in acknowledgment reconciliation messages where PDS 0375 contains the value "undefined." Use of PDS 0375 in other business services arrangements is not affected. Refer to the Extended Decimal Precision Service section for more information.

Global Clearing Management System, Clearing Optimizer, and IPM MPE will construct Customer ID and issuer account range as follows:
Customer ID 009999 or 00000009999 **NOTE: The IPM MPE contains the 11-position representation. The IPM format supports a variable representation from six positions to 11 positions.**
Account Range Low 5555550000000000000 (zero-filled)
Account Range High 5555559999999999999 (nine-filled) (issuer only or both)

The account ranges initially allow specification by 11-position ranges; however, this field supports 19 positions for future use. The positions 12-19 in the Issuing Account Range reconciliation category element are zero-filled for the beginning account range and nine-filled for the ending account range.

Transaction function reconciliation category

The transaction functions currently supported for reconciliation messages are listed in the Currently Supported Transaction Functions table.

NOTE: If the customer chooses to receive reconciliation messages for transaction functions, Mastercard will provide reconciliation detail only for the transaction functions for which financial detail activity has occurred.

Currently supported transaction functions

Message Type Identifier	Function Code	Transaction Function
1240	200	First Presentment
1240	205	Second Presentment (full)
1240	282	Second Presentment (partial)
1442	450	First Chargeback (full)
1442	451	Arbitration Chargeback (full)
1442	453	First Chargeback (partial)
1442	454	Arbitration Chargeback (partial)
1644	603	Retrieval Requests[11]

[11] Customers selecting this option and submitting only 1644-603 (Retrieval Requests; non-financial messages) will receive reconciliation messages with zero counts and amounts.

Message Type Identifier	Function Code	Transaction Function
1740	700	Fee Collection (customer-generated)
1740	780	Fee Collection Return
1740	781	Fee Collection Resubmission
1740	782	Fee Collection Arbitration Return
1740	783	Fee Collection (Global Clearing Management System-generated)
1740	790	Fee Collection (Funds Transfer applies only in the Clearing Optimizer system to UK Domestic Maestro transactions)

Customer Reconciliation Indicator 1 reconciliation category

The Customer Reconciliation Indicator 1 table provides details about PDS 0375.

Customer Reconciliation Indicator 1

IF the customer chooses the reconciliation category...	THEN...
Customer Reconciliation Indicator 1	1. For each of the proprietary values present in clearing activity that includes the optional PDS 0375. Example: A customer includes the value 1234 in PDS 0375 for several First Presentment messages and 5678 in PDS 0375 for several other First Presentment messages. In this case, the IPM reconciliation messages will include totals of the clearing activity for all of the messages that have the value 1234 in PDS 0375 and separate totals for all the messages that have the value 5678 in PDS 0375.
	2. For all financial activity when PDS 0375 is not provided. Example: A customer has chosen this reconciliation category but does not include PDS 0375 in several of the First Presentment clearing messages submitted. The Global Clearing Management System will create an acknowledgment message with a Customer Reconciliation Indicator 1 value of undefined. This process will ensure that the acknowledgment reconciliation provided represents 100 percent of the accepted financial activity of the customer for that file.

IF the customer chooses the reconciliation category...	THEN...
	3. Will not receive reconciliation totals based on PDS 0375 (Member Reconciliation Indicator 1) for reporting within any business service arrangement subject to the Extended Decimal Precision service, as the decimal portion of the interchange is not settled at the individual transaction level. For customers using this Financial Reconciliation Option, the totals within a business service arrangement subject to the Extended Decimal Precision Service will be accumulated and returned in acknowledgment reconciliation messages where PDS 0375 contains the value undefined. Use of PDS 0375 in other business service arrangements is not affected.

Functionality in the reconciliation messages

The reconciliation messages provide customers with detailed reconciliation data in reconciliation currency and, optionally, transaction currency. Customers do not receive totals in U.S. dollars unless the transaction currency or reconciliation currency is U.S. dollars.

- The File Currency Summary message always will contain totals in transaction currency.
- The Financial Position Detail message always will contain totals in the customer's reconciliation currency.

For...	Global Clearing Management System provides amount totals in...
Global Collection Only transactions	Transaction currency only.
Bilateral transactions	Transaction currency only.
All other transactions	The customer's reconciliation currency and, if the customer selects it, also in transaction currency.

When the reconciliation amounts are for bilateral totals, Global Collection Only totals, or both, the message elements related to reconciliation currency amounts will be present in the reconciliation message, but zero-filled. However, elements related to transaction counts always contain totals for those settled by Mastercard, bilateral, and Global Collection Only count when there is activity for those transaction types.

The IPM format does not require customers to provide expected reconciliation totals. Customers optionally may provide hash totals for counts and amounts in PDS 0301 and PDS 0306 in their outbound File Trailer/1644-695 messages to activate file integrity checks. However, the Global Clearing Management System does not use this data in PDS 0301 and PDS 0306 as part of the reconciliation process.

Reconciliation messages accumulate only accepted financial activity. Financial activity currently includes the transaction functions shown in the table Currently Supported Transaction Functions.

The reconciliation messages do not provide amount or count totals for non-financial message types

- File Headers
- File Trailers
- Retrieval Requests, and
- Financial Detail Addenda.

NOTE: For more information about transaction functions, as identified by MTI and Function Code (DE 24), that qualify as financial activity, refer to the *IPM Clearing Formats* manual.

NOTE: The reconciliation messages report only accepted (not rejected) transaction message totals.

File Currency Summary/1644-680 message

This message provides a summary by transaction currency of the customer's clearing financial activity totals. Customers that choose to receive this type of message will receive one message for each transaction currency that occurs, by logical file.

Both credit and debit totals are provided by transaction currency. Global Clearing Management System determines the original amount and identifies it as a credit or a debit through the processing code. Global Clearing Management System then calculates the credit and debit sums for a given currency and places those sums in the appropriate amount elements in the File Currency Summary message.

Financial Position Detail/1644-685 message

Customers may choose to receive the Financial Position Detail message. Global Clearing Management System generates this message for both acknowledgment and notification activity. Customers electing to receive these messages receive both types after each clearing cycle cutoff.

Customers submitting the early reconciliation file option will receive acknowledgement messages after the Global Clearing Management System completes the processing of the physical file. These totals will not be repeated after the clearing cycle cutoff.

The Financial Position Detail/1644-685 message provides details of the customer's clearing financial activity by reconciliation categories.

There are multiple reconciliation categories, and all are optional. Customers may select

- up to nine categories for reconciliation messages reflecting customer inbound data (referred to as Notification data), and
- up to 10 categories for reconciliation messages reflecting customer outbound data (referred to as Acknowledgment data).

The Global Clearing Management System automatically provides all message amount totals for the Financial Position Detail/1644-685 in the customer's reconciliation currency. If a customer selects the Transaction Currency reconciliation category, the message will contain amount totals for each unique pair of transaction currency and reconciliation currency for which there was clearing activity.

Choosing clearing reconciliation categories

For clearing reconciliation messages, customers may choose reconciliation categories separately for acknowledgment messages and notification messages.

Customers that want to receive reconciliation totals for Mastercard settled, bilateral settlement, and global collection only activity should request both the transaction currency option and the settlement indicator option for IPM Financial Position Detail Reconciliation messages to differentiate amount totals for each of these types of transactions.

Customers may select category options by contact their account manager or Mastercard Customer Implementation Specialist.

The Global Clearing Management System generates a Financial Position Detail/1644-685 message for each unique combination of values for the selected reconciliation categories. For example, a customer could select the reconciliation categories for acknowledgment and notification messages as shown in the following table titled Example of Customer Reconciliation Messages.

Example of customer reconciliation messages

Acknowledgment or Notification	Reconciliation Category
Notification	Customer Activity
Notification	Account Range: 54XXXXXXXXXXXXXXXXX - 54XXXXXXXXXXXXXXXXX **Note: Initially, account ranges will allow specification by 11-position ranges; however, this field supports 19 positions for future use. Refer to previous table titled Account Range Building for additional information about building account ranges.**
Notification	Settlement Indicator (values B, C, and M)
Notification	Original/Reversal Transactions
Notification	Processing Code
Acknowledgment	Customer Activity
Acknowledgment	File ID
Acknowledgment	Settlement Indicator (values B, C, and M)

Acknowledgment or Notification	Reconciliation Category
Acknowledgment	Original/Reversal Transactions
Acknowledgment	Processing Code

For each combination of category, the Global Clearing Management System generates a unique notification or acknowledgment Financial Position Detail/1644-685 message. For example, one Financial Position Detail/1644-685 reconciliation message would contain totals for the combination of one account range plus settlement indicator, another for a second account range plus settlement indicator, and so forth.

Within the reconciliation categories for account range, customer activity, settlement indicator, and processing code are multiple possible values. This can result in additional reconciliation category combinations, generating additional Financial Position Detail/1644-685 messages. This applies to all reconciliation categories.

For example, suppose that customer 001234 has selected the following reconciliation categories for acknowledgment and notification messages and has clearing data as shown.

Acknowledgment or Notification	Reconciliation Category Selected	Clearing Data Received/Sent
Notification	Business Activity	MCC and DMC U.S.-U.S. IRDs: 70 (Merit III) for MCC 78 (Merit I) for DMC
Notification	Settlement Indicator (values B, C, and M)	M (Mastercard Settled): both MCC and DMC
Notification	Original/Reversal Transactions	O (original): MCC R (reversal): DMC
Notification	Processing Code (for example, purchase or unique)	Purchase: both MCC and DMC, USD 100 each
Acknowledgment	File ID	00205290300123400001
Acknowledgment	Settlement Indicator (values B, C, and M)	M (Mastercard Settled): both MCC and DMC
Acknowledgment	Original/Reversal Transactions	O (original): both MCC and DMC

Acknowledgment or Notification	Reconciliation Category Selected	Clearing Data Received/Sent
Acknowledgment	Processing Code (such as purchase and unique)	Purchase: both MCC and DMC, USD 50 each Unique: MCC, USD 25

For each combination of categories, Global Clearing Management System generates a unique notification or acknowledgment Financial Position Detail/1644-685 message.

In addition, within the reconciliation categories for business activity, settlement indicator, original/reversal, and processing code are multiple possible values. These values can result in additional reconciliation category combinations, generating additional Financial Position Detail/1644-685 messages.

Using the selected reconciliation categories and specified values shown in the previous table, Global Clearing Management System generates the following Financial Position Detail/1644-685 messages.

Acknowledgment or Notification Received	Clearing Data Totals Reported
Notification Message 1	USD 100: **credit, IRD 70**, Mastercard settled, original, purchase transaction
Notification Message 2	USD 100: **debit, IRD 78**, Mastercard settled, reversal, purchase transaction
Acknowledgment Message 1	USD 100: file ID, Mastercard settled, original, purchase transactions
Acknowledgment Message 2	USD 25: file ID, Mastercard settled, original, unique transaction

In the above example, when the customer does not select the business activity reconciliation category, Global Clearing Management System will combine the reconciliation totals for consumer credit transactions and point-of-sale (POS) consumer debit transactions. Global Clearing Management System also combines the interchange fee amount totals for those transactions. Conversely, when the business activity reconciliation category is selected, Global Clearing Management System specifies the interchange fee amount totals with the associated credit or POS debit transaction amount totals in the reconciliation messages.

Customers may receive IPM acknowledgment and notification reconciliation messages for POS debit and credit activity within the same logical file. Customers selecting the Early Reconciliation file option also may see acknowledgment messages for both POS debit and credit activity in the same Early Reconciliation file from Global Clearing Management System.

Settlement Position Detail/1644-688 message

Customers may choose to receive the Settlement Position Detail/1644-688 message. Global Clearing Management System generates this message for both acknowledgment and notification activity. Customers electing to receive these messages will receive both types after each clearing cycle cutoff.

The Settlement Position Detail/1644-688 message provides details of the customer's settlement financial activity by reconciliation categories giving the customer the ability to reconcile settlement positions and tie back to the Settlement Advisement received from the Mastercard Settlement Account Management (S.A.M.) system.

There are multiple settlement reconciliation categories. If a customer chooses to receive Settlement Position Detail/1644-688 messages, the two default categories must be selected. In addition to the default categories, customers may select up to five optional categories for reconciliation messages reflecting customer inbound notification and outbound acknowledgment data.

The Global Clearing Management System provides all message amount totals for the Settlement Position Detail/1644-688 in the customer's reconciliation currency. If a customer selects the Transaction Currency reconciliation category, the message contains reconciliation amount totals for each unique pair of transaction currency and reconciliation currency for which there was settlement activity.

If the customer chooses this message option, a Settlement Position Detail message will be generated only for transactions settled by Mastercard (PDS 0165 = M) after each clearing cycle.

Refer to the *IPM Clearing Formats* manual for a complete message layout for the Settlement Position Detail/1644-688 message.

NOTE: The Settlement Position Detail/1644-688 Message will be delivered along with the customers' normal activity at the end of each clearing cycle (Bulk Type T112) and will be included in the IPM Early Reconciliation File (Bulk Type T113) if the customer has requested it.

Choosing settlement reconciliation categories

For settlement reconciliation messages, customers choose reconciliation categories that apply to both acknowledgment messages and notification messages.

The Global Clearing Management System generates a Settlement Position Detail/1644-688 message for each unique combination of values for the selected reconciliation categories. For example, a customer could select the reconciliation categories for messages as shown in the following table titled Example of Customer Settlement Reconciliation Messages.

Example of customer settlement reconciliation messages

Reconciliation Category
Account Range: 54XXXXXXXXXXXXXXXXX - 54XXXXXXXXXXXXXXXXX **NOTE: Initially, account ranges will allow specification by 11-position ranges, however this field supports 19 positions for future use. Refer to previous table titled Account Range Building for additional information about building account ranges.**
Reconciled, File (PDS 0300) default category
Reconciled, Settlement Activity (PDS 0359) default category

For each combination of category, the Global Clearing Management System generates a unique notification or acknowledgment Settlement Position Detail/1644-688 message. For example, one Settlement Position Detail/1644-688 reconciliation message would contain totals for the combination of one account range, one file ID, and settlement activity, another for a second account range, file ID, and settlement activity, and so forth.

Customers may receive IPM acknowledgment and notification settlement reconciliation messages for point-of-sale (POS) debit and credit activity within the same logical file.

Global Clearing Management System reconciliation reports

The Global Clearing Management System reports supplement the reconciliation messages and will facilitate customers' internal reconciliation and balancing related to Mastercard.

Customers can request these reports in print image format. The print image format is a standard 133-character print format that contains a one-position carriage control.

Customers can use the reports for both financial data reporting and for customer statistical data capture for analysis within customer management information systems (MIS).

The Global Clearing Management System separates the clearing reports for accepted transactions by acknowledgment and notification clearing data. The Global Clearing Management System generates these reports upon completion of the applicable clearing cycle. Once these reports are generated, the Global Clearing Management System sends them to the customers that have requested them. These reports are optional.

Customers requesting the reports will receive them for each clearing cycle. The Global Clearing Management System will transmit these reports using bulk types

- T140: Clearing Cycle Acknowledgement Report (production)
- T150: Clearing Cycle Acknowledgement Report (test)
- T140: Clearing Cycle Notification Report (production), and
- T150: Clearing Cycle Notification Report (test).

NOTE: Customers that request these reports will receive them after each clearing cycle.

Although reconciliation messages may vary depending on customer reconciliation category selections, the reports do not vary and always provide totals for all 11 of the reconciliation categories shown in the following table titled Reconciliation Report Categories.

Customers will have the option to receive Global Clearing Management System reconciliation reports for accepted clearing data and rejected clearing data.

Reconciliation report categories

	Category	Examples of Items in the Category
1	Card Program Identifier (Acceptance Brand)	Mastercard, private label.
2	Business Service Level	Customer-to-customer, intracountry, intercountry, intraregional, interregional.
3	Business Service ID	Business Service ID number.
4	Interchange Rate Designator	The ID assigned to the specific interchange program within the business agreement identified.
5	Transaction Function	First presentment, first chargeback, second presentment.
6	Processing Code	Purchase, ATM, Unique, Payment Transaction.
7	Original/Reversal Transactions	Original transactions separated from reversal transactions.
8	Settlement Indicator	Settled by Mastercard, Bilateral, Global Collection Only.
9	Reconciliation Currency/ Code	Reconciliation Currency alpha and numeric codes. These totals will reflect only Mastercard settled transactions. Bilateral and Global Collection Only totals are not provided in reconciliation currency.
10	Financial and Non-Financial Transactions	Financial transactions separated from non-financial transactions. **NOTE: Non-financial transactions include retrieval requests and financial detail addenda.**
11	Logical File ID	Customer outbound logical file ID or customer inbound logical file ID.

The reconciliation reports are available for distribution to the customers upon request. Customers can contact the Global Customer Service team or their regional office to request these reports, detailed in the Global Clearing Management System Reconciliation Reports table and in the report samples that follow.

If the customer chooses the option to receive reconciliation reports, detail IPM clearing reports and a summary report will be generated for each of the six clearing cycles. These reports supplement the IPM reconciliation messages and will facilitate reconciliation and balancing for the customers.

A seventh clearing cycle exists exclusively for Mexico domestic switching transactions. For more information on the seven clearing cycles, refer to the Daily Clearing Cycle Schedule section.

Global Clearing Management System reconciliation reports

Report Name	Description	Report No.	Categorized by:
Clearing Cycle Acknowledgment Report	For transactions sent from the customer's processing site to Mastercard	IP727010-AA	• Transactions settled by Mastercard • Bilateral Transactions • Global Collection Only Transactions • Non-Financial Transactions
Clearing Cycle Notification Report	For transactions sent to the customer's processing site	IP727020-AA	• Transactions settled by Mastercard • Bilateral Transactions • Non-Financial Transactions
Clearing Cycle Summary Report	A summary of the clearing cycle activity based on completion of each clearing cycle. The Global Clearing Management System generates one report per clearing cycle per member ID.	IP728010-AA	N/A
IPM Messages Created On Behalf of a Member	For customers that receive acknowledgments for Fee Collection/1740 messages that they did not generate, this report assists customers in the reconciliation process.	IP142110-AA	N/A
Acquirer Funded Reward Presentments Created On Behalf of a Member	Aids acquirers in reconciling promotions that will be merchant-funded, providing acquirers with a recap of the merchant-funded promotions.	IP170010-AA	N/A
On-behalf Service Fee Collection Report	Reconciliation summary report offered to acquirers in the Europe region to allow reconciliation and settlement of their authorization and clearing transactions.	IP142520-AA	N/A

IPM clearing reports: Clearing Cycle Acknowledgment and Clearing Cycle Notification reports

These reports are billable at USD 0.01 per line and are billed through the Mastercard Consolidated Billing System (MCBS).

Report Number	Description	Billing Event Number
IP727010-AA	Reconciliation Acknowledgment Report	2RP2216
IP727020-AA	Reconciliation Notification Report	2RP2217

Customers may select report options by contacting their Mastercard customer implementation specialist.

IPM clearing reports: Clearing Cycle Summary

The Clearing Cycle Summary, which is optional and is generated once per clearing cycle by the Global Clearing Management System, provides customers with an additional reconciliation tool by providing specific clearing totals summarized by clearing cycle.

This report includes reconciliation totals at

- Card Program Identifier (Acceptance Brand)
- Business Service Level
- Customer ID (sender or receiver)
- Logical file ID to Mastercard, or logical file ID from Mastercard, and
- Totals in the appropriate reconciliation currency, and that reconciliation currency code.

The Global Clearing Management System transmits the Clearing Cycle Summary reports using bulk type T140 (for production) and T150 (for test).

This report is billable at USD 0.01 per line and is billed through the Mastercard Consolidated Billing System (MCBS). The billing event number is as follows.

Report Number	Description	Billing Event Number
IP728010-AA	Clearing Cycle Summary	2RP2218

Customers may select report options by contacting their account manager or Mastercard Customer Implementation Specialist.

NOTE: For each of the report samples that follows, field descriptions applicable to all of the report pages follow the Summary page.

Clearing Cycle Acknowledgment Report samples

These samples of the Clearing Cycle Acknowledgment Report show accepted totals.

Figure 20: Clearing Cycle Acknowledgment Report (IP727010-AA), page 1: Mastercard Settled Transactions

```
IP727010-AA                                        MASTERCARD WORLDWIDE                                                   RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                         CLEARING CYCLE XXX - ACKNOWLEDGEMENT                                         PAGE NO:          1
BUSINESS SERVICE LEVEL: INTRACOUNTRY                        YYYY-MM-DD
BUSINESS SERVICE ID: 999001
FILE ID: XXX/YYMMDD/XXXXXXXXXXX/99999
MEMBER ID: XXXXXXXXXXX

MASTERCARD SETTLED                                                          RECON                     FEE
                                                                             CURR                     CURR
TRANS. FUNC. PROC.CODE        IRD   COUNTS                  RECON AMOUNT     CODE        TRANS FEE    CODE
------------ --------------- --- -------- ------------------------------- ------- --------------- -------
FIRST PRES.  PURCHASE   ORIG 75  XXXXXXXX                       0.00 CR   36-AUD         0.00 DR  36-AUD
------------ --------------- --- -------- ------------------------------- ------- --------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                       0.00 CR   36-AUD         0.00 DR  36-AUD

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                       0.00 CR   36-AUD         0.00 DR  36-AUD


                                                                             CURR                     CURR
TRANS. FUNC. PROC.CODE        IRD   COUNTS                  RECON AMOUNT     CODE        TRANS FEE    CODE
------------ --------------- --- -------- ------------------------------- ------- --------------- -------
FIRST PRES.  PURCHASE   ORIG 75  XXXXXXXX                       0.00 CR  124-CAD         0.00 DR 124-CAD
             CREDIT     ORIG 75  XXXXXXXX                       0.00 DR  124-CAD         0.00 CR 124-CAD
------------ --------------- --- -------- ------------------------------- ------- --------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                       0.00 CR  124-CAD         0.00 DR 124-CAD

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                       0.00 CR  124-CAD         0.00 DR 124-CAD


                                                                             CURR                     CURR
TRANS. FUNC. PROC.CODE        IRD   COUNTS                  RECON AMOUNT     CODE        TRANS FEE    CODE
------------ --------------- --- -------- ------------------------------- ------- --------------- -------
FIRST PRES.  PURCHASE   ORIG 75  XXXXXXXX                       0.00 CR  208-DKK         0.00 DR 208-DKK
             CREDIT     ORIG 75  XXXXXXXX                       0.00 DR  208-DKK         0.00 CR 208-DKK
```

Figure 21: Clearing Cycle Acknowledgment Report (IP727010-AA), page 2: Mastercard Settled Transactions

```
IP727010-AA                                          MASTERCARD WORLDWIDE                                             RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                         CLEARING CYCLE XXX - ACKNOWLEDGEMENT                                     PAGE NO:          2
BUSINESS SERVICE LEVEL: INTRACOUNTRY                       YYYY-MM-DD
BUSINESS SERVICE ID: 999001
FILE ID: XXX/YYMMDD/XXXXXXXXXX/99999
MEMBER ID: XXXXXXXXXX

MASTERCARD SETTLED                                                            RECON                   FEE
                                                                               CURR                   CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS                   RECON AMOUNT       CODE      TRANS FEE    CODE
------------ -------------- --- -------- ------------------------ ------- -------------- -------
------------ -------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  TOTAL                XXXXXXXX                       0.00 CR 208-DKK         0.00 DR 208-DKK

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL      XXXXXXXX                       0.00 CR 208-DKK         0.00 DR 208-DKK


                                                                               CURR                   CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS                   RECON AMOUNT       CODE      TRANS FEE    CODE
------------ -------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  PURCHASE    ORIG 75  XXXXXXXX                       0.00 CR 344-HKD         0.00 DR 344-HKD
             CREDIT      ORIG 75  XXXXXXXX                       0.00 DR 344-HKD         0.00 CR 344-HKD
------------ -------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  TOTAL                XXXXXXXX                       0.00 CR 344-HKD         0.00 DR 344-HKD

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL      XXXXXXXX                       0.00 CR 344-HKD         0.00 DR 344-HKD


                                                                               CURR                   CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS                   RECON AMOUNT       CODE      TRANS FEE    CODE
------------ -------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  PURCHASE    ORIG 75  XXXXXXXX                       0.00 CR 392-JPY         0.00 DR 392-JPY
------------ -------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  TOTAL                XXXXXXXX                       0.00 CR 392-JPY         0.00 DR 392-JPY
```

Figure 22: Clearing Cycle Acknowledgment Report (IP727010-AA), page 3: Mastercard Settled Transactions

```
IP727010-AA                                   MASTERCARD WORLDWIDE                                              RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                    CLEARING CYCLE 001 - ACKNOWLEDGEMENT                                   PAGE NO:         4
BUSINESS SERVICE LEVEL: INTRACOUNTRY                YYYY-MM-DD
BUSINESS SERVICE ID: 999001
FILE ID: XXX/YYMMDD/XXXXXXXXXXX/99999
MEMBER ID: XXXXXXXXXXX

MASTERCARD SETTLED                                                     RECON                        FEE
                                                                       CURR                         CURR
TRANS. FUNC. PROC.CODE      IRD   COUNTS              RECON AMOUNT    CODE        TRANS FEE     CODE
------------ --------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  PURCHASE    ORIG 75  XXXXXXXX                  0.00 CR 756-CHF          0.00 DR 756-CHF
             CREDIT      ORIG 75  XXXXXXXX                  0.00 DR 756-CHF          0.00 CR 756-CHF
------------ --------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  TOTAL                XXXXXXXX                  0.00 CR 756-CHF          0.00 DR 756-CHF

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL      XXXXXXXX                  0.00 CR 756-CHF          0.00 DR 756-CHF


                                                                       CURR                         CURR
TRANS. FUNC. PROC.CODE      IRD   COUNTS              RECON AMOUNT    CODE        TRANS FEE     CODE
------------ --------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  PURCHASE    ORIG 75  XXXXXXXX                  0.00 CR 826-GBP          0.00 DR 826-GBP
             CREDIT      ORIG 75  XXXXXXXX                  0.00 DR 826-GBP          0.00 CR 826-GBP
------------ --------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  TOTAL                XXXXXXXX                  0.00 CR 826-GBP          0.00 DR 826-GBP

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL      XXXXXXXX                  0.00 CR 826-GBP          0.00 DR 826-GBP


                                                                       CURR                         CURR
TRANS. FUNC. PROC.CODE      IRD   COUNTS              RECON AMOUNT    CODE        TRANS FEE     CODE
------------ --------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  PURCHASE    ORIG 75  XXXXXXXX                  0.00 CR 840-USD          0.00 DR 840-USD
```

Figure 23: Clearing Cycle Acknowledgment Report (IP727010-AA), page 4: Mastercard Settled Transactions

```
IP727010-AA                                          MASTERCARD WORLDWIDE                                                 RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                          CLEARING CYCLE 001 - ACKNOWLEDGEMENT                                       PAGE NO:         4
BUSINESS SERVICE LEVEL: INTRACOUNTRY                     YYYY-MM-DD
BUSINESS SERVICE ID: 999001
FILE ID: XXX/YYMMDD/XXXXXXXXXXX/99999
MEMBER ID: XXXXXXXXXXX

MASTERCARD SETTLED                                                      RECON                   FEE
                                                                        CURR                    CURR
TRANS. FUNC. PROC.CODE      IRD   COUNTS               RECON AMOUNT     CODE       TRANS FEE    CODE
------------ -------------- --- --------  ------------------------- -------  -------------- -------
FIRST PRES.  PURCHASE   ORIG 75  XXXXXXXX                   0.00 CR 756-CHF         0.00 DR 756-CHF
             CREDIT     ORIG 75  XXXXXXXX                   0.00 DR 756-CHF         0.00 CR 756-CHF
------------ -------------- --- --------  ------------------------- -------  -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                   0.00 CR 756-CHF         0.00 DR 756-CHF

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                   0.00 CR 756-CHF         0.00 DR 756-CHF


                                                                        CURR                    CURR
TRANS. FUNC. PROC.CODE      IRD   COUNTS               RECON AMOUNT     CODE       TRANS FEE    CODE
------------ -------------- --- --------  ------------------------- -------  -------------- -------
FIRST PRES.  PURCHASE   ORIG 75  XXXXXXXX                   0.00 CR 826-GBP         0.00 DR 826-GBP
             CREDIT     ORIG 75  XXXXXXXX                   0.00 DR 826-GBP         0.00 CR 826-GBP
------------ -------------- --- --------  ------------------------- -------  -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                   0.00 CR 826-GBP         0.00 DR 826-GBP

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                   0.00 CR 826-GBP         0.00 DR 826-GBP


                                                                        CURR                    CURR
TRANS. FUNC. PROC.CODE      IRD   COUNTS               RECON AMOUNT     CODE       TRANS FEE    CODE
------------ -------------- --- --------  ------------------------- -------  -------------- -------
FIRST PRES.  PURCHASE   ORIG 75  XXXXXXXX                   0.00 CR 840-USD         0.00 DR 840-USD
```

Figure 24: Clearing Cycle Acknowledgment Report (IP727010-AA), page 5: Mastercard Settled Transactions

```
IP727010-AA                                       MASTERCARD WORLDWIDE                                                              RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                       CLEARING CYCLE XXX - ACKNOWLEDGEMENT                                                    PAGE NO:         5
BUSINESS SERVICE LEVEL: INTRACOUNTRY                      YYYY-MM-DD
BUSINESS SERVICE ID: 999001
FILE ID: XXX/YYMMDD/XXXXXXXXXXX/99999
MEMBER ID: XXXXXXXXXXX

MASTERCARD SETTLED                                                         RECON                 FEE
                                                                           CURR                  CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS                    RECON AMOUNT  CODE      TRANS FEE   CODE
------------ --------------- --- -------- ------------------------------- ------- -------------- -------
------------ --------------- --- -------- ------------------------------- ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                       0.00 CR 840-USD        0.00 DR 840-USD

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                       0.00 CR 840-USD        0.00 DR 840-USD


                                                                           CURR                  CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS                    RECON AMOUNT  CODE      TRANS FEE   CODE
------------ --------------- --- -------- ------------------------------- ------- -------------- -------
FIRST PRES.  PURCHASE   ORIG 75  XXXXXXXX                       0.00 CR 978-EUR        0.00 DR 978-EUR
             CREDIT     ORIG 75  XXXXXXXX                       0.00 DR 978-EUR        0.00 CR 978-EUR
------------ --------------- --- -------- ------------------------------- ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                       0.00 CR 978-EUR        0.00 DR 978-EUR

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                       0.00 CR 978-EUR        0.00 DR 978-EUR
```

Figure 25: Clearing Cycle Acknowledgment Report (IP727010-AA), page 6: Mastercard Settled Transactions

```
IP727010-AA                                        MASTERCARD WORLDWIDE                                            RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                        CLEARING CYCLE XXX - ACKNOWLEDGEMENT                                  PAGE NO:          6
BUSINESS SERVICE LEVEL: INTRACOUNTRY                      YYYY-MM-DD
BUSINESS SERVICE ID: 999002
FILE ID: XXX/YYMMDD/XXXXXXXXXXX/99999
MEMBER ID: XXXXXXXXXXX

MASTERCARD SETTLED                                                       RECON                     FEE
                                                                          CURR                    CURR
TRANS. FUNC. PROC.CODE      IRD  COUNTS             RECON AMOUNT         CODE       TRANS FEE     CODE
------------ ------------- --- -------- ------------------------- ------- -------------- -------
FIRST PRES.  CASH DISB. ORIG 75  XXXXXXXX                   0.00 CR   36-AUD        0.00 CR   36-AUD
------------ ------------- --- -------- ------------------------- ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                   0.00 CR   36-AUD        0.00 CR   36-AUD

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                   0.00 CR   36-AUD        0.00 CR   36-AUD


                                                                          CURR                    CURR
TRANS. FUNC. PROC.CODE      IRD  COUNTS             RECON AMOUNT         CODE       TRANS FEE     CODE
------------ ------------- --- -------- ------------------------- ------- -------------- -------
FIRST PRES.  CASH DISB. ORIG 75  XXXXXXXX                   0.00 CR  208-DKK        0.00 CR  208-DKK
------------ ------------- --- -------- ------------------------- ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                   0.00 CR  208-DKK        0.00 CR  208-DKK

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                   0.00 CR  208-DKK        0.00 CR  208-DKK


                                                                          CURR                    CURR
TRANS. FUNC. PROC.CODE      IRD  COUNTS             RECON AMOUNT         CODE       TRANS FEE     CODE
------------ ------------- --- -------- ------------------------- ------- -------------- -------
FIRST PRES.  CASH DISB. ORIG 75  XXXXXXXX                   0.00 CR  344-HKD        0.00 CR  344-HKD
------------ ------------- --- -------- ------------------------- ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                   0.00 CR  344-HKD        0.00 CR  344-HKD
```

Figure 26: Clearing Cycle Acknowledgment Report (IP727010-AA), page 7: Mastercard Settled Transactions

```
IP727010-AA                                         MASTERCARD WORLDWIDE                                               RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                        CLEARING CYCLE XXX - ACKNOWLEDGEMENT                                      PAGE NO:         7
BUSINESS SERVICE LEVEL: INTRACOUNTRY                      YYYY-MM-DD
BUSINESS SERVICE ID: 999002
FILE ID: XXX/YYMMDD/XXXXXXXXXX/99999
MEMBER ID: XXXXXXXXXX

MASTERCARD SETTLED                                                          RECON                FEE
                                                                            CURR                 CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS                     RECON AMOUNT  CODE      TRANS FEE  CODE
------------ -------------- --- -------- ------------------------ ------- -------------- -------
INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                     0.00 CR 344-HKD       0.00 CR 344-HKD


                                                                            CURR                 CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS                     RECON AMOUNT  CODE      TRANS FEE  CODE
------------ -------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  CASH DISB. ORIG 75  XXXXXXXX                     0.00 CR 392-JPY       0.00 CR 392-JPY
------------ -------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                     0.00 CR 392-JPY       0.00 CR 392-JPY

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                     0.00 CR 392-JPY       0.00 CR 392-JPY


                                                                            CURR                 CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS                     RECON AMOUNT  CODE      TRANS FEE  CODE
------------ -------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  CASH DISB. ORIG 75  XXXXXXXX                     0.00 CR 826-GBP       0.00 CR 826-GBP
------------ -------------- --- -------- ------------------------ ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                     0.00 CR 826-GBP       0.00 CR 826-GBP

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                     0.00 CR 826-GBP       0.00 CR 826-GBP
```

Figure 27: Clearing Cycle Acknowledgment Report (IP727010-AA), page 8: Mastercard Settled Transactions

```
IP727010-AA                                   MASTERCARD WORLDWIDE                                       RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                  CLEARING CYCLE XXX - ACKNOWLEDGEMENT                              PAGE NO:         8
BUSINESS SERVICE LEVEL: INTRACOUNTRY                  YYYY-MM-DD
BUSINESS SERVICE ID: 999002
FILE ID: XXX/YYMMDD/XXXXXXXXXXX/99999
MEMBER ID: XXXXXXXXXXX

MASTERCARD SETTLED                                                         RECON                   FEE
                                                                            CURR                   CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS               RECON AMOUNT        CODE       TRANS FEE   CODE
------------ --------------- --- -------- -------------------------- ------- -------------- -------
FIRST PRES.  CASH DISB. ORIG 75  XXXXXXXX                    0.00 CR 840-USD        0.00 CR 840-USD
------------ --------------- --- -------- -------------------------- ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                    0.00 CR 840-USD        0.00 CR 840-USD

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                    0.00 CR 840-USD        0.00 CR 840-USD


                                                                            CURR                   CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS               RECON AMOUNT        CODE       TRANS FEE   CODE
------------ --------------- --- -------- -------------------------- ------- -------------- -------
FIRST PRES.  CASH DISB. ORIG 75  XXXXXXXX                    0.00 CR 978-EUR        0.00 CR 978-EUR
------------ --------------- --- -------- -------------------------- ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                    0.00 CR 978-EUR        0.00 CR 978-EUR

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                    0.00 CR 978-EUR        0.00 CR 978-EUR
```

Figure 28: Clearing Cycle Acknowledgment Report (IP727010-AA), page 9: Global Collection Only Transactions

```
IP727010-AA                                    MASTERCARD WORLDWIDE                                             RUN DATE: MM/DD/YY
                                       CLEARING CYCLE XXX - ACKNOWLEDGEMENT                                     PAGE NO:         9
                                                      YYYY-MM-DD
ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXXX
CURRENCY CODE :  36-AUD

BUSINESS
SERVICE                                ORIG/
   ID            FILE ID               RVSL             RECON. AMOUNT          TRANSACTION FEE
-------- ----------------------------- ----          -----------------      -------------------
999001   XXX/YYMMDD/XXXXXXXXXXX/99999 ORIG                    0.00 CR               0.00 DR
999002   XXX/YYMMDD/XXXXXXXXXXX/99999 ORIG                    0.00 CR               0.00 CR

                            GRAND TOTAL                       0.00 CR               0.00 CR

ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXXX
CURRENCY CODE : 124-CAD

BUSINESS
SERVICE                                ORIG/
   ID            FILE ID               RVSL             RECON. AMOUNT          TRANSACTION FEE
-------- ----------------------------- ----          -----------------      -------------------
999001   XXX/YYMMDD/XXXXXXXXXXX/99999 ORIG                  428.37 CR               0.00 DR

                            GRAND TOTAL                     428.37 CR               0.00 DR

ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXXX
CURRENCY CODE : 208-DKK

BUSINESS
SERVICE                                ORIG/
   ID            FILE ID               RVSL             RECON. AMOUNT          TRANSACTION FEE
-------- ----------------------------- ----          -----------------      -------------------
999001   XXX/YYMMDD/XXXXXXXXXXX/99999 ORIG                    0.00 CR               0.00 DR
999002   XXX/YYMMDD/XXXXXXXXXXX/99999 ORIG                    0.00 CR               0.00 CR

                            GRAND TOTAL                       0.00 CR               0.00 CR
```

Figure 29: Clearing Cycle Acknowledgment Report (IP727010-AA), page 10: Global Collection Only Transactions

```
IP727010-AA                                    MASTERCARD WORLDWIDE                                         RUN DATE: MM/DD/YY
                                        CLEARING CYCLE XXX - ACKNOWLEDGEMENT                                PAGE NO:        10
                                                     YYYY-MM-DD
ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXX
CURRENCY CODE : 344-HKD

BUSINESS
SERVICE                                   ORIG/
   ID              FILE ID                RVSL           RECON. AMOUNT          TRANSACTION FEE
-------- ---------------------------- ----           ----------------       ------------------
999001   XXX/YYMMDD/XXXXXXXXXX/99999 ORIG                     0.00 CR                0.00 DR
999002   XXX/YYMMDD/XXXXXXXXXX/99999 ORIG                     0.00 CR                0.00 CR

                            GRAND TOTAL                       0.00 CR                0.00 CR

ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXX
CURRENCY CODE : 392-JPY

BUSINESS
SERVICE                                   ORIG/
   ID              FILE ID                RVSL           RECON. AMOUNT          TRANSACTION FEE
-------- ---------------------------- ----           ----------------       ------------------
999001   XXX/YYMMDD/XXXXXXXXXX/99999 ORIG                     0.00 CR                0.00 DR
999002   XXX/YYMMDD/XXXXXXXXXX/99999 ORIG                     0.00 CR                0.00 CR

                            GRAND TOTAL                       0.00 CR                0.00 CR
```

Figure 30: Clearing Cycle Acknowledgment Report (IP727010-AA), page 11: Mastercard Settled Transactions

```
IP727010-AA                          MASTERCARD WORLDWIDE                                  RUN DATE: MM/DD/YY
                               CLEARING CYCLE XXX - ACKNOWLEDGEMENT                        PAGE NO:        11
                                            YYYY-MM-DD
ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXX
CURRENCY CODE : 578-NOK

BUSINESS
SERVICE                                ORIG/
   ID           FILE ID                RVSL          RECON. AMOUNT        TRANSACTION FEE
-------- ----------------------------- ----        -----------------    -------------------
999001   XXX/YYMMDD/XXXXXXXXXX/99999  ORIG                 0.00 CR              0.00 DR

                    GRAND TOTAL                            0.00 CR              0.00 DR

ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXX
CURRENCY CODE : 752-SEK

BUSINESS
SERVICE                                ORIG/
   ID           FILE ID                RVSL          RECON. AMOUNT        TRANSACTION FEE
-------- ----------------------------- ----        -----------------    -------------------
999001   XXX/YYMMDD/XXXXXXXXXX/99999  ORIG                 0.00 CR              0.00 DR

                    GRAND TOTAL                            0.00 CR              0.00 DR

ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXX
CURRENCY CODE : 756-CHF

BUSINESS
SERVICE                                ORIG/
   ID           FILE ID                RVSL          RECON. AMOUNT        TRANSACTION FEE
-------- ----------------------------- ----        -----------------    -------------------
999001   XXX/YYMMDD/XXXXXXXXXX/99999  ORIG                 0.00 CR              0.00 DR

                    GRAND TOTAL                            0.00 CR              0.00 DR
```

Figure 31: Clearing Cycle Acknowledgment Report (IP727010-AA), page 12: Mastercard Settled Transactions

```
IP727010-AA                                          MASTERCARD WORLDWIDE                                                    RUN DATE: MM/DD/YY
                                             CLEARING CYCLE XXX - ACKNOWLEDGEMENT                                            PAGE NO:         12
                                                          YYYY-MM-DD
ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXX
CURRENCY CODE : 826-GBP

BUSINESS
SERVICE                                  ORIG/
   ID           FILE ID                  RVSL          RECON. AMOUNT          TRANSACTION FEE
-------- ---------------------------- ----          -----------------      -------------------
999001   002/050121/XXXXXXXXXX/99999 ORIG                   0.00 CR                0.00 DR
999002   002/050121/XXXXXXXXXX/99999 ORIG                   0.00 CR                0.00 CR

                            GRAND TOTAL                     0.00 CR                0.00 CR

ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXX
CURRENCY CODE : 840-USD

BUSINESS
SERVICE                                  ORIG/
   ID           FILE ID                  RVSL          RECON. AMOUNT          TRANSACTION FEE
-------- ---------------------------- ----          -----------------      -------------------
999001   002/050121/XXXXXXXXXX/99999 ORIG                   0.00 CR                0.00 DR
999002   002/050121/XXXXXXXXXX/99999 ORIG                   0.00 CR                0.00 CR

                            GRAND TOTAL                     0.00 CR                0.00 CR
```

Figure 32: Clearing Cycle Acknowledgment Report (IP727010-AA), page 13: Non-financial Transactions

```
IP727010-AA                              MASTERCARD WORLDWIDE                                   RUN DATE: MM/DD/YY
                                   CLEARING CYCLE XXX - ACKNOWLEDGEMENT                         PAGE NO:        13
                                               YYYY-MM-DD
ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL :INTRACOUNTRY
MEMBER ID: XXXXXXXXXXX
CURRENCY CODE : 978-EUR

BUSINESS
SERVICE                              ORIG/
   ID             FILE ID            RVSL            RECON. AMOUNT          TRANSACTION FEE
-------- --------------------------- ----          ----------------       ------------------
999001   XXX/YYMMDD/XXXXXXXXXXX/99999 ORIG                  0.00 CR                 0.00 DR
999002   XXX/YYMMDD/XXXXXXXXXXX/99999 ORIG                  0.00 CR                 0.00 CR

                         GRAND TOTAL                        0.00 CR                 0.00 DR
```

Table 34: Report IP727010-AA field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
Acceptance Brand (Card Program Identifier)	The code for the Mastercard or proprietary service marks under whose umbrella transactions are processed. As an example, MCC (Mastercard Credit) is a card program.
Business Service Level	Identifies the interchange relationship for the business arrangement. Examples are intracountry, intraregional, and interregional.
Business Service ID	A unique code that identifies the specific interchange agreement assigned to the transaction.
File ID	The logical file ID to which the data in this report pertains.
Member ID	The identifier that the association assigns to a customer (also referred to as ICA number).
Settlement Indicator	Identifies the settlement disposition of the reported transactions. Values are Mastercard Settled, Global Collection Only (no settlement), and Bilateral (no settlement).
Trans. Func. (Transaction Function)	The IPM Message Type Identifier and Function Code combination that defines the transaction. Examples of transaction functions are first presentment, first chargeback, and second presentment.
Proc. Code (Processing Code)	Describes the effect of a transaction on a customer account and the type of account affected. Examples are purchase, credit, and ATM cash withdrawal. All transactions are defined as either an original or a reversal.
IRD	The interchange rate designator defines the interchange program for which the transactions were presented.
Counts	The number of transactions accumulated for the applicable processing code.
Recon. Amount (Reconciliation Amount)	The total net amount (with fees applied) of the transactions in reconciliation currency for the applicable processing code. **NOTE: Global Collection Only and Bilateral transactions are not settled by Mastercard; therefore, the field contains a zero.**
Recon. Currency Code	The numeric and alpha ISO currency code associated with the reconciliation currency (Always 840-USD for Global Collection Only and Bilateral).

Field	Description
Trans. Fee (Transaction Fee)	The total of the transaction fees applicable to the transactions for the processing code. **NOTE: Global Collection Only and Bilateral transactions are not settled by Mastercard; therefore, the field contains a zero.**
Fee Curr. Code (Fee Currency Code)	The numeric and alpha ISO currency code associated with the fee currency (Always 840-USD for Global Collection Only and Bilateral).
Total	The total count and net amount (with fees applied) of the transactions and reconciliation currency for the applicable transaction function.
Subtotal	The subtotal of the Mastercard settled, global collection only, or bilateral transaction amounts for the specified business service level. **NOTE: Global Collection Only and Bilateral transactions are not settled by Mastercard; therefore, the field contains a zero.**

Clearing Cycle Notification Report samples

These samples of the Clearing Cycle Notification Report show accepted totals.

Figure 33: Clearing Cycle Notification Report (IP727020-AA), page 1: Mastercard Settled Transactions

```
IP727020-AA                                   MASTERCARD WORLDWIDE                                     RUN DATE: MM/DD/YY
 ACCEPTANCE BRAND: MCC                   CLEARING CYCLE XXX - NOTIFICATION                              PAGE NO:         1
 BUSINESS SERVICE LEVEL: INTRACOUNTRY                   YYYY-MM-DD
 BUSINESS SERVICE ID: 999001
 FILE ID: XXX/YYMMDD/XXXXXXXXXXX/99999
 MEMBER ID: XXXXXXXXXXX

 MASTERCARD SETTLED                                                         RECON                       FEE
                                                                             CURR                       CURR
 TRANS. FUNC. PROC.CODE       IRD   COUNTS                   RECON AMOUNT    CODE       TRANS FEE       CODE
 ------------ -------------- --- -------- ------------------------ ------- -------------- -------
 FIRST PRES.  PURCHASE   ORIG 75  XXXXXXXX                      0.00 DR 826-GBP         0.00 CR 826-GBP
              CREDIT     ORIG 75  XXXXXXXX                      0.00 CR 826-GBP         0.00 DR 826-GBP
 ------------ -------------- --- -------- ------------------------ ------- -------------- -------
 FIRST PRES.  TOTAL               XXXXXXXX                      0.00 DR 826-GBP         0.00 CR 826-GBP

 INTRACOUNTRY
 MASTERCARD SETTLED
 BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                      0.00 DR 826-GBP         0.00 CR 826-GBP
```

Figure 34: Clearing Cycle Notification Report (IP727020-AA), page 2: Mastercard Settled Transactions

```
IP727020-AA                                  MASTERCARD WORLDWIDE                                           RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                    CLEARING CYCLE XXX - NOTIFICATION                                  PAGE NO:         2
BUSINESS SERVICE LEVEL: INTRACOUNTRY               YYYY-MM-DD
BUSINESS SERVICE ID: 999002
FILE ID: XXX/YYMMDD/XXXXXXXXXXX/99999
MEMBER ID: XXXXXXXXXXX

MASTERCARD SETTLED                                                      RECON                FEE
                                                                         CURR                CURR
TRANS. FUNC. PROC.CODE       IRD   COUNTS                 RECON AMOUNT   CODE     TRANS FEE   CODE
------------ --------------- --- -------- ------------------------- ------- -------------- -------
FIRST PRES.  CASH DISB. ORIG 75  XXXXXXXX                    0.00 DR 826-GBP      0.00 DR 826-GBP
------------ --------------- --- -------- ------------------------- ------- -------------- -------
FIRST PRES.  TOTAL               XXXXXXXX                    0.00 DR 826-GBP      0.00 DR 826-GBP

INTRACOUNTRY
MASTERCARD SETTLED
BUSINESS SERVICE ID SUBTOTAL     XXXXXXXX                    0.00 DR 826-GBP      0.00 DR 826-GBP
```

Figure 35: Clearing Cycle Notification Report (IP727020-AA), page 3: Mastercard Settled Transactions

```
IP727020-AA                              MASTERCARD WORLDWIDE                                        RUN DATE: MM/DD/YY
                                    CLEARING CYCLE XXX - NOTIFICATION                                PAGE NO:         3
                                              YYYY-MM-DD

ACCEPTANCE BRAND : MCC
BUSINESS SERVICE LEVEL : INTRACOUNTRY
MEMBER ID: XXXXXXXXXX
CURRENCY CODE : 826-GBP

BUSINESS
SERVICE                                 ORIG/
   ID              FILE ID              RVSL            RECON. AMOUNT         TRANSACTION FEE
-------- ------------------------------ ----          ------------------    --------------------
999001   XXX/YYMMDD/XXXXXXXXXX/99999 ORIG                     0.00 DR                 0.00 CR
999002   XXX/YYMMDD/XXXXXXXXXX/99999 ORIG                     0.00 DR                 0.00 DR

                          GRAND TOTAL                         0.00 DR                 0.00 DR

                                              YYYY-MM-DD
```

NOTE: This report is not available for customers submitting only Global Collection Only transaction data.

Table 35: Report IP727020-AA field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
Acceptance Brand (Card Program Identifier)	The code for the Mastercard or proprietary service marks under whose umbrella transactions are processed. As an example, MCC (Mastercard Credit) is a card program.
Business Service Level	Identifies the interchange relationship for the business arrangement. Examples are intracountry, intraregional, and interregional.
Business Service ID	A unique code that identifies the specific interchange agreement assigned to the transaction.
File ID	The logical file ID to which the data in this report pertains.
Member ID	The identifier that the association assigns to a customer (also referred to as ICA number).
Settlement Indicator	Identifies the settlement disposition of the reported transactions. Values are M: Mastercard Settled and B: Bilateral (no settlement).
Trans. Func. (Transaction Function)	The IPM Message Type Identifier and Function Code combination that defines the transaction. Examples of transaction functions are first presentment, first chargeback, and second presentment.
Proc. Code (Processing Code)	Describes the effect of a transaction on a customer account and the type of account affected. Examples are purchase, payment credit, and ATM cash withdrawal. All transactions are defined as either an original or a reversal.
IRD	The interchange rate designator defines the interchange program for which the transactions were presented.
Counts	The number of transactions accumulated for the applicable processing code.
Recon. Amount (Reconciliation Amount)	The total net amount (with fees applied) of the transactions in reconciliation currency for the applicable processing code. **NOTE: Mastercard does not settle Global Collection Only and Bilateral transactions; therefore, the field contains a zero.**

Field	Description
Recon. Currency Code (Reconciliation Currency Code)	The numeric and alpha ISO currency code associated with the reconciliation currency (Always 840-USD for Global Collection Only and Bilateral).
Trans. Fee (Transaction Fee)	The total of the transaction fees applicable to the transactions for the processing code. **NOTE: Bilateral transactions are not settled by Mastercard; therefore, the field contains a zero.**
Fee Curr. Code (Fee Currency Code)	The numeric and alpha ISO currency code associated with the fee currency (always 840-USD for bilateral).
Total	The total count and net amount (with fees applied) of the transactions in reconciliation currency for the applicable transaction function.
Subtotal	The subtotal of the Mastercard settled, global collection only, or bilateral transaction amounts for the specified Business Service level. **NOTE: Mastercard does not settle Global Collection Only and Bilateral transactions; therefore, the field contains a zero.**

Clearing Cycle Summary Reconciliation Report (IP728010-AA)

The Clearing Cycle Summary Reconciliation Report, which is optional and is generated once per clearing cycle by the Global Clearing Management System, provides customers with an additional reconciliation tool by providing specific clearing totals summarized by clearing cycle.

This report includes reconciliation totals at levels

- Acceptance Brand
- Business Service Level and ID
- Customer ID (sender or receiver)
- Logical file ID to Mastercard or logical file ID from Mastercard, and
- Totals in the appropriate reconciliation currency, and that reconciliation currency code.

Figure 36: Clearing Cycle Summary Report (IP728010-AA), page 1

```
IP728010-AA                                        MASTERCARD WORLDWIDE                                            RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: DMC                                CLEARING CYCLE XXX                                            RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTRAREGIONAL                  YYYY-MM-DD                                                  PAGE NO:         1
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :   356 - INR

BUSINESS                                                                                         RECON.
SERVICE          FILE ID                    FILE ID                        NET RECON              CURR.
  ID          TO MASTERCARD             FROM MASTERCARD                 CURRENCY AMOUNT           CODE
_______  _____________________  XXX/YYMMDD/XXXXXXXXXX/99999  _________________
 999001                                                                 23,983.05 DR           356-INR

 TOTAL                                                                  23,983.05 DR           356-INR
```

Figure 37: Clearing Cycle Summary Report (IP728010-AA), page 2

```
IP728010-AA                                   MASTERCARD WORLDWIDE                                  RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                           CLEARING CYCLE XXX                                  RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL              YYYY-MM-DD                                       PAGE NO:         2
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  360 - IDR

BUSINESS                                                                              RECON.
SERVICE           FILE ID                  FILE ID              NET RECON             CURR.
  ID           TO MASTERCARD           FROM MASTERCARD       CURRENCY AMOUNT          CODE
_______   ______________________   ____________________   __________________     ______
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                              12,548 CR     360-IDR

 TOTAL                                                             12,548 CR     360-IDR

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  376 - ILS

BUSINESS                                                                              RECON.
SERVICE           FILE ID                  FILE ID              NET RECON             CURR.
  ID           TO MASTERCARD           FROM MASTERCARD       CURRENCY AMOUNT          CODE
_______   ______________________   ____________________   __________________     ______
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                              125.48 CR     376-ILS

 TOTAL                                                             125.48 CR     376-ILS

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  388 - JMD

BUSINESS                                                                              RECON.
SERVICE           FILE ID                  FILE ID              NET RECON             CURR.
  ID           TO MASTERCARD           FROM MASTERCARD       CURRENCY AMOUNT          CODE
_______   ______________________   ____________________   __________________     ______
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                              125.48 CR     388-JMD

 TOTAL                                                             125.48 CR     388-JMD
```

Figure 38: Clearing Cycle Summary Report (IP728010-AA), page 3

```
IP728010-AA                                   MASTERCARD WORLDWIDE                                          RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                           CLEARING CYCLE XXX                                          RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL              YYYY-MM-DD                                               PAGE NO:         3
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  392 - JPY

BUSINESS                                                                                     RECON.
SERVICE          FILE ID                    FILE ID                    NET RECON              CURR.
  ID          TO MASTERCARD             FROM MASTERCARD             CURRENCY AMOUNT          CODE
________   ______________________   ______________________   ______________________   ________
 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                    12,548 CR      392-JPY

 TOTAL                                                                    12,548 CR      392-JPY

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  398 - KZT

BUSINESS                                                                                     RECON.
SERVICE          FILE ID                    FILE ID                    NET RECON              CURR.
  ID          TO MASTERCARD             FROM MASTERCARD             CURRENCY AMOUNT          CODE
________   ______________________   ______________________   ______________________   ________
 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                    125.48 CR      398-KZT

 TOTAL                                                                    125.48 CR      398-KZT

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  400 - JOD

BUSINESS                                                                                     RECON.
SERVICE          FILE ID                    FILE ID                    NET RECON              CURR.
  ID          TO MASTERCARD             FROM MASTERCARD             CURRENCY AMOUNT          CODE
________   ______________________   ______________________   ______________________   ________
 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                    12.548 CR      400-JOD

 TOTAL                                                                    12.548 CR      400-JOD
```

Figure 39: Clearing Cycle Summary Report (IP728010-AA), page 4

```
IP728010-AA                                              MASTERCARD WORLDWIDE                                                  RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                                      CLEARING CYCLE XXX                                                  RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL                         YYYY-MM-DD                                                       PAGE NO:         4
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :   404 - KES

BUSINESS                                                                                                      RECON.
SERVICE          FILE ID                       FILE ID                         NET RECON                       CURR.
  ID          TO MASTERCARD                FROM MASTERCARD                  CURRENCY AMOUNT                   CODE
________  ___________________________  ___________________________  ___________________________  ________
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                                125.48 CR   404-KES

 TOTAL                                                                               125.48 CR   404-KES

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :   408 - KPW

BUSINESS                                                                                                      RECON.
SERVICE          FILE ID                       FILE ID                         NET RECON                       CURR.
  ID          TO MASTERCARD                FROM MASTERCARD                  CURRENCY AMOUNT                   CODE
________  ___________________________  ___________________________  ___________________________  ________
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                                125.48 CR   408-KPW

 TOTAL                                                                               125.48 CR   408-KPW

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :   410 - KRW

BUSINESS                                                                                                      RECON.
SERVICE          FILE ID                       FILE ID                         NET RECON                       CURR.
  ID          TO MASTERCARD                FROM MASTERCARD                  CURRENCY AMOUNT                   CODE
________  ___________________________  ___________________________  ___________________________  ________
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                               12,548 CR    410-KRW

 TOTAL                                                                              12,548 CR    410-KRW
```

Figure 40: Clearing Cycle Summary Report (IP728010-AA), page 5

```
IP728010-AA                                    MASTERCARD WORLDWIDE                                        RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                            CLEARING CYCLE XXX                                        RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL               YYYY-MM-DD                                             PAGE NO:         5
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  414 - KWD

BUSINESS                                                                                    RECON.
SERVICE          FILE ID                   FILE ID                     NET RECON             CURR.
  ID          TO MASTERCARD            FROM MASTERCARD              CURRENCY AMOUNT          CODE
________   ___________________________  ___________________________  _____________________  _______
 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                           12.548 CR  414-KWD

 TOTAL                                                                           12.548 CR  414-KWD

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  417 - KGS

BUSINESS                                                                                    RECON.
SERVICE          FILE ID                   FILE ID                     NET RECON             CURR.
  ID          TO MASTERCARD            FROM MASTERCARD              CURRENCY AMOUNT          CODE
________   ___________________________  ___________________________  _____________________  _______
 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                           125.48 CR  417-KGS

 TOTAL                                                                           125.48 CR  417-KGS

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  512 - OMR

BUSINESS                                                                                    RECON.
SERVICE          FILE ID                   FILE ID                     NET RECON             CURR.
  ID          TO MASTERCARD            FROM MASTERCARD              CURRENCY AMOUNT          CODE
________   ___________________________  ___________________________  _____________________  _______
 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                           12.548 CR  512-OMR

 TOTAL                                                                           12.548 CR  512-OMR
```

Figure 41: Clearing Cycle Summary Report (IP728010-AA), page 6

```
IP728010-AA                                    MASTERCARD WORLDWIDE                                       RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                            CLEARING CYCLE XXX                                       RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL                YYYY-MM-DD                                           PAGE NO:         6
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  516 - NAD

BUSINESS                                                                                  RECON.
SERVICE            FILE ID                    FILE ID              NET RECON               CURR.
  ID             TO MASTERCARD             FROM MASTERCARD      CURRENCY AMOUNT            CODE
_______   _________________________   _____________________   _________________        _______
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                   125.48 CR        516-NAD

 TOTAL                                                                  125.48 CR        516-NAD

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  524 - NPR

BUSINESS                                                                                  RECON.
SERVICE            FILE ID                    FILE ID              NET RECON               CURR.
  ID             TO MASTERCARD             FROM MASTERCARD      CURRENCY AMOUNT            CODE
_______   _________________________   _____________________   _________________        _______
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                   125.48 CR        524-NPR

 TOTAL                                                                  125.48 CR        524-NPR

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  532 - ANG

BUSINESS                                                                                  RECON.
SERVICE            FILE ID                    FILE ID              NET RECON               CURR.
  ID             TO MASTERCARD             FROM MASTERCARD      CURRENCY AMOUNT            CODE
_______   _________________________   _____________________   _________________        _______
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                   125.48 CR        532-ANG

 TOTAL                                                                  125.48 CR        532-ANG
```

Figure 42: Clearing Cycle Summary Report (IP728010-AA), page 7

```
IP728010-AA                                   MASTERCARD WORLDWIDE                               RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                           CLEARING CYCLE XXX                               RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL               YYYY-MM-DD                                   PAGE NO:         7
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  533 - AWG

BUSINESS                                                                                RECON.
SERVICE           FILE ID                  FILE ID                 NET RECON             CURR.
  ID           TO MASTERCARD           FROM MASTERCARD          CURRENCY AMOUNT          CODE
________   _____________________   ____________________   __________________   ______
 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                 125.48 CR   533-AWG

 TOTAL                                                                 125.48 CR   533-AWG

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  548 - VUV

BUSINESS                                                                                RECON.
SERVICE           FILE ID                  FILE ID                 NET RECON             CURR.
  ID           TO MASTERCARD           FROM MASTERCARD          CURRENCY AMOUNT          CODE
________   _____________________   ____________________   __________________   ______
 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                12,548 CR   548-VUV

 TOTAL                                                                12,548 CR   548-VUV

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  554 - NZD

BUSINESS                                                                                RECON.
SERVICE           FILE ID                  FILE ID                 NET RECON             CURR.
  ID           TO MASTERCARD           FROM MASTERCARD          CURRENCY AMOUNT          CODE
________   _____________________   ____________________   __________________   ______
 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                 125.48 CR   554-NZD

 TOTAL                                                                 125.48 CR   554-NZD
```

Figure 43: Clearing Cycle Summary Report (IP728010-AA), page 8

```
IP728010-AA                                   MASTERCARD WORLDWIDE                                   RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                           CLEARING CYCLE XXX                                   RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL              YYYY-MM-DD                                        PAGE NO:         8
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  558 - NIO

BUSINESS                                                                                RECON.
SERVICE           FILE ID                      FILE ID                  NET RECON        CURR.
  ID           TO MASTERCARD               FROM MASTERCARD           CURRENCY AMOUNT     CODE
_______   ___________________________   _____________________   ___________________   _______
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                     125.48 CR   558-NIO

 TOTAL                                                                    125.48 CR   558-NIO

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  566 - NGN

BUSINESS                                                                                RECON.
SERVICE           FILE ID                      FILE ID                  NET RECON        CURR.
  ID           TO MASTERCARD               FROM MASTERCARD           CURRENCY AMOUNT     CODE
_______   ___________________________   _____________________   ___________________   _______
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                     125.48 CR   566-NGN

 TOTAL                                                                    125.48 CR   566-NGN

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  590 - PGK

BUSINESS                                                                                RECON.
SERVICE           FILE ID                      FILE ID                  NET RECON        CURR.
  ID           TO MASTERCARD               FROM MASTERCARD           CURRENCY AMOUNT     CODE
_______   ___________________________   _____________________   ___________________   _______
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                     125.48 CR   590-PGK

 TOTAL                                                                    125.48 CR   590-PGK
```

Figure 44: Clearing Cycle Summary Report (IP728010-AA), page 9

```
IP728010-AA                                   MASTERCARD WORLDWIDE                                        RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                           CLEARING CYCLE XXX                                        RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL              YYYYY-MM-DD                                            PAGE NO:         9
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  598 - PYG

BUSINESS                                                                                 RECON.
SERVICE          FILE ID                    FILE ID                NET RECON             CURR.
  ID          TO MASTERCARD             FROM MASTERCARD         CURRENCY AMOUNT          CODE

 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                   12,548 CR    598-PYG

 TOTAL                                                                   12,548 CR    598-PYG

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  600 - PEN

BUSINESS                                                                                 RECON.
SERVICE          FILE ID                    FILE ID                NET RECON             CURR.
  ID          TO MASTERCARD             FROM MASTERCARD         CURRENCY AMOUNT          CODE

 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                   125.48 CR    600-PEN

 TOTAL                                                                   125.48 CR    600-PEN

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  624 - QAR

BUSINESS                                                                                 RECON.
SERVICE          FILE ID                    FILE ID                NET RECON             CURR.
  ID          TO MASTERCARD             FROM MASTERCARD         CURRENCY AMOUNT          CODE

 999101    XXX/YYMMDD/XXXXXXXXXX/99999                                   125.48 CR    624-QAR

 TOTAL                                                                   125.48 CR    624-QAR
```

Figure 45: Clearing Cycle Summary Report (IP728010-AA), page 10

```
IP728010-AA                                        MASTERCARD WORLDWIDE                                  RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                                CLEARING CYCLE XXX                                  RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL                   YYYY-MM-DD                                       PAGE NO:        10
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  634 - ROL

BUSINESS                                                                                   RECON.
SERVICE            FILE ID                    FILE ID                   NET RECON          CURR.
  ID            TO MASTERCARD             FROM MASTERCARD            CURRENCY AMOUNT        CODE
_______     _______________________     _____________________     __________________     _______
 999101     XXX/YYMMDD/XXXXXXXXXX/99999                                     12,548 CR     634-ROL

 TOTAL                                                                      12,548 CR     634-ROL

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  642 - RUB

BUSINESS                                                                                   RECON.
SERVICE            FILE ID                    FILE ID                   NET RECON          CURR.
  ID            TO MASTERCARD             FROM MASTERCARD            CURRENCY AMOUNT        CODE
_______     _______________________     _____________________     __________________     _______
 999101     XXX/YYMMDD/XXXXXXXXXX/99999                                     125.48 CR     642-RUB

 TOTAL                                                                      125.48 CR     642-RUB

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  643 - RUF

BUSINESS                                                                                   RECON.
SERVICE            FILE ID                    FILE ID                   NET RECON          CURR.
  ID            TO MASTERCARD             FROM MASTERCARD            CURRENCY AMOUNT        CODE
_______     _______________________     _____________________     __________________     _______
 999101     XXX/YYMMDD/XXXXXXXXXX/99999                                     12,548 CR     643-RUF

 TOTAL                                                                      12,548 CR     643-RUF
```

Figure 46: Clearing Cycle Summary Report (IP728010-AA), page 11

```
IP728010-AA                                  MASTERCARD WORLDWIDE                                    RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                          CLEARING CYCLE XXX                                    RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL            YYYY-MM-DD                                          PAGE NO:        11
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  646 - SHP

BUSINESS                                                                                  RECON.
SERVICE          FILE ID                    FILE ID                 NET RECON              CURR.
  ID          TO MASTERCARD             FROM MASTERCARD          CURRENCY AMOUNT           CODE
--------  ------------------------  ------------------------  -----------------------  --------
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                      125.48 CR   646-SHP

 TOTAL                                                                     125.48 CR   646-SHP

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  654 - STD

BUSINESS                                                                                  RECON.
SERVICE          FILE ID                    FILE ID                 NET RECON              CURR.
  ID          TO MASTERCARD             FROM MASTERCARD          CURRENCY AMOUNT           CODE
--------  ------------------------  ------------------------  -----------------------  --------
 999101   XXX/YYMMDD/XXXXXXXXXX/99999                                      125.48 CR   654-STD

 TOTAL                                                                     125.48 CR   654-STD
```

Figure 47: Clearing Cycle Summary Report (IP728010-AA), page 12

```
IP728010-AA                                    MASTERCARD WORLDWIDE                                       RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: DMC                            CLEARING CYCLE XXX SUMMARY                               RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTRAREGIONAL                 YYYY-MM-DD                                          PAGE NO:        12
MEMBER ID: XXXXXXXXXXX
CURRENCY CODE :  356 - INR

                                                                                             RECON.
 CYCLE              FILE ID                     FILE ID                    NET RECON          CURR.
ACTIVITY         TO MASTERCARD              FROM MASTERCARD             CURRENCY AMOUNT       CODE

CYCLE XX    _____________________   XXX/YYMMDD/XXXXXXXXXXX/99999   _________23,983.05 DR   356-INR

 TOTAL                                                                      23,983.05 DR   356-INR
```

Figure 48: Clearing Cycle Summary Report (IP728010-AA), page 13

```
IP728010-AA                                  MASTERCARD WORLDWIDE                                    RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                     CLEARING CYCLE XXX SUMMARY                                 RUN TIME: HH.MM.YY
BUSINESS SERVICE LEVEL: INTERREGIONAL             YYYY-MM-DD                                         PAGE NO:        13
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  360 - IDR

                                                                                           RECON.
 CYCLE            FILE ID                   FILE ID                     NET RECON          CURR.
ACTIVITY      TO MASTERCARD              FROM MASTERCARD            CURRENCY AMOUNT        CODE

CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                       12,548 CR     360-IDR

 TOTAL                                                                      12,548 CR     360-IDR

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  376 - ILS

                                                                                           RECON.
 CYCLE            FILE ID                   FILE ID                     NET RECON          CURR.
ACTIVITY      TO MASTERCARD              FROM MASTERCARD            CURRENCY AMOUNT        CODE

CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                       125.48 CR     376-ILS

 TOTAL                                                                      125.48 CR     376-ILS

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  388 - JMD

                                                                                           RECON.
 CYCLE            FILE ID                   FILE ID                     NET RECON          CURR.
ACTIVITY      TO MASTERCARD              FROM MASTERCARD            CURRENCY AMOUNT        CODE

CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                       125.48 CR     388-JMD

 TOTAL                                                                      125.48 CR     388-JMD
```

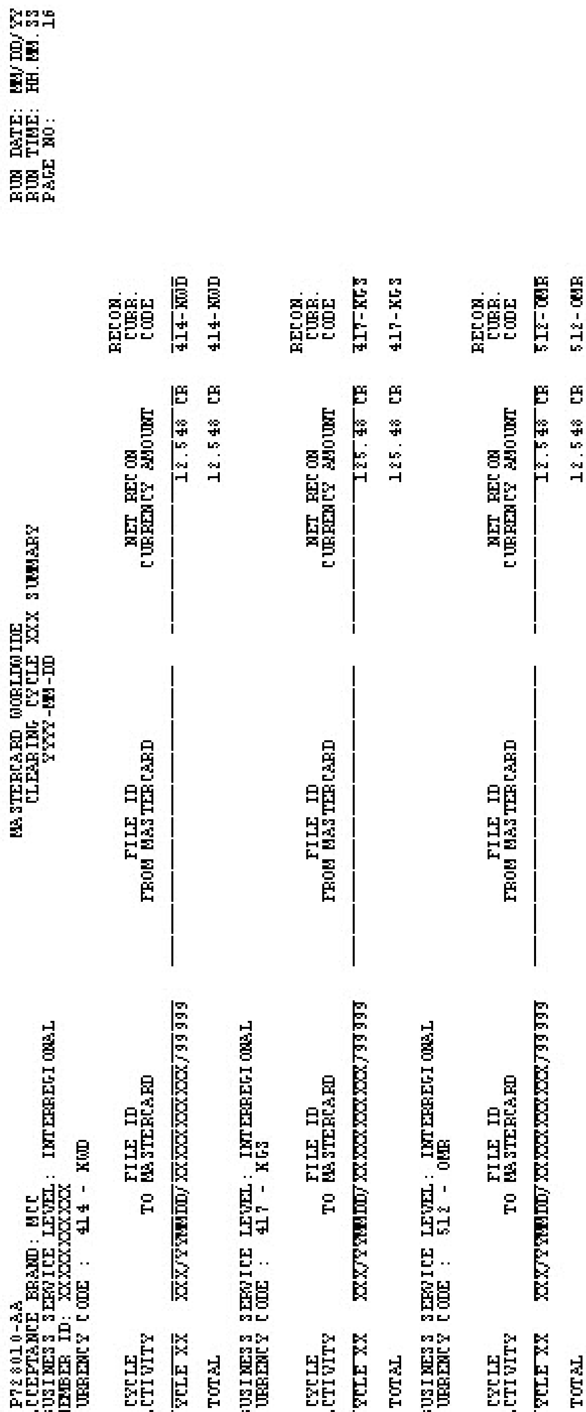
Figure 49: Clearing Cycle Summary Report (IP728010-AA), page 14

```
IP728010-AA                                        MASTERCARD WORLDWIDE                                     RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                                CLEARING CYCLE XXX SUMMARY                             RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL                      YYYY-MM-DD                                       PAGE NO:        14
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  392 - JPY
                                                                                               RECON.
 CYCLE              FILE ID                      FILE ID                      NET RECON         CURR.
ACTIVITY         TO MASTERCARD               FROM MASTERCARD              CURRENCY AMOUNT       CODE
________   ________________________   ______________________   ___________________   _______
CYCLE XX   XXX/YYMMDD/XXXXXXXXXX/99999                                          12,548 CR   392-JPY

 TOTAL                                                                          12,548 CR   392-JPY

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  398 - KZT
                                                                                               RECON.
 CYCLE              FILE ID                      FILE ID                      NET RECON         CURR.
ACTIVITY         TO MASTERCARD               FROM MASTERCARD              CURRENCY AMOUNT       CODE
________   ________________________   ______________________   ___________________   _______
CYCLE XX   XXX/YYMMDD/XXXXXXXXXX/99999                                          125.48 CR   398-KZT

 TOTAL                                                                          125.48 CR   398-KZT

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  400 - JOD
                                                                                               RECON.
 CYCLE              FILE ID                      FILE ID                      NET RECON         CURR.
ACTIVITY         TO MASTERCARD               FROM MASTERCARD              CURRENCY AMOUNT       CODE
________   ________________________   ______________________   ___________________   _______
CYCLE XX   XXX/YYMMDD/XXXXXXXXXX/99999                                          12.548 CR   400-JOD

 TOTAL                                                                          12.548 CR   400-JOD
```

Figure 50: Clearing Cycle Summary Report (IP728010-AA), page 15

```
IP728010-AA                                      MASTERCARD WORLDWIDE                                          RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                           CLEARING CYCLE XXX SUMMARY                                     RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL                  YYYY-MM-DD                                              PAGE NO:        15
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :   404 - KES

                                                                                               RECON.
 CYCLE              FILE ID                  FILE ID                        NET RECON           CURR.
ACTIVITY         TO MASTERCARD            FROM MASTERCARD                CURRENCY AMOUNT        CODE

CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                           125.48 CR     404-KES

 TOTAL                                                                           125.48 CR     404-KES

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :   408 - KPW

                                                                                               RECON.
 CYCLE              FILE ID                  FILE ID                        NET RECON           CURR.
ACTIVITY         TO MASTERCARD            FROM MASTERCARD                CURRENCY AMOUNT        CODE

CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                           125.48 CR     408-KPW

 TOTAL                                                                           125.48 CR     408-KPW

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :   410 - KRW

                                                                                               RECON.
 CYCLE              FILE ID                  FILE ID                        NET RECON           CURR.
ACTIVITY         TO MASTERCARD            FROM MASTERCARD                CURRENCY AMOUNT        CODE

CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                          12,548 CR      410-KRW

 TOTAL                                                                          12,548 CR      410-KRW
```

Figure 51: Clearing Cycle Summary Report (IP728010-AA), page 16



```
IP728010-AA                                        MASTERCARD WORLDWIDE                                               RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                                CLEARING CYCLE XXX SUMMARY                                       RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL                      YYYY-MM-DD                                                 PAGE NO:        16
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :   414 - KWD

                                                                                                     RECON.
 CYCLE               FILE ID                        FILE ID                       NET RECON           CURR.
ACTIVITY          TO MASTERCARD                 FROM MASTERCARD               CURRENCY AMOUNT         CODE
________   _________________________   __________________________   __________________________   _______
CYCLE XX   XXX/YYMMDD/XXXXXXXXXX/99999                                              12.548 CR    414-KWD

 TOTAL                                                                              12.548 CR    414-KWD

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :   417 - KGS

                                                                                                     RECON.
 CYCLE               FILE ID                        FILE ID                       NET RECON           CURR.
ACTIVITY          TO MASTERCARD                 FROM MASTERCARD               CURRENCY AMOUNT         CODE
________   _________________________   __________________________   __________________________   _______
CYCLE XX   XXX/YYMMDD/XXXXXXXXXX/99999                                              125.48 CR    417-KGS

 TOTAL                                                                              125.48 CR    417-KGS

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :   512 - OMR

                                                                                                     RECON.
 CYCLE               FILE ID                        FILE ID                       NET RECON           CURR.
ACTIVITY          TO MASTERCARD                 FROM MASTERCARD               CURRENCY AMOUNT         CODE
________   _________________________   __________________________   __________________________   _______
CYCLE XX   XXX/YYMMDD/XXXXXXXXXX/99999                                              12.548 CR    512-OMR

 TOTAL                                                                              12.548 CR    512-OMR
```

Figure 52: Clearing Cycle Summary Report (IP728010-AA), page 17

```
IP728010-AA                                  MASTERCARD WORLDWIDE                                  RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                      CLEARING CYCLE XXX SUMMARY                              RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL              YYYY-MM-DD                                      PAGE NO:        17
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  516 - NAD

                                                                                       RECON.
 CYCLE              FILE ID                  FILE ID                   NET RECON       CURR.
ACTIVITY          TO MASTERCARD           FROM MASTERCARD           CURRENCY AMOUNT     CODE
________   ____________________________  ____________________  _________________   ______
CYCLE XX   XXX/YYMMDD/XXXXXXXXXX/99999                                   125.48 CR   516-NAD

 TOTAL                                                                   125.48 CR   516-NAD

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  524 - NPR

                                                                                       RECON.
 CYCLE              FILE ID                  FILE ID                   NET RECON       CURR.
ACTIVITY          TO MASTERCARD           FROM MASTERCARD           CURRENCY AMOUNT     CODE
________   ____________________________  ____________________  _________________   ______
CYCLE XX   XXX/YYMMDD/XXXXXXXXXX/99999                                   125.48 CR   524-NPR

 TOTAL                                                                   125.48 CR   524-NPR

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  532 - ANG

                                                                                       RECON.
 CYCLE              FILE ID                  FILE ID                   NET RECON       CURR.
ACTIVITY          TO MASTERCARD           FROM MASTERCARD           CURRENCY AMOUNT     CODE
________   ____________________________  ____________________  _________________   ______
CYCLE XX   XXX/YYMMDD/XXXXXXXXXX/99999                                   125.48 CR   532-ANG

 TOTAL                                                                   125.48 CR   532-ANG
```

Figure 53: Clearing Cycle Summary Report (IP728010-AA), page 18

```
IP728010-AA                                  MASTERCARD WORLDWIDE                                        RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                       CLEARING CYCLE XXX SUMMARY                                   RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL              YYYY-MM-DD                                            PAGE NO:        18
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  533 - AWG

                                                                                             RECON.
 CYCLE            FILE ID                    FILE ID                   NET RECON              CURR.
ACTIVITY       TO MASTERCARD             FROM MASTERCARD             CURRENCY AMOUNT          CODE
________  _______________________  ______________________  __________________  ______
CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                           125.48 CR  533-AWG

 TOTAL                                                                          125.48 CR  533-AWG

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  548 - VUV

                                                                                             RECON.
 CYCLE            FILE ID                    FILE ID                   NET RECON              CURR.
ACTIVITY       TO MASTERCARD             FROM MASTERCARD             CURRENCY AMOUNT          CODE
________  _______________________  ______________________  __________________  ______
CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                           12,548 CR  548-VUV

 TOTAL                                                                          12,548 CR  548-VUV

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  554 - NZD

                                                                                             RECON.
 CYCLE            FILE ID                    FILE ID                   NET RECON              CURR.
ACTIVITY       TO MASTERCARD             FROM MASTERCARD             CURRENCY AMOUNT          CODE
________  _______________________  ______________________  __________________  ______
CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                           125.48 CR  554-NZD

 TOTAL                                                                          125.48 CR  554-NZD
```

Figure 54: Clearing Cycle Summary Report (IP728010-AA), page 19

```
IP728010-AA                                  MASTERCARD WORLDWIDE                                       RUN DATE: MM/DD/YY
ACCEPTANCE BRAND: MCC                     CLEARING CYCLE XXX SUMMARY                                    RUN TIME: HH.MM.SS
BUSINESS SERVICE LEVEL: INTERREGIONAL             YYYY-MM-DD                                            PAGE NO:        19
MEMBER ID: XXXXXXXXXX
CURRENCY CODE :  558 - NIO

                                                                                    RECON.
 CYCLE            FILE ID                  FILE ID                 NET RECON         CURR.
ACTIVITY        TO MASTERCARD          FROM MASTERCARD          CURRENCY AMOUNT       CODE
________  _______________________  ____________________  ____________________  _______
CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                125.48 CR  558-NIO

 TOTAL                                                               125.48 CR  558-NIO

BUSINESS SERVICE LEVEL: INTERREGIONAL
CURRENCY CODE :  566 - NGN

                                                                                    RECON.
 CYCLE            FILE ID                  FILE ID                 NET RECON         CURR.
ACTIVITY        TO MASTERCARD          FROM MASTERCARD          CURRENCY AMOUNT       CODE
________  _______________________  ____________________  ____________________  _______
CYCLE XX  XXX/YYMMDD/XXXXXXXXXX/99999                                125.48 CR  566-NGN

 TOTAL                                                               125.48 CR  566-NGN
```

Figure 55: Clearing Cycle Summary Report (IP728010-AA), page 20

```
IP728010-AA                              MASTERCARD WORLDWIDE                          RUN DATE: MM/DD/YY
                                           CLEARING DAY TOTAL                          RUN TIME: HH.MM.SS
MEMBER ID: 00000001001                        YYYY-MM-DD                               PAGE NO:        20
CLEARING DAY TOTAL AS OF CLEARING CYCLE  X
                RECONCILIATION     NET RECONCILIATION
                CURRENCY  CODE       CURRENCY  CODE
                --------------   ------------------
                  356-INR              23,983.05 DR
                  360-IDR                 12,548 CR
                  376-ILS                 125.48 CR
                  388-JMD                 125.48 CR
                  392-JPY                 12,548 CR
                  398-KZT                 125.48 CR
                  400-JOD                 12.548 CR
                  404-KES                 125.48 CR
                  408-KPW                 125.48 CR
                  410-KRW                 12,548 CR
                  414-KWD                 12.548 CR
                  417-KGS                 125.48 CR
                  512-OMR                 12.548 CR
                  516-NAD                 125.48 CR
                  524-NPR                 125.48 CR
                  532-ANG                 125.48 CR
                  533-AWG                 125.48 CR
                  548-VUV                 12,548 CR
                  554-NZD                 125.48 CR
                  558-NIO                 125.48 CR
                  566-NGN                 125.48 CR

                                         ***END OF REPORT***
```

NOTE: This report is not available for customers submitting only Global Collection Only transaction data.

Table 36: Report IP728010-AA field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page	The page number within the report.
Acceptance Brand (Card Program Identifier)	The code for the Mastercard or proprietary service marks under whose umbrella transactions are processed. As an example, MCC (Mastercard Credit) is a card program.
Business Service Level	Identifies the interchange relationship for the business arrangement. Examples are intracountry, intraregional, and regional.
Business Service ID	A unique code that identifies the specific interchange agreement assigned to the transaction.
Member ID	The identifier that the association assigns to a customer (also referred to as ICA number).
Cycle Activity	The clearing cycle in which the file was processed by Global Clearing Management System.
File ID To Mastercard	The logical file ID of the file sent by the customer to Mastercard to which the net amounts apply.
File ID From Mastercard	The logical file ID of the file sent by Mastercard to the customer to which the net amounts apply.
Net Reconciliation Currency Amount	The total net amount (with fees applied) of the transactions in reconciliation currency for the applicable logical file ID.
Reconciliation Currency Code	The numeric and alpha ISO currency code associated with the reconciliation currency.
Clearing Day Total As Of Clearing (001-006)	The grand total net amount (with fees applied) for the specified clearing day as of clearing cycle NNN.

IPM Messages Created On Behalf of a Member Report (IP142110-AA)

Customers that receive IPM Acknowledgment Reconciliation messages receive acknowledgements for Fee Collection/1740 messages that they did not generate.

Mastercard creates this report to assist customers in their reconciliation process. The report is generated in each clearing cycle and distributed as part of bulk type T140 (Production) and T150 (Test) only if the customer had activity.

Global Clearing Management System report IP142110-AA (IPM Clearing Messages Created On Behalf of a Customer) has two additional receipt options:

- Text file available in raw data, variable length version. The bulk types are TN70 (Production) and TN72 (Test) for outbound file delivery, and
- XML data file available in variable length version. The bulk types are TN66 (Production) and TN68 (Test) for outbound file delivery.

The data files are created and distributed after each clearing cycle. The data files do not include summary totals. If no data is available, the customer will receive a header and trailer only, with record count 0.

When multiple customer IDs are packaged in a single file to the same endpoint, the data is sequenced by customer ID. A header and trailer will be provided for each customer ID (as shown for three customers in the following example).

XML or Raw Data File for Endpoint A
Header for customer 1
Detail for customer 1
... [detail information 1]
... [detail information 2]
Trailer for customer 1
Header for customer 2
Detail for customer 2
... [detail information 2]
... [detail information 2]
Trailer for customer 2
Header for customer 3
Detail for customer 3
... [detail information 3]
... [detail information 3]
Trailer for customer 3

Both of the data files contain the same fields that are currently on the IP142110-AA report. In addition, the data files contain the following fields. (These fields will not be added to the IP142110-AA print report.

Name	Description
Central Site Processing Date of Original Message	Contains the value in PDS 0025 (Message Reversal Indicator), subfield 2 (Central Site Processing Date of Original Message). If PDS 0025, subfield 2 is present because the transaction is being reversed, the original message date is displayed.
File ID	For the IP142110–AA report and data files, the File ID is the Mastercard Source File ID. The File ID is found in PDS 0105 (File ID).

XML data file distribution

The XML file version of the report contains this data layout.

Record Type	Field Name	Field Format	Field Value	Justification
Header	Record Type	PIC X(1)	H	Left
	Distribution ID	PIC X(16)	IP142110-AA	Left
	Member ID	PIC 9(11)		Right
	Endpoint	PIC X(07)		Left

Record Type	Field Name	Field Format	Field Value	Justification
Data	Record Type	PIC X(1)	D	Left
	Transaction Originator Institution ID Code	PIC 9(11)		Right
	MTI	PIC 9(04)		Right
	Function Code	PIC 9(03)		Right
	Message Reason Code	PIC 9(04)		Right
	File ID	PIC 9(25)		Right
	CR DR Indicator	PIC X(02)		Left
	Central Site Processing Date of Original Message	PIC X(06)		Left
	Transaction Type	PIC X(02)		Left
	Processing Code	PIC 9(02)		Right
	Transaction Amount	PIC 9(12)		Right
	Transaction Currency Code	PIC 9(03)		Right
	Currency Exponent	PIC X(01)		Left
	Reconciliation Amount	PIC 9(12)		Right
	Reconciliation Currency Code	PIC 9(03)		Right
	Currency Exponent	PIC X(01)		Left
	Transaction Destination Institution ID Code	PIC 9(11)		Right
	Forwarding Institution ID Code	PIC 9(11)		Right
	Fee Collection Control Number	PIC 9(20)		Right
	Card Program Identifier	PIC X(03)		Left
	Receiving Institution ID Code	PIC 9(11)		Right
	MasterCom Control Number	PIC X(07)		Left
	PAN	PIC X(19)	[a]	Left

Record Type	Field Name	Field Format	Field Value	Justification
Trailer	Record Type	PIC X(01)	T	Left
	Distribution ID	PIC X(16)	IP142110–AA	Left
	Member ID	PIC 9(11)		Right
	Endpoint	PIC X(07)		Left
	Count	PIC 9(12)	Count of XML data detail records [b]	Right

aSixteen-digit PANs will be left-justified with trailing spaces. If PAN is unavailable, the field will contain PAN NA.

b Count does not include Header/Trailer records.

Raw data distribution

The raw data version of the report contains this data layout.

Record Type	Field Name	Field Format	Field Value	Justification
Header	Record Type	PIC X(01)	H	Left
	Distribution ID	PIC X(16)	IP142110-AA	Left
	Member ID	PIC 9(11)		Right
	Endpoint	PIC X(07)		Left

Record Type	Field Name	Field Format	Field Value	Justification
Data	Record Type	PIC X(01)	D	Left
	Transaction Originator Institution ID Code	PIC 9(11)		Right
	MTI	PIC 9(04)		Right
	Function Code	PIC 9(03)		Right
	Message Reason Code	PIC 9(04)		Right
	File ID	PIC 9(25)		Right
	CR DR Indicator	PIC X(02)		Left
	Central Site Processing Date of Original Message	PIC X(06)		Left
	Transaction Type	PIC X(02)		Left
	Processing Code	PIC 9(02)		Right
	Transaction Amount	PIC 9(12)		Right
	Transaction Currency Code	PIC 9(03)		Right
	Currency Exponent	PIC X(01)		Left
	Reconciliation Amount	PIC 9(12)		Right
	Reconciliation Currency Code	PIC 9(03)		Right
	Reconciliation currency exponent	PIC X(01)		Left
	Transaction Destination Institution ID Code	PIC 9(11)		Right
	Forwarding Institution ID Code	PIC 9(11)		Right
	Fee Collection Control Number	PIC 9(20)		Right
	Card Program Identifier	PIC X(03)		Left
	Receiving Institution ID Code	PIC 9(11)		Right
	MasterCom Control Number	PIC X(07)		Left
	PAN	PIC X(19)	[a]	Left

Record Type	Field Name	Field Format	Field Value	Justification
Trailer	Record Type	PIC X(01)	T	Left
	Distribution ID	PIC X(16)	IP142110–AA	Left
	Member ID	PIC 9(11)		Right
	Endpoint	PIC X(07)		Left
	Count	PIC 9(12)	Count of raw data detail records [b]	Right

a Sixteen-digit PANs will be left-justified with trailing spaces. If PAN is unavailable, the field will contain PAN NA.

b Count does not include Header/Trailer records.

Figure 56: IPM Messages Created On Behalf of a Member Report (IP142110-AA)

```
IP142110-AA                                        MASTERCARD WORLDWIDE                                    RUN DATE: 09/05/08
                                           IPM MESSAGES CREATED ON BEHALF OF A MEMBER                       PAGE NO:         1
                                                           2008-09-05

MEMBER ID: XXXXXXXXXXX
MTI/FUNC CD/RSN CD :  1740/700/7800
TRANS TYPE: RR - RETRIEVAL REQUEST
PROC    TRANS AMOUNT       - CUR   RECON AMOUNT       - CUR  TRANS DEST ICA  FORW INST ICA/   FEE COLL CNTL NO/   CARD PGM IDENT/
CODE                                                                         RCVG INST ICA      MCOM CNTL NO      PRIM ACCT NUMB
==== ========================= ========================= ============== ============== ==================== ================
 19              8.00 CR - 840             8.00 CR - 840   XXXXXXXXXXX    XXXXXXXXXXX  0000000000000001          MCC
                                                                          XXXXXXXXXXX                     5036300000000000000
 19              3.00 CR - 840             3.00 CR - 840   XXXXXXXXXXX    XXXXXXXXXXX  0000000000000002          MCC
                                                                          XXXXXXXXXXX                     5036300000000000001
 19              3.00 CR - 840             3.00 CR - 840   XXXXXXXXXXX    XXXXXXXXXXX  0000000000000003          MCC
                                                                          XXXXXXXXXXX                     5036300000000000002
                                                  S   U   M   M   A   R   Y
TRANS TYPE COUNT                                                    TOTAL
                                                                                3

TRANSACTION AMOUNTS                       CURRENCY CODE              TOTAL
                                               840                              14.00 CR

RECONCILIATION AMOUNTS                    CURRENCY CODE              TOTAL
                                               840                              14.00 CR

                                       O  V  E  R  A  L  L     S  U  M  M  A  R  Y
MEMBER TRANS COUNT                                                  TOTAL
                                                                                3

TRANSACTION AMOUNTS                       CURRENCY CODE              TOTAL
                                               840                              14.00 CR

RECONCILIATION AMOUNTS                    CURRENCY CODE              TOTAL
                                               840                              14.00 CR
```

Table 37: Report IP142110-AA field descriptions

Field	Description
Run Date	The date on which this report was produced.
Page No	The page number within the report.
Member ID	The identifier that the association assigns to a customer (also referred to as ICA number). DE 94 (Transaction Originator Institution ID Code).
MTI/Function Code/Reason Code	Message Type Identifier, DE 24 (Function Code) and DE 25 (Message Reason Code).
Transaction Type	Identifies the type of transaction: • RR = Retrieval Request • CA = Case Filing/Member Mediation • CO = Collection Letter • FT = Funds Transfer • UK = UK ATM On-behalf Service • IV = Mexico IVA Fees
Processing Code	DE 3 (Processing Code), subfield 1 (Cardholder Transaction Type).
Transaction Amount	DE 4 (Amount, Transaction).
CR DR Indicator	Indicates the amount as a credit or debit.
Currency	The numeric ISO currency code associated with the transaction currency. DE 49 (Currency Code, Transaction).
Reconciliation Amount	DE 5 (Amount, Reconciliation).
CR DR Indicator	Indicates the amount as a credit or debit.
Credit Debit Indicator	Indicates the amount credit or debit for the customer.
Currency	The numeric ISO currency code associated with the reconciliation currency. DE 50 (Currency Code, Reconciliation).
Transaction Destination ICA	DE 93 (Transaction Destination Institution ID Code).
Forwarding Institution ICA/ Receiving Institution ICA	DE 33 (Forwarding Institution ID Code)/DE 100 (Receiving Institution ID Code.
Fee Collection Control Number/MasterCom Control Number	PDS 0137 (Fee Collection Control Number)/PDS 0241 (MasterCom Control Number).

Field	Description
Card Program Identifier/PAN	PDS 0158 (Business Activity), subfield 1 (Card Program Identifier)/DE 2 (Primary Account Number [PAN]).
Transaction Amounts	The net total amount of the transaction in transaction currency for the applicable logical ID file.
Reconciliation Amounts	The net total amount of the transaction in transaction currency for the applicable logical ID file.
Currency Code	The numeric ISO currency code associated with the reconciliation currency. DE 50 (Currency Code, Reconciliation).

On-behalf Service Fee Collection Report (IP142520-AA)

This Global Clearing Management System reconciliation summary report (On-behalf Service Fee Collection Report) is offered to acquirers in the Europe region to allow reconciliation and settlement of their authorization and clearing transactions. Customers can sign up for this report.

Acquirers will have the option to receive the consolidated clearing report, On-behalf Service Fee Collection Report (IP142520-AA)

- in three clearing cycles per day (cycle 1, 3, and 5) and distributed as part of bulk type T140 (Production) and T150 (Test).
- on the next clearing cycle if there is an issue with the generation of the report on one of the three cycles listed above, and
- by total transaction counts and amounts.

In addition to the On-behalf Service Fee Collection Report, the text file or XML data file format can also be requested.

- Text file: available in raw data, variable length version. The bulk types are TN70 (Production) and TN72 (Test) for outbound file delivery.
- XML Data file: available in variable length version. The bulk types are TN66 (Production) and TN68 (Test) for outbound file delivery.

Customers should indicate their format preference by contacting their account manager or Mastercard Customer Implementation Specialist. the Mastercard Customer Implementation Services team.

Figure 57: On-behalf Service Fee Collection Report (IP142520-AA)

```
IP142520-AA                              MASTERCARD WORLDWIDE                                          RUN DATE: 06/17/08
                             SUMMARY REPORT ON-BEHALF SERVICE SYSTEM-GENERATED                         PAGE NO:   NNNNNN
                                  ATM NON-FINANCIAL FEE COLLECTION MESSAGES                            CLEARING CYCLE: NN

MEMBER ID:        NNNNNNNNNNN
FILE ID:          904YYMMDD00000001119NNNNN
SETTLE SERVICE:   XXXXXXXXXX    RECONCILIATION CURRENCY: XXX

ACCEPTANCE BRAND         TRANSACTION TYPE            ACTION DATE    TOTAL COUNTS     SERVICE FEE AMOUNT
----------------   -----------------------------    -----------   -------------   -------------------
CIR (CIRRUS)       7621 - ATM BALANCE INQ. FEE       YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                   7625 - PIN CHG/UNBLOCK FEE        YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                   7629 - ATM FIN. DECLINE FEE       YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX

CIR TOTAL                                                        ZZZ,ZZZ,ZZZ,ZZ9  ZZZZZZZZZZZZZZZZZ9 XX

ACCEPTANCE BRAND         TRANSACTION TYPE            ACTION DATE    TOTAL COUNTS     SERVICE FEE AMOUNT
----------------   -----------------------------    -----------   -------------   -------------------
DMC (DEBIT)        7621 - ATM BALANCE INQ. FEE       YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                   7625 - PIN CHG/UNBLOCK            YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                   7629 - ATM FIN. DECLINE FEE       YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX

DMC TOTAL                                                        ZZZ,ZZZ,ZZZ,ZZ9  ZZZZZZZZZZZZZZZZZ9 XX

ACCEPTANCE BRAND         TRANSACTION TYPE            ACTION DATE    TOTAL COUNTS     SERVICE FEE AMOUNT
----------------   -----------------------------    -----------   -------------   -------------------
MCC (CREDIT)       7621 - ATM BALANCE INQ. FEE       YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                   7625 - ATM PIN CHG/UNBLOCK        YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                   7629 - ATM FIN. DECLINE FEE       YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX

MCC TOTAL                                                        ZZZ,ZZZ,ZZZ,ZZ9  ZZZZZZZZZZZZZZZZZ9 XX

ACCEPTANCE BRAND         TRANSACTION TYPE            ACTION DATE    TOTAL COUNTS     SERVICE FEE AMOUNT
----------------   -----------------------------    -----------   -------------   -------------------
MSI (MAESTRO)      7621 - ATM BALANCE INQ. FEE       YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                   7625 - PIN CHG/UNBLOCK FEE        YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                   7629 - ATM FIN. DECLINE FEE       YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX
                                                     YY-MM-DD      Z,ZZZ,ZZZ,ZZ9     ZZZZZZZZZZZZZZ9 XX

MSI TOTAL                                                        ZZZ,ZZZ,ZZZ,ZZ9  ZZZZZZZZZZZZZZZZZ9 XX

GRAND TOTAL                                                      ZZZ,ZZZ,ZZZ,ZZ9  ZZZZZZZZZZZZZZZZZ9 XX
```

Miscellaneous Override Financial Adjustments Report (IP148320-AA)

The Miscellaneous Override Financial Adjustments report is available to customers each processing day and is distributed as part of bulk file type T140.

The report provides detail about the Mastercard Fee Collection/1740 messages containing message reason code 7808 in the Clearing Cycle Notification Report (IP727020-AA) that are generated at the account range level.

Issuers and processors can elect to receive the Miscellaneous Override Financial Adjustments Report. Customers should indicate their format preference by contacting their account manager or Mastercard Customer Implementation Specialist. contacting the Mastercard Implementation Services team.

Clearing system report Miscellaneous Override Financial Adjustments report (IP148320-AA) has two additional receipt options.

- Text file is available in raw data, variable length version. The bulk type is TN70 (Production).
- XML data file is available in variable length version. The bulk type is TN66 (Production).

The data files are created and distributed after each processing day. The data files do not include summary totals. If no data is available, the customer receives a header and trailer only, with record count 0.

When multiple customer IDs are packaged in a single file to the same endpoint, the data is sequenced by customer ID. A header and trailer is provided for each customer ID (as shown for three customers in the following example).

XML or Raw Data File for Endpoint A
Header for customer 1
Detail for customer 1
... [detail information 1]
... [detail information 2]
Trailer for customer 1
Header for customer 2
Detail for customer 2
... [detail information 2]
... [detail information 2]
Trailer for customer 2
Header for customer 3
Detail for customer 3
... [detail information 3]
... [detail information 3]
Trailer for customer 3

The Miscellaneous Override Financial Adjustments Report (IP148320-AA) includes Settlement Service and Submitted Fee Collection Amount.

The XML file version of the report will contain the data shown in the following layout.

Table 38: XML data file distribution

Record Type	Field Name	Field Format	Field Value	Justification
Header	Record Type	PIC X(01)	H	Left
	Distribution ID	PIC X(16)	IP148320–AA	Left
	Member ID	PIC 9(11)		Right
	Endpoint	PIC X(07)		Left
Detail	Record Type	PIC X(01)	D	Left
	Member ID	PIC X(11)		Left
	FEE-ADJ-SETTLE-SERVICE	PIC X(10)		Left
	FEE-ADJ-ACCT-RANGE	PIC X(38)		Left
	FEE-ADJ-CURR-CD	PIC X(03)		Left
	FEE-ADJ-CURR-EXP	PIC X(01)		Left
	FEE-TRX-CURR-CD	PIC X(03)		Left
	FEE-TRX-CURR-EXP	PIC X(01)		Left
	FEE-ADJ-ALIGN-EXP	PIC X(01)		Left
	FEE-ADJ-AMOUNT-DR	PIC 9(18)		Right
	FEE-ADJ-AMOUNT-CR	PIC 9(18)		Right
	FEE-ADJ-AMOUNT-NET	PIC 9(18)		Right
	FEE-ADJ-NET-DR-CR	PIC X(02)		Left
	FEE-TRX-AMOUNT-DR	PIC 9(18)		Right
	FEE-TRX-AMOUNT-CR	PIC 9(18)		Right
	FEE-TRX-AMOUNT-NET	PIC 9(18)		Right
	FEE-TRX-NET-DR-CR	PIC X(02)		Left

Record Type	Field Name	Field Format	Field Value	Justification
Trailer	Record Type	PIC X(01)	T	Left
	Distribution ID	PIC X(16)	IP148320–AA	Left
	Member ID	PIC X(11)		Left
	Endpoint	PIC X(07)		Left
	Count	PIC 9(12)	Count of XML data detail records	Right

The Raw Data version of the report will contain the data shown in the following layout.

Table 39: Raw data file distribution

Record Type	Field Name	Field Format	Field Value	Justification
Header	Record Type	PIC X(01)	H	Left
	Distribution ID	PIC X(16)	IP148320–AA	Right
	Endpoint	PIC X(07)		Left

Record Type	Field Name	Field Format	Field Value	Justification
Detail	Record Type	PIC X(01)	D	Left
	Member ID	PIC X(11)		Left
	FEE-ADJ-SETTLE-SERVICE	PIC X(10)		Left
	FEE-ADJ-ACCT-RANGE	PIC X(38)		Left
	FEE-ADJ-CURR-CD	PIC X(03)		Left
	FEE-ADJ-CURR-EXP	PIC X(01)		Left
	FEE-ADJ-ALIGN-EXP	PIC X(01)		Left
	FEE-TRX-CURR-CD	PIC X(03)		Left
	FEE-TRX-CURR-EXP	PIC X(01)		Left
	FEE-ADJ-AMOUNT-NET	PIC 9(18)		Right
	FEE-ADJ-DR-CR	PIC X(02)		Left
	FEE-TRX-AMOUNT-DR	PIC 9(18)		Right
	FEE-TRX-AMOUNT-CR	PIC 9(18)		Right
	FEE-TRX-AMOUNT-NET	PIC 9(18)		Right
	FEE-TRX-NET-DR-CR	PIC X(02)		Left
Trailer	Record Type	PIC X(01)	T	Left
	Distribution ID	PIC X(16)	IP148320–AA	Left
	Member ID	PIC X(11)		Left
	Endpoint	PIC X(07)		Left
	Count	PIC 9(12)	Count of raw data detail records	Right

Figure 58: Miscellaneous Override Financial Adjustments Report (IP148320-AA)

```
IP148320-AA                                      MASTERCARD WORLDWIDE                                         RUN DATE: CCYY/MM/DD
                                      MISCELLANEOUS OVERRIDE FINANCIAL ADJUSTMENTS                               PAGE:    00000001

MTI/FUNCTION CODE/MESSAGE REASON CODE: XXXX/XXX/XXXX
MEMBER ID: NNNNNNNNNN

SETTLEMENT                                                            NET SETTLEMENT                 SUBMITTED FEE COLLECTION
SERVICE                  ACCOUNT RANGE                          AMOUNT/DIRECTION/CURRENCY          AMOUNT/DIRECTION/CURRENCY
----------   -----------------------------------------    --------------------------------   --------------------------------
US00000001   1234560000000000000 - 1234569999999999999    ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 840-USD   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 840-USD
             1234560000000000000 - 1234569999999999999    ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 840-USD   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 840-USD
             1234560000000000000 - 1234569999999999999    ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 840-USD   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 123-LOC
             1234560000000000000 - 1234569999999999999    ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 123-LOC   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 123-LOC

EU00000001   1234560000000000000 - 1234569999999999999    ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 978-EUR   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 978-EUR
             1234560000000000000 - 1234569999999999999    ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 978-EUR   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 978-EUR
             1234560000000000000 - 1234569999999999999    ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 978-EUR   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 978-EUR
             1234560000000000000 - 1234569999999999999    ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 978-EUR   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 978-EUR


SUMMARY FOR MEMBER ID NNNNNNNNNN

SETTLEMENT         SETTLEMENT              SETTLEMENT                NET SETTLEMENT
SERVICE          AMOUNT DEBITS           AMOUNT CREDITS         AMOUNT/DIRECTION/CURRENCY
==========   =====================   =====================   ================================
US00000001   ZZZ,ZZZ,ZZZ,ZZN.NNNNN   ZZZ,ZZZ,ZZZ,ZZN.NNNNN   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 840-USD
             ZZZ,ZZZ,ZZZ,ZZN.NNNNN   ZZZ,ZZZ,ZZZ,ZZN.NNNNN   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 123-LOC
EU00000001   ZZZ,ZZZ,ZZZ,ZZN.NNNNN   ZZZ,ZZZ,ZZZ,ZZN.NNNNN   ZZZ,ZZZ,ZZZ,ZZN.NNNNN CR 978-EUR

                                        *** END OF REPORT ***
```

Acquirer-funded Reward Presentments Created On Behalf of a Member Report (IP170010-AA)

The Reward Presentments Created on Behalf of a Customer Report (IP170010-AA) aids acquirers in reconciling promotions that will be merchant-funded, providing acquirers with a recap of the merchant-funded promotions.

Acquirers have the option to receive the consolidated clearing report, Acquirer-funded Reward Presentments Created on Behalf of a Customer Report (IP170010-AA).

- In each clearing cycle and distributed as part of bulk type T140 (Production) and T150 (Test) only if the customer had activity.
- By transaction origination, customer reconciliation indicator (reward program ID), acceptor, and transaction currency.

Totals are provided by transaction currency and reconciliation currency.

In addition to the Acquirer-funded Reward Presentments Created on Behalf of a Customer Report, the text file or xml data file format can also be requested.

- Text file: available in raw data, variable length version. The bulk types are TN70 (Production) and TN72 (Test) for outbound file delivery.
- XML Data file: available in variable length version. The bulk types are TN66 (Production) and TN68 (Test) for outbound file delivery.

Consolidated on-request XML data file distribution

Customers who request a raw data file version of a report will receive the data using default layouts.

Record Type	Field Name	Field Format	Field Value
Header	Filler	PIC X(01)	H
	Distribution File	PIC X(16)	IP170010–AA: when Funds Transfer Fee Collection
	Member ID	PIC X(11)	
	Endpoint	PIC X(07)	
Data	Filler	PIC X(01)	D
	Raw Data	PIC X (varies by layout)	Contains raw data for the distribution file
Trailer	Filler	PIC X(01)	T

Record Type	Field Name	Field Format	Field Value
	Distribution File	PIC X(16)	IP170010–AA: when Funds Transfer Fee Collection IP702010-AA: when Merchant Partner Program
	Member ID	PIC X(11)	
	Endpoint	PIC X(07)	
	Count	PIC X(12)	Count of raw data records

RAW DATA LAYOUT		
Distribution File	**Raw Data Format**	**Field**
IP170010–AA	FILLER	PIC X(01) VALUE D
	TRAN-ORIG	PIC X(11)
	FILE-ID	PIC X(25)
	ACCEPTOR	PIC X(15)
	REWARD-PGM	PIC X(11)
	MTI	PIC X(04)
	FUNC-CD	PIC X(03)
	PROC-CD	PIC X(02)
	TRAN-AMT	PIC 9(12)
	TRAN-CR-DR-IND	PIC X(02)
	TRAN-CUR	PIC X(03)
	RECON-AMT	PIC 9(12)
	RECON-CR-DR-IND	PIC X(02)
	FEE-IN-RECON-CUR	PIC 9(12)
	FEE-IN-RECON-CR-DR-IND	PIC X(02)
	FEE-IN-CALC-CUR	PIC 9(12)
	FEE-CALC-CUR	PIC X(03)
	FEE-IN-CALC-CR-DR-IND	PIC X(02)
	RECON-CUR	PIC X(03)
	TRAN-DEST	PIC X(11)

RAW DATA LAYOUT		
Distribution File	**Raw Data Format**	**Field**
	CARD-PGM-ID	PIC X(03)
IP1702010–AA	FILLER	PIC X(01) VALUE D
	MTI	PIC X(04)
	FUNC-CD	PIC X(03)
	PRIM-ACCT-NO	PIC X(19)
	PROC-CD	PIC X(02)
	TRANS-DATE	PIC X(06)
	ACQ-REF-NO	PIC X(23)
	IRD	PIC X(02)
	FUNDS-DIRECTION	PIC X(02)
	AMOUNT-RECON-FEE	PIC X(12)
	CURRENCY-RECON-FEE	PIC X(03)
	EXPONENT-RECON-FEE	PIC X(01)
	AMOUNT-TRANS-FEE	PIC 9(12)
	CURRENCY-TRANS-FEE	PIC X(03)
	EXPONENT-TRANS-FEE	PIC X(01)

NOTE:

Customers that request an XML data file version of a report will receive the same data as above but in XML format.

For customers that elect to receive the text file, when no data is present, the file will consist of a header and trailer record with zero (0) for the record count.

Using both IPM messages and reports to collect information

Customers can use both the IPM reconciliation messages and the Global Clearing Management System reports to derive information about customer and other activity, at different total levels.

For example:

- The customer may choose to receive the IPM reconciliation message totals at the account range level. Global Clearing Management System reconciliation reports provide totals at the customer level but not at the account range level. Choosing the message totals at the account range level provides the customer with a more detailed breakdown by customer activity than Global Clearing Management System reports will provide.
- Global Clearing Management System reports provide count totals for non-financial transactions, in addition to financial transactions. The IPM reconciliation messages do not provide non-financial transaction detail. Thus, customers may request the IPM clearing reports to obtain non-financial transaction count information to supplement the financial count and totals information in the IPM reconciliation messages.
- Global Clearing Management System reports provide amount totals in the customer's reconciliation currency. The IPM reconciliation messages provide amount totals in the customer's reconciliation currency and optionally in the transaction currency. Customers receiving both the Global Clearing Management System reports and the IPM reconciliation messages can thus receive their amount totals in these currencies: transaction, reconciliation.
- The rejected transaction reports can provide customers with rejected transaction information that accounts for the difference between the customer clearing data totals and the accepted clearing data totals as reported by Mastercard. For example, suppose that customer A submits financial transactions totaling USD 3,000.00. Customer A receives acknowledgment reconciliation messages, which show processing of USD 2,500.00 financial activity. Customer A can refer not only to the rejected transaction reports but also to the customer inbound error messages to verify the source of the USD 500.00 difference.

NOTE: All of the reports referenced in the list above are available per clearing cycle and are not available within the IPM Early Reconciliation File. Reconciliation messages are delivered according to the customer's elected file delivery schedule.

Accumulating reconciliation totals

Details about the accumulation of reconciliation messages done by customers and processors are described here.

NOTE: Customers and processors will need to accumulate reconciliation messages to derive a grand total, by processor, for any of the reconciliation categories for the customers for which they process.

For example, suppose that customer or processor 001111 processes for customer ID 002222, customer ID 003333, and customer ID 004444 and that Mastercard has set up the customers' selected categories for notification messages in this way.

- Customer ID 002222: Set up to receive reconciliation totals by processing code and settlement indicator.
- Customer ID 004444: Set up to receive reconciliation totals by processing code and settlement indicator.

Although it is unlikely that a customer or processor would establish such a diverse set of categories for each customer ID, this example illustrates the process for accumulating any set of reconciliation totals.

Member ID	Processor 001111 Receives Record...	Processing Code	Settlement Indicator	Originals/ Reversals	Transaction Function
002222	1	Purchase: USD 100.00	Settled by Mastercard		
Subtotal of Purchase Processing Code for Customer ID 2222		USD 100.00			
	2	ATM: USD 50.00	Settled by Mastercard		
Subtotal of ATM Processing Code for Customer ID 2222		USD 50.00			
004444	9	Purchase: USD 100.00	Settled by Mastercard		
Subtotal of Purchase Processing Code for Customer ID 4444		USD 100.00			
	10	ATM: USD 50.00	Settled by Mastercard		
Subtotal of ATM Processing Code for Customer ID 4444		USD 50.00			
Grand Total of Purchase Processing Code for Customer ID 001111		USD 200.00			

To derive a total at the customer or processor level for any of the above reconciliation categories, the customer or processor will need to accumulate and total each applicable customer ID's reconciliation category.

For example, to derive the notification totals by processing code of purchase for processor 001111, the processor must accumulate the notification totals by processing code for customer ID 002222 and customer ID 004444.

NOTE: All summarization of totals occurs within the same currency.

IPM reconciliation split

PDS 0360 (Reconciled, Transaction Sequence Identifier) indicates that there has been a split in the reconciliation total amount reported in reconciliation messages. The subfields indicate the sequence and the total number of message splits.

For example: GCMS calculates a reconciliation amount of 19,999,999,999,999,999 (17 digits or more). Then GCMS will split that single reconciliation amount into multiple amounts (in this case, specifically three amounts) and include each amount in three separate 1644-680/1644-685/1644-688 reconciliation messages. The sum total of those three amounts will equal the total reconciliation amount.

Additionally, to simplify customer reconciliation processing, GCMS will insert new PDS 0360 into each of those reconciliation messages to provide the sequence number of each related message and the total number of messages pertaining to given split amount.

1. PDS 0360 subfield 1 = 00001, PDS 0360 subfield 2 = 00003 and Amount-PDSs***** = 9999999999999999 (16 positions)
2. PDS 0360 subfield 1 = 00002, PDS 0360 subfield 2 = 00003 and Amount-PDSs***** = 9999999999999999 (16 positions)
3. PDS 0360 subfield 1 = 00002, PDS 0360 subfield 2 = 00003 and Amount-PDSs***** = 9999999999999999 (16 positions)

The total reconciliation amount can then be calculated as: 9,999,999,999,999,999 + 9,999,999,999,999,999 + 0000000000000001 = 19,999,999,999,999,999.

All of the related 1644-680/1644-685/1644-688 messages for a given split will always be sent in the proper order and always sent together sequentially. Mastercard will never intermix 1644-680/1644-685/1644-688 messages from unrelated splits, nor will Mastercard ever separate the messages belonging to a split with a single message that is not related to any split whatsoever.

***Amount-PDS:** Indicates amount PDS which are applicable for split like 0380/0381/0384/0390/0391/0392/0393/0394/0395/0396 for 1644 transactions. Customers should check for the presence of PDSs for different transactions in the table.

Chapter 18 Early Reconciliation

This section describes the Global Clearing Management System messages and reports and how they can be used in the early reconciliation process.

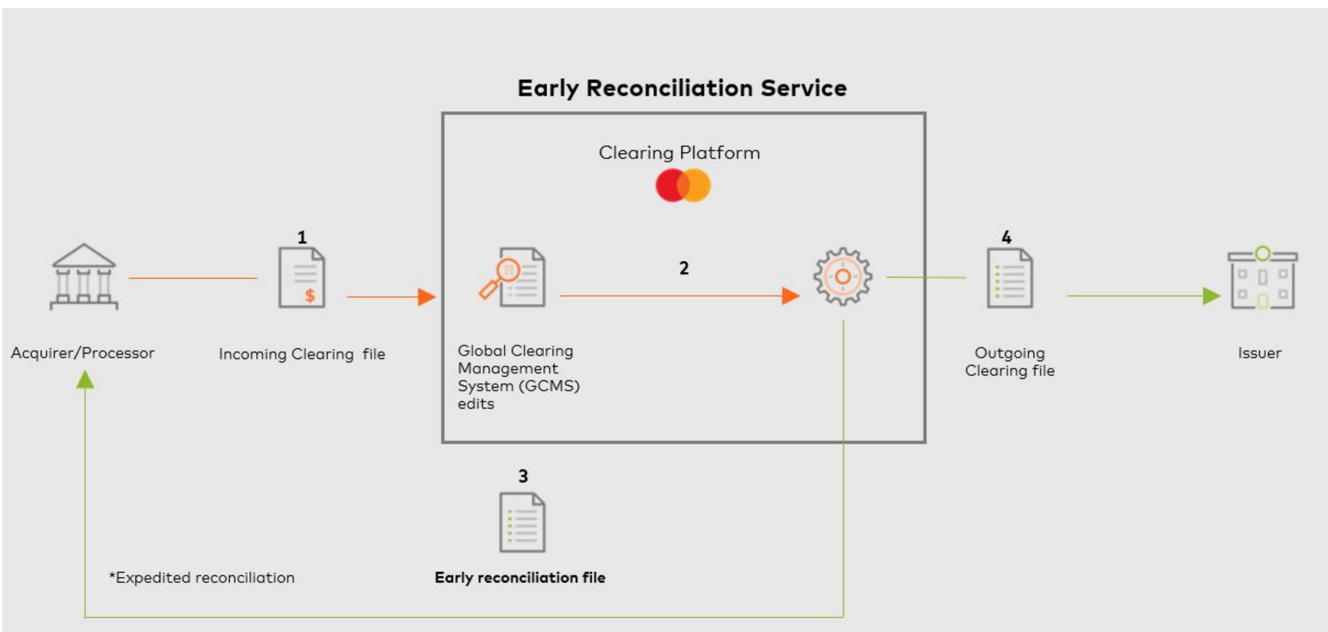
Overview and summary

Early Reconciliation Service helps customers expedite their clearing reconciliation process. It provides early acknowledgment summary of clearing transactions submitted to the Global Clearing Management System (GCMS), and error messages. This service can provide balancing information, error records, and can help customers and processors make their merchant prefund decisions without waiting for the next GCMS cutoff and distribution of notification data.

It allows the customer to understand its settlement position for the file processed by Mastercard and to correct, resubmit any errors that may be present without the constraint of waiting for the next GCMS cutoff time.

The Early Reconciliation file is transmitted using bulk type T113.

As part of the Early Reconciliation Service customers can receive the Early Reconciliation file after the St. Louis Operations Center has processed their outbound IPM logical clearing files, without waiting until the Central Site clearing cutoff time to receive their reconciliation messages. This option is available at the processor level. If a customer is its own processor, the customer may also choose this option for itself.



*Time may vary depending upon various factors

Functionalities

Early Reconciliation Service (T113) provides:

- IPM File Currency Summary/1644-680 message
- IPM Financial Position Detail/1644-685 message
- GCMS Rejects
  - Message Exception/1644-691 along with the entire Original transaction/1240-200
  - Full File Reject/1644-699 messages
- IPM Settlement Position Detail/1644-688 messages

For details of File Currency Summary, Financial Position Detail and Settlement Position Detail refer to chapter 15 Reconciliation. For details on GCMS rejects refer to Chapter 2 Clearing processing details -> Global Clearing Management system rejection of messages. For information about the edits that apply to individual IPM messages, refer to the *IPM Clearing Formats manual*.

Early Recon is available in two options:

- Option 1 – File Currency Summary/1644-680 and Financial Position Detail/1644-685
- Option 2 – File Currency Summary/1644-680, Financial Position Detail/1644-685, and Settlement Position Detail/1644-688

Rejected Transaction Details are provided by default in both options of Early Reconciliation.

All message formats are the same as the reconciliation messages sent in customer inbound clearing file (Bulk Type T113).

Acquirers and issuers can only select an acknowledgment message for their Early Reconciliation Service that has been selected for their reconciliation message. For example, if a customer or processor has not chosen to receive Settlement Position Detail/1644-688 message for their reconciliation messages, they cannot choose to receive Settlement Position Detail/1644-688 in their Early Reconciliation file.

T113 File contents and details

IPM Reconciliation messages are sent in Mastercard generated clearing files Bulk Type: T113.

Integrated Product Messages (IPM) is a variable-length format based on the ISO 8583–1993 specification.

Each IPM message contains data elements (DEs) and private data subelements (PDS).

One T113 file will contain multiple IPM messages distinguished by Message Type Identifier (MTI) and Function Codes.

T113 File begins with a File Header/1644 and ends with a File Trailer/1644.

The messages are generated in a specific sequence. For details, please refer to Chapter 2 – Creating IPM messages – Files generated by Mastercard – Sequence of the early reconciliation file. Sequence of the early reconciliation file

For more details on the file format refer to the *IPM Clearing Formats manual* -> Chapter 1 for IPM File Structure/Overview.

Important Data Elements specific to Early Recon

For an exhaustive list of data elements related to Reconciliation Messages refer to *IPM Clearing Formats manual* Chapter 5, below are a few important ones:

1644/697 File Header:

PDS 0105 Subfield 1 (File Type) (1–3) = 003 (Early Reconciliation file: Generated by Mastercard). *Different for local processing systems.

1644/680 File Currency Summary & 1644/685 Settlement Currency Summary:

PDS 0300 contains the PDS 0105 value submitted by the file originator in customer-generated files. This can be used by customers to reconcile data.

DE93 is the institution that has an agreement with Mastercard as being a principal member and has the financial authority to process transactions as an acquirer or issuer.

DE 100 contains the Customer ID or Processor ID of the physically connected processing facility that receives a message.

1644/685 Settlement Currency Summary:

Reconciled Settlement Activity (PDS 0359) identifies in reconciliation messages the settlement activity to which the reconciliation totals pertain. Apart from other sub fields, it contains important values like Reconciliation Date, Reconciliation Cycle, Settlement Date, Settlement Cycle, which are important to members making prefunding to merchants and in regions where the settlement time frame is longer.

Comparison of T112 and T113

Table below provides a summary of important differences.

Table 40:

	T112(Clearing Reconciliation File)	T113 (Early Reconciliation File)
Frequency	Provided once per cycle	Provided against every inbound clearing file

	T112(Clearing Reconciliation File)	T113 (Early Reconciliation File)
Message Reason Codes	Acknowledgment of Outbound Activity (6861) & Notification to Inbound Activity (6862)	Acknowledgment of Outbound Activity (6861)
Message Types	• File Currency Summary • Financial Position Detail • Settlement Position Detail • GCMS Rejects	• File Currency Summary • Financial Position Detail • Settlement Position Detail • GCMS Rejects
File Structure	IPM	IPM (Same as T112)
Reconciliation Categories	As per the Message Type	As per the Message Type. (Same as T112)

The Global Clearing Management System does not duplicate the messages provided in the early reconciliation files when it creates the customer inbound clearing files at cycle cutoff times. The customer will receive the message only once. Reconciliation messages not selected in Early Reconciliation will be delivered within the customers inbound file from Mastercard (T112) based on customer selection.

Migration from T112 to T113

Existing member banks and processors consuming acknowledgment messages in T112 can consume them through T113. T113 helps segregation of reconciliation for Acknowledgment messages and Notification messages.

For details refer to the onboarding and enrollment section in the chapter, customer needs to be aware of the following points:

- The bulk type consumed by the customer needs to be changed (T112- T113).
- While consuming T113, the File header (PDS 0105 SF1 value) would need to be changed from 001 (T112) to 003 (T113). Refer to IPM Formats for more details.
- Configuration at Mastercard needs to be changed to enable T113. Refer to the on-boarding section for more details.
- Customer needs to move from cycle-based processing to file based processing. As an optional step Members/Processors can also have a look at the Reconciliation Categories that they want to consume (this is optional and the default values would be the same as T112).
- Processing frequency at the customer end might need to change depending upon the frequency of the files being sent by the member bank and the processor.
- T113 will only contain the Acknowledgment of Outbound Activity, if Members or Processors want notification of inbound activity they still need to consume data from T112 in addition to T113.

Onboarding

Customers may enroll in the Early Reconciliation Service by contacting their account manager or Mastercard Type, Customer Implementation Specialist (CIS). Customers may work with their CIS specialist and select the Early Reconciliation file option in the Automatic Parameter Worksheet (APW form) under Clearing Options. Customers need to select one out of the two options in which they want to consume T113 files.

Customers can change Reconciliation Categories during onboarding that are available in APW. Customers can also choose to continue with the same Recon Categories.

Refer to chapter 15 to learn more about the various default, optional, and recommended reconciliation categories by which customers can receive Financial Position Detail/1644-685, and Settlement Position Detail/1644-688 message.

Billing

Early Reconciliation is billed through the Mastercard Consolidated Billing System (MCBS). Current rates are listed in the Pricing Guide on the Pricing and Billing Resource Center. The billing event identifiers are as follows.

Table 41:

Billing event	Description
2GC1240ER	Early Reconciliation Service Fee

Chapter 19 Cross-Border Fee Manager service

Issuers have the option to enroll in the Cross-Border Fee Manager service, an on-behalf service that allows the application of issuer-determined cardholder fees for cross-border and currency conversion transactions.

Cross-Border Fee Manager service overview

The Cross-Border Fee Manager service allows issuers to have the flexibility to set markup fees for both currency-conversion and cross-border transactions, taking into account a variety of parameters.

- Account range for Mastercard, Debit Mastercard, Maestro, and Cirrus acceptance brands
- Transaction currency
- Region differentiation (for example, intraregional versus interregional)
- Processing groups (for example, point-of-sale [POS], ATM, card-present, card-not-present, and so on)

In combination with the default service in Clearing, issuers can select Authorization as an option. Markup fees are added to the cardholder billing amount (DE 6) without any impact to other data fields within the authorization. The markup amount provided within Authorization serves as an estimate and may differ slightly from the amount within Clearing due to fluctuations within the currency conversion rates used to calculate the final issuer markup.

Issuers may use any combination of the Currency Conversion Method, Cross-Border Flex Method, or both to set the markup rates for cross-border and currency conversion transactions and to add the associated fees to the total cardholder billing amount.

- Currency Conversion Method: Allows issuers to charge cardholders a percentage rate, fixed amount, or both by applying a markup to currency-converted transactions that may be further filtered by setup parameters.
- Cross-Border Flex Method: Allows issuers to charge cardholders an additional percentage rate, fixed amount, or both by applying a markup to cross-border transactions that may be further filtered by setup parameters.

Both of these methods are provided in message types

- First Presentment/1240 (including reversals and credits) and
- First Chargeback/1442.

Issuers can optionally set up to three different markup fee overrides based on any transaction currency at the account range level for both authorization and clearing. If the transaction currency matches the override currency, the markup fee override is used to calculate the markup versus the issuer's default service setting for all other currencies. Issuers may use these overrides to change the existing markup fee setup or even nullify the markup service (using a 0 percent override) for lower risk currencies, or to increase the fee for higher risk, volatile currencies.

Mastercard calculates the currency conversion method and cross-border flex method amounts based on the markup services the issuer opts into and fees established by the issuer at the account range level. Mastercard incorporates these calculated amounts into DE 6 (Amount, Cardholder Billing).

Method Description	Condition of Application	Markup Calculation
Currency Conversion Method	DE 49 (Currency Code, Transaction) is different from DE 51 (Currency Code, Cardholder Billing)	Percentage rate, fixed amount, or both
Cross-Border Flex Method	DE 43, subfield 6 is different from the issuer country code (defined at account range level)	Percentage rate, fixed amount, or both

NOTE: The Cross-Border Flex Method does not apply to intra-European transactions where the country codes of the merchant and the account range are both in the extended Eurozone (Euro countries plus Sweden) and the transaction currency is euros (EUR).

By participating in either of the methods (Currency Conversion Method and Cross-Border Flex Method), issuers have the option to use a combination of parameters at an account range level, which can be applied to the total cardholder billing amount, including

- Account range for Mastercard, Debit Mastercard, Maestro, and Cirrus acceptance brands
- Region differentiation
- Processing groups (for example, point-of-sale [POS], ATM, card-present, card-not-present, and so on)
- Transaction currency, and
- Region identifier.

For both of these methods, issuers can apply different fees for intraregional and interregional identifiers.

Cross-Border Fee Manager self-service application

Issuers that participate in the service have the capability to change their Cross-Border Fee Manager markup rates at the account range level within an existing service setup, using a self-service application on Mastercard Connect™. To expedite rate changes, issuers can view their current rates and change markup rates up to two decimal positions and set zero rates for account ranges that are already enrolled in the Cross-Border Fee Manager service.

NOTE: Rate changes become effective within 48 hours after the rate changes are made in the self-service application.

Cross-Border Fee Manager service enrollment

The *Cross-Border Fee Manager Customer Form* (Form 1155d), available on Mastercard Connect™, must be completed and submitted before issuers can participate in the currency conversion method, cross-border flex method, or both as part of the cross-border fee manager service.

This form should be submitted to the issuer's local customer delivery manager.

NOTE: Issuers may only participate in the currency conversion method and the cross-border flex method where permitted by local regulations.

Cross-Border Fee Manager service reports

Issuers can choose to receive daily audit report files that align with each clearing cycle from Global Clearing Management System.

This audit report will be available for the clearing transactions for which the Cross-Border Fee Manager calculation was performed.

Bulk file TN70 on request report data file transfer raw format

Header record

Field ID	Length	Comments
1	an-17	Value HIP830020
2	an-11	ICA
3	an-07	Endpoint

Detail record

Field ID	Length	Comments
1	a-01	Value D
2	an-11	ICA
3	an-04	MTI Code
4	an-03	Function Code
5	an-08	Processing Date
6	an-19	Primary Account Number
7	n-02	Process Code
8	n-11	Issuer ICA
9	an-01	Reversal Indicator
10	an-03	Filler

Field ID	Length	Comments
11	an-06	Transaction Date
12	an-04	Transaction Time
13	an-03	Merchant Country Code
14	an-09	Banknet Reference Number
15	n-12	Transaction Amount
16	an-03	Transaction Currency Code
17	an-01	Transaction Currency Exponent
18	n-12	Reconciliation Amount
19	an-03	Reconciliation Currency Code
20	an-01	Reconciliation Currency Exponent
21	an-12	Cardholder Billing Amount
22	an-03	Cardholder Billing Currency Code
23	an-01	Cardholder Billing Currency Exponent
24	an-08	Filler
25	n-12	Currency Conversion Method Amount (% Rate)
26	n-15	Currency Conversion Method % Rate
27	n-12	Currency Conversion Method Amount (Fixed Rate)
28	n-12	Currency Conversion Method Fixed Rate
29	n-12	Cross-Border Flex Method Amount (% Rate)
30	n-15	Cross-Border Flex Method % Rate
31	n-12	Cross-Border Flex Method Amount (Fixed Rate)
32	n-12	Cross Border Flex Method Fixed Rate
33	n-12	Cross-Border Cost Method Amount (% Rate)

Field ID	Length	Comments
34	n-15	Cross-Border Cost Method % Rate

Mastercard does not calculate a rate or amount if DE 22 (Point of Service [POS] Entry Mode]), subfield 6 (Card Present Data) contains value 9 (Unknown; data unavailable), but the transaction is included in report IP830020. This assists issuers with identification of why the markup was not applied.

Trailer record

Field ID	Length	Comments
1	an-17	Value of TIP830020
2	an-11	ICA
3	an-07	Endpoint
4	an-12	Total of detail records only

Cross-Border Fee Manager service bulk files

Mastercard has added report IP830020 to bulk file TN70 for production and bulk file TN72 for testing.

Chapter 20 Mastercard Cardless ATM Program

This section provides information on the Mastercard Cardless ATM program, which allows cardholders to use an issuer's mobile banking app to withdraw cash from their enabled ATM without the need of a physical card.

Mastercard Cardless ATM program overview

The Mastercard Cardless ATM program is a digital ATM solution that provides improved security, convenience, and transparency to consumers, drives engagement in the mobile banking app, and reduces time and cost of teller service cash disbursements for issuers.

For ATM acquirers, the Mastercard Cardless ATM program allows them to meet the increased security expectations of issuers and consumers and leverages the use of existing network capabilities for authorization, settlement, and reconciliation.

Participation in the Mastercard Cardless ATM program is on an opt-in basis.

Functionality

Mastercard enables an issuer and ATM operator to allow cardholders to view the fee of an ATM cash withdrawal in advance of conducting the transaction from an enabled ATM using their mobile banking app. Cardholders initiate the withdrawal using their mobile banking app after their arrival at the ATM or any time in advance of the withdrawal. At the ATM, cardholders scan a Quick Response Code (QR) code or manually enter a code displayed on the ATM. After viewing any transaction fees in their mobile banking app, cardholders authenticate the withdrawal using their mobile device. Mastercard passes the token and details of the withdrawal to the ATM operator about the authorization request. If the transaction is approved by the issuer, the ATM dispenses cash to cardholders.

The Mastercard Cardless ATM program supports cardless cash withdrawals initiated on the Mastercard Network or those received from alternate networks via the Mastercard Shared Service Platform (MSSP) or Alternative Network Routing Solution (ANRS) protocols.

For additional information on the program, refer to *Cardless ATM Program Guide*.

Chapter 21 Mastercard ATM Cash Pick-Up service

This section provides information on the Mastercard ATM Cash Pick-Up service, which allows money to be sent to individual recipients who obtain their funds from an ATM which has been upgraded with the ATM Cash Pick-Up software.

Mastercard ATM Cash Pick-Up service overview

The Mastercard ATM Cash Pick-Up service allows money to be sent to individual recipients who obtain their funds from an ATM which has been upgraded with the ATM Cash Pick-Up software.

Recipients receive a code (for example, Short Message Service [SMS] text message), which they enter into the ATM; therefore, they do not need a debit card or relationship with a bank to receive funds.

The Mastercard ATM Cash Pick-Up Service provides multiple use cases for customers engaging in the service, including

- Relief Fund Disbursement
- Emergency Cash Assistance
- Cash Rewards
- Person to Person Payments
- Small Insurance Claims
- Government Aid Payments/Social Benefits, and
- Compensation.

Mastercard provides customers with the ability to uniquely identify ATM withdrawal transactions initiated via the Mastercard ATM Cash Pick-Up Service using a new payment type value P01 (ATM Cash Pick-Up Transaction) in DE 48 (Additional Data), subelement 77 (Transaction Type Identifier) for the Dual Message System (Authorization) and Single Message System and in PDS 0043 (Transaction Type Identifier) for the Dual Message System (Clearing).

Issuers that participate in the Mastercard ATM Cash Pick-Up service find payment type value P01 in DE 48, subelement 77 for Mastercard ATM Cash Pick-Up transactions in message types

- Authorization Request/0100
- Authorization Request Response/0110
- Reversal Request/0400, and
- Reversal Request Response/0410.

Acquirers that participate in the Mastercard ATM Cash Pick-Up service must support payment type value P01 in DE 48, subelement 77 for Mastercard ATM Cash Pick-Up transactions in message types

- Financial Transaction Request/0200 and
- Acquirer Reversal Advice/0420: acquirer initiated.

Chapter 22 Fee collection

Various IPM messages are used for fee collection.

Fee collection overview

The Global Clearing Management System collects all fees through fee collection messages. This includes retrieval fee billing transactions, as well as all other fee types.

The combination of message type indicator (MTI), DE 24 (Function Code), and DE 25 (Message Reason Code) in the fee collection message indicates the fee that is being collected.

Fee collection messages are IPM messages used for the collection or disbursement of fees that require funds settlement between various payment parties. These messages include fees generated between pairs of customers and fees generated between Mastercard and customers.

NOTE: Mastercard does not provide or validate history for fee collection messages, although the sender may optionally provide it.

Fee collection messages for retrieval fee billing

Customers are allowed to submit IPM Fee Collection (Retrieval Fee Billing)/1740 messages for specific document types.

Acquirers may not submit IPM Fee Collection (Retrieval Fee Billing)/1740 messages for

- Document type 2 (copy) and
- Document type 4 (substitute draft).

However, customers may continue to submit these messages for document type 1 (hard copy original document) at a rate of USD 15 each.

Fees for document types 2 (copy) and 4 (substitute draft) are collected through the Mastercard Consolidated Billing System (MCBS). The Mastercom electronic imaging system does not generate any fulfillment fee IPM messages or records.

Mastercard applies a tiered rate structure to fulfillment fee messages (applies to types 2 and 4), depending on the type of document and number of days for fulfillment.

Fee collection messages for purposes other than retrieval fee billing

Customers must settle all miscellaneous fees and charges by use of the IPM Fee Collection/1740 message. The fee collection message is used for a number of diverse applications, and it contains the information required for customers to process the miscellaneous fees and charges identified in DE 25 (Message Reason Code).

Within the IPM Fee Collection/1740 message, DE 25 indicates the reason for, or type of, fee collection. DE 3 (Processing Code), subfield 1 (Cardholder Transaction Type) indicates the direction of funds movement, such as debit to message originator or credit to message originator.

Presenting the Fee Collection/1740 message

The message originator must submit the entire Fee Collection/1740 message with function code 700, providing the appropriate information for each element.

The message originator always must provide a control number for returns and resubmissions and must retain the control number for audit trail purposes. The message originator provides this control number in PDS 0137 (Fee Collection Control Number). The contents of PDS 0137 are assigned at the discretion of the message originator.

If the fee collection message requires supporting documentation, the message originator must mail the documentation according to the instructions on the specific ICA form or as specified in this chapter. The message originator should clearly note the PDS 0137 value on all of the documentation to allow the receiving customer to readily match the documentation to the applicable message and transaction.

If the transaction amount exceeds the U.S. dollar maximum for each message reason code, an additional message or messages reflecting the same DE 25 (Message Reason Code) value should be submitted for the excess amount.

NOTE: Transaction amount maximum can be set in currencies other than U.S. dollar. All Fee Collection/1740 message with function code 700 transaction amount maximum settings can be viewed in the IPM MPE Table IP0097T1: Message Reason Code Restrictions for Card Program Identifier and Business Service Arrangement.

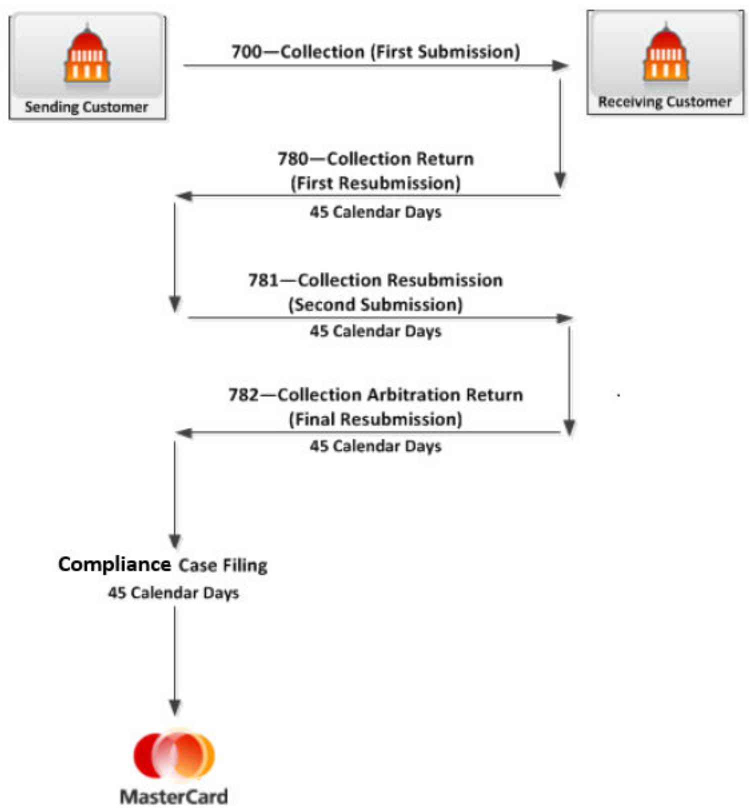
Returning and resubmitting the Fee Collection/1740 message

Reference these tables and figures for information regarding returning and resubmitting the Fee Collection/1740 message and the values that may be entered in DE 24 (Function Code).

Customers may return or resubmit a fee collection message by sending a Fee Collection/1740 message with one of these DE 24 values.

- 700 = First Submission
- 780 = Return
- 781 = Resubmission
- 782 = Arbitration Return

Figure 59: Submitting the Fee Collection/1740 Message



1. The receiving customer may return a fee collection within 45 calendar days after receipt of the message for any of the following reasons. This is handled by sending a Fee Collection/1740 with the same data originally received, except that DE 24 must contain a value of 780 to indicate a return.
   - Supporting documentation not received. The receiving customer must wait 21 calendar days from the date the message is received before returning for this reason.
   - Missorted to wrong member.
   - The message text was not provided or was incomplete.
   - Fee charged exceeds amount allowed.
   - Fee inaccurate because of entry error.
   - Charged twice for same fee.
   - Past applicable time frame.
   - An erroneous or inappropriate progressive handling fee was received.
   - Unauthorized fee/charge: receiving member did not approve or agree to accept fee/charge. Applicable only to reason codes for good-faith acceptance (DE 25 = 7606) and for collection letters (DE 25=7607).
2. If a fee collection is returned for any of the previously-mentioned reasons, the receiving customer may resubmit it within 45 calendar days of receipt of the message but only if the

reason for return has been corrected (For example, the receiving customer has supplied the missing documentation or the correct amount). To resubmit the fee collection, the customer sends a Fee Collection/1740 with a DE 24 value of 781 to indicate a resubmission. The customer should indicate an explanation of the correction in DE 72 (Data Record).

3. If a fee collection is improperly resubmitted, it may be returned within 45 calendar days of receipt of the message, using the arbitration return. Before returning the fee collection for missing documentation, the receiving customer must wait 21 calendar days from the date the customer receives the message. To return the fee collection, the customer sends a Fee Collection/1740 with a DE 24 value of 782 to indicate an arbitration return. The customer should indicate an explanation in DE 72.

Mastercard does not permit a third submission (the second submission being in step 2, above). Any remaining unsolved disputes concerning the fee collection message may be pursued by the customer through a compliance case filing with Mastercard.

NOTE: For case filings initiated for a violation of this subsection, the good-faith correspondence is not required. For more information about filing procedure, refer the *Chargeback Guide*.

The sending customer must reverse any Fee Collection/1740 message that is duplicated in error. The customer handles this by processing a duplicate of the message originally processed, except that the customer enters the letter R in PDS 0025 (Message Reversal Indicator), subfield 1 (Message Reversal Indicator). This denotes a reversal transaction.

NOTE: For more information about reversals, refer to the Reversals chapter of the *Global Clearing Management System Reference Manual*.

Reason codes for fee collection

The following tables describe the DE 25 (Message Reason Code) values that apply to fee collection messages.

Global Clearing Management System minimal rounding

Global Clearing Management System rounds to the number of positions specified by the currency exponent.

- After Global Clearing Management System calculates a cash disbursement fee
- After Global Clearing Management System completes the calculation of acquirer and issuer payment amounts in acquirer/issuer payment currency
- After Global Clearing Management System completes the calculation of a cardholder billing amount
- After Global Clearing Management System completes the calculation of an interchange fee in issuer/acquirer payment currency

NOTE: When Global Clearing Management System converts the transaction amount in transaction currency to the (euro) issuer/acquirer payment currency, Global Clearing Management System first converts the amount to the base currency (USD), and carries six positions to the right of the decimal (no rounding). Then Global Clearing Management System converts the USD base amount to the euro, and rounds to the euro currency exponent.

Global Clearing Management System only rounds amounts to the number of positions to the right of the decimal point specified by the currency exponent, once they are calculated in the final (issuer/acquirer payment currency, cardholder billing currency) currency, as shown in the following table.

Global Clearing Management System minimal rounding to currency exponent

IF Global Clearing Management System has...	THEN Global Clearing Management System rounding to the nearest currency exponent...
Calculated interchange **fees in payment currencies**	Occurs after Global Clearing Management System has completed calculation of the interchange fee in acquirer/issuer currency.
Calculated an **Acquirer/ Issuer payment**	Occurs after Global Clearing Management System has completed calculation of the acquirer/issuer payment amount.
Calculated a **Cardholder billing amount**	Occurs after Global Clearing Management System has completed calculation of the cardholder billing amount.

Fee Collection Return/1740–780 and Fee Collection Arbitration Return/1740–782

This table describes the DE 25 (Message Reason Code) values that apply to Fee Collection Return/1740–780 and Fee Collection Arbitration Return/1740–782 messages.

NOTE: Transaction amount maximum can be set in currencies other than U.S. dollar. All Fee Collection/ 1740 message transaction amount maximum settings can be viewed in the IPM MPE Table IP0097T1: Message Reason Code Restrictions for Card Program Identifier and Business Service Arrangement. For example, the maximum amount for MRC 7601 for Europe intraregional business services for MCC and DMC acceptance brand is EUR 115.

DE 25	7600
	Lost/stolen telex/phone fee; for collection of lost stolen report fee and phone or telex costs incurred for taking a lost or stolen card report.
Maximum Amount	USD 65
DE 3	19 (credit to message originator)

DE 72	Position	Length	Contents		
	1-32	32	LOST/STOLEN CARD TRANSACTION FEE		
	33	1	Space		
	34-100	67	When the cardholder number is absent, the cardholder name and address should be placed in this field.		
DE 73	Date lost/stolen report was taken				

DE 25	**7601**				
	Recovered card award fee; for collection of reward for a acceptor or financial institution employee when a card has been recovered.				
Maximum Amount	USD 115				
DE 3	19 (credit to message originator)				
DE 72	Position	Length	Contents		
			Required Message Data:		
	1	1	Card type code:		
			1	=	Mastercard® Card
			3	=	Gold Mastercard® Card
			4	=	Mastercard BusinessCard® Card or Mastercard Corporate Card®
			5	=	Mastercard Corporate Purchasing Card®
			6	=	Mastercard Corporate Fleet Card®
			7	=	Platinum Mastercard® Card
			8	=	World Mastercard®Card
	2	1	Space		
DE 72	Position	Length	Contents		
	3-6	4	Valid MCC; refer to the *Quick Reference Booklet* for a current listing.		
			Valid MCC; refer to the *Quick Reference Booklet* for a current listing.		
	7	1	Space		
	8	1	Card recovery reason:		
			1	=	warning bulletin listing
			2	=	authorization response

			4 = code	
			5 = authenticator	
			6 = non-hologram	
			0 = other	
			Optional Message Data:	
	9	1	Space	
	10-31	22	Name of acceptor recovering card; space-filled if not applicable	
	32	1	Space	
	33-45	13	Acceptor's City	
	46	1	Space	
	47-49	3	Alphabetic; U.S. state or country code if outside the U.S. region; left-justified with trailing spaces	
	50	1	Space	
	51-100	50	Message text	
DE 73	Date card was recovered as recorded on ICA-6 form			

DE 25	**7602**				
	Emergency cash disbursement fee; for collection of fees associated with the handling of emergency cash disbursements to cardholders.				
Maximum Amount	USD 5,000				
DE 3	19 (credit to message originator)				
DE 72	Position	Length	Contents		
			Reason Code	Fee	Description
	1	1	A	USD 95	US ECA-$65 BASE FEE, $30 LOCATION FEE[1]
			B	USD 95	NON-US ECA-$65 BASE FEE, $30 LOCATION FEE[1]
			C	USD 50	ECA REQUEST CANCELED/DENIED (US REGION)
			D	USD 50	ECA REQUEST CANCELED/DENIED (NON-US REGION)
			E	USD 50	REFERRED TO U.S. ISSUER BY REQUEST

		F	USD 50	REFERRED TO NON-U.S. ISSUER BY REQUEST
		G	USD 95	ECA AMOUNT TO CARD-HOLDER VIA WESTERN UNION
		H-Z		Reserved for future use
	2-100	99	Spaces	
DE 73	Emergency cash disbursement date			

DE 25	**7603**			
	Compliance ruling settlement; for collection of a compliance ruling settlement amount.			
Maximum Amount	USD 5,000			
DE 3	19 (credit to message originator)			
DE 72	Position	Length	Contents	
	1-11	11	Mastercard case number (for example, 31234-001-9)	
	12	1	Space	
	13-100	88	Optional message text as may be needed	
DE 73	Compliance Ruling Date			

DE 25	**7604**				
	Emergency card replacement fee; for collection of fees associated with the Emergency Card Replacement Service (ECR Service).				
Maximum Amount	USD 25,000				
DE 3	19 (credit to message originator)				
DE 72	Position	Length	Contents		
	1	1	Reason Code:		
			A	=	issuance of emergency card
			B	=	emergency cash disbursement not picked up
			C	=	emergency card cancelled
			D	=	second location ECR request
			E	=	issuer denies ECR request
			F	=	referred to card issuer outside the U.S. region

			G =	delivery of card within the U.S. region
			H =	delivery of card outside the U.S. region
			I =	initial member participation fee
			J =	monthly member participation fee
			K =	installation and training fee
			L =	survey statistics
			M-Z	reserved for future use
	2–100	99	Spaces	
DE 73	Emergency card replacement date			

DE 25	**7605**			
	Warning bulletin handling fee: issuer originated; for settlement of warning bulletin handling fees in accordance with Mastercard operating rules.			
Maximum Amount	USD 25			
DE 3	19 (credit to message originator)			
DE 72	Position	Length	Contents	
	1	1	Reason Code:	
			A =	incorrect acceptor location
			B =	incorrect transaction date
			C =	combination of A and B
	2	1	Space	
	3-25	23	Acquirer Reference Data (ARD)	
	26	1	Space	
	27-36	10	Chargeback reference number	
	37-100	64	Spaces	
DE 73	Second presentment Central Site processing date			

DE 25	**7606**
	Good-faith acceptance settlement; for settlement of the amount of a good-faith acceptance.
Maximum Amount	USD 5,000

DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator		
	1-31	31	Reference number and the name of the person who gave acceptance
	32	1	Space
	33-100	68	Optional message text as may be needed
DE 73	Good-faith date		

DE 25	**7607**		
	Collection letter handling fee; for settlement of the amount of a collection letter acceptance.		
Maximum Amount	USD 5,000		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
	1-11	11	Collection letter reference number
	12	1	Space
	13-100	88	Optional message text as may be needed
DE 73	Collection letter date		

DE 25	**7608**		
	Telex authorization fee; for collection of fees associated with an international telex authorization.		
Maximum Amount	USD 20		
DE 3	19 (credit to message originator)		
DE 72	Position	Length	Contents
	1-33	33	Telex reference number and response
	34-100	67	Spaces
DE 73	Authorization Request Date		

DE 25	**7610**
	Investigation fee; for fee collection when an investigation report has been completed by an investigating member on behalf of the requesting member.

Maximum Amount	USD 1,000			
DE 3	19 (credit to message originator)			
DE 72	Position	Length	Contents	
	1-19	19	INVESTIGATION FEES	
	20-100	81	Spaces	
DE 73	Investigation request date from ICA-7A form			
DE 25	**7611**			
	Retrieval fee reversal; issuer-originated; acquirer may return. For acquirer use when returning an invalid or incorrect retrieval fee reversal; applicable only if the previous cycle message reason code was 7611, or For issuer use when returning an invalid or incorrect non-MasterCom fulfillment fee settlement; applicable only if the previous cycle message reason code was 7614.			
Maximum Amount	USD 15			
DE 3	19 (credit to message originator)			
DE 72	Position	Length	Contents	
	1	1	Reason Code:	
			A =	nonreceipt of document
			B =	illegible document
			C =	invalid acceptor description
	2	1	Space	
	3-25	23	ARD	
	26	1	Space	
	27-36	10	Issuer control number	
	37-100	64	Spaces	
DE 73	PDS 0105 (File ID), subfield 2 (File Reference Date) of the Central Site processed Retrieval Fee Billing/1740-700 message.			
DE 25	**7612**			

	Retrieval handling fee; issuer-originated; acquirer may return. For acquirer use when returning an invalid or incorrect retrieval handling fee; applicable only if the previous cycle message reason code was 7612, or For issuer use when returning an invalid or incorrect non-Mastercom fulfillment fee settlement; applicable only if the previous cycle message reason code was 7614, or for issuer use to assess the acquirer for incorrect information verified by the retrieval request document or a TID sent as chargeback documentation. For issuer use to charge the acquirer for incorrect information verified by the retrieval request document or a TID sent as chargeback documentation.
Maximum Amount	USD 25
DE 3	19 (credit to message originator)

DE 72

Position	Length	Contents
1	1	Reason Code: A = incorrect acceptor name B = incorrect acceptor location C = incorrect transaction date
2	1	Space
3-25	23	ARD
26	1	Space

If processing handling fee for TID received as a fulfillment, complete as follows:

Position	Length	Contents
27-36	10	Issuer control number
37	1	Space
38-59	22	Incorrect A, B, or C condition; acceptor name, city, state, country, or transaction date from original acceptor description or Financial Detail message.
60	1	Space
61-82	22	Corrected A, B, or C condition; acceptor name, city, state, country, or transaction date from retrieval fulfillment
83-100	18	Spaces

Position	Length	Content

If processing handling fee for TID received as a second presentment in response to a chargeback, complete as follows:

Position	Length	Content
27-36	10	Chargeback reference number

	37	1	Space
	38-59	22	Incorrect A, B, or C condition; acceptor name, city, state, country, or transaction date from the original acceptor description or Financial Detail message.
	60	1	Space
	61-82	22	Corrected A, B, or C condition; acceptor name, city, state, country, or transaction date from retrieval fulfillment.
	83-100	18	Spaces
DE 73	PDS 0105 (File ID), subfield 2 (File Reference Date) of the Central Site processed Retrieval Fee Billing/1740-700 or Second Presentment/1240-205 or 1240-282		

DE 25	**7616**		
	Handling fee for second presentment of reason codes 12 and 35 for chip transactions where transaction certificate and DE 55 (Integrated Circuit Card [ICC] System-Related Data) are present in the clearing message. Acquirer-originated.		
Maximum Amount	USD 25		
DE 3	19 (credit to message originator)		
DE 72	Position	Length	Contents
	1	1	Reason Code: A = correct information previously provided with first presentment
	2	1	Space
	3-25	23	ARD
	26	1	Space
	27-36	10	Chargeback reference number
	37-100	45	Spaces
DE 73	PDS 0105 (File ID), subfield 2 (File Reference Date) of the member-submitted Second Presentment/1240-205 or 1240-282		

DE 25	**7617**		
	Adjustment for promotional transactions.		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 72	Position	Length	Contents

	For both credit to message originator and debit to message originator:			
	1-38	38	ADJUSTMENT FOR PROMOTIONAL TRANSACTIONS	
	39-00	62	Spaces	
DE 73	PDS 0105 (File ID), subfield 2 (File Reference Date) of the File Header/1644			

DE 25	**7618**				
	Reversal of previously reimbursed State Fuel Tax.				
Maximum Amount	None				
DE 3	19 (credit to message originator)				
DE 72	Position	Length	Contents		
	1-86	86	REVERSAL OF TAX REIMBURSE: FROM JURISDICTION SSSS VIA OIL AAA TO AGENCY NNN PERIOD YYMM		
	87-100	14	Spaces		

DE 25	**7619**				
	Emergency card replacement center, cash advance lockbox fee.				
Maximum Amount	USD 50				
DE 3	19 (credit to message originator)				
DE 72	Position	Length	Contents		
	1	1	Reason Code	Fee	Description
			A	USD 50	U.S. ECR CENTER REIMBURSEMENT
			B	USD 30	ECA LOCATION REIMBURSEMENT
			C	USD 50	NON-U.S. ECR CENTER REIMBURSEMENT
	2-100	99	Spaces		
DE 73	Emergency card replacement date				

DE 25	**7621**		
	ATM Balance Inquiry Fee: Reserved for intra-European and inter-European use.		
Maximum Amount	USD 50		
DE 3	19 (credit to message originator)		
DE 72	Position	Length	Contents

	1-100	100	
DE 25	**7622**		
	Handling fee for Authorization Related Chargebacks (4807 and 4808). This fee is sent by the issuer after sending a First Chargeback/1442–450 or 1442–453 for one of the chargeback reasons identified above.		
Maximum Amount	USD 50		
DE 3	19 (credit to message originator)		
DE 72	Position	Length	Contents
	1-2	2	Values 07, 08, or 47 correspond to the IPM DE 25 (Message Reason Code) 4807 and 4808 of the related First Chargeback/1442
	3	1	Constant Space
	4	1	Values for Condition indicator: A = 4808 Authorization-related chargeback (declined) B = 4808 Authorization-related chargeback D = 4807 Warning bulletin
	5	1	Constant Space
	6	1	Constant 1 to denote the first chargeback
	7	1	Constant Space
	8–17	10	DE 95 (Card Issuer Reference Data). Chargeback reference number originally assigned by the issuer in the associated First Chargeback/1442 message
	18	1	Constant Space
	19-24	6	Date of the declined authorization associated with the disputed clearing record if position 4 of the DE 72 (Data Record) is A. MMDDYY or spaces.
	25	1	Constant Space
	26-28	3	Constant 700
	29	1	Constant Space
	30-49	20	PDS 0137 (Fee Collection Control Number) assigned by the issuer. Right justified, leading zeros.
	50-100	51	Constant Space
DE 73	Date of the chargeback cycle with which the handling fee is associated		

DE 25	**7623**		
	Handling fee for Authorization Related Chargebacks (4807 and 4808). This fee is sent by the acquirer after sending a Second Presentment/1240-205 or 1240-282 for one of the chargeback reasons identified above.		
Maximum Amount	USD 100		
DE 3	19 (credit to message originator)		
DE 72	Position	Length	Contents
	1-2	2	Values 07, 08, or 47 correspond to the IPM Message Reason Code (DE 25) 4807 and 4808 of the related First Chargeback/1442
	3	1	Constant Space
	4	1	Values for Condition indicator. A = 4808 Authorization-related chargeback (declined) B = 4808 Authorization-related chargeback C = 4808 Authorization-related chargeback D = 4807 Warning bulletin
	5	1	Constant Space
	6	1	Constant 2 to denote the second presentment
	7	1	Constant Space
	8-17	10	DE 95 (Card Issuer Reference Data). Chargeback reference number originally assigned by the issuer in the associated First Chargeback/1442 message
	18-25	8	Constant Space
	26-28	3	Constant 700
	29	1	Constant Space
	30-49	20	PDS 0137 (Fee Collection Control Number) assigned by the issuer in the (IPM Fee Collection/1740-700 message with a DE 25 (Message Reason Code) of 7622, or spaces, if the issuer did not send a Fee Collection/ 1740-700 message. Right justified, leading zeros.
	50	1	Constant Space
	51-56	6	Date authorization request approved. MMDDYY
	57	1	Constant Space
	58-63	6	DE 38 (Approval Code)–XXXXXX

	64-100	37	Constant Space
DE 73	Date of the chargeback cycle with which the handling fee is associated		

DE 25	**7624**		
	Handling fee for Authorization Related Chargebacks (4807 and 4808). This fee is sent by the issuer after sending an Arbitration Chargeback/1442-451 or 1442-454 for one of the chargeback reasons identified above.		
Maximum Amount	USD 150		
DE 3	19 (credit to message originator)		
DE 72	Position	Length	Contents
	1-2	2	Values 07, 08, or 47 correspond to the DE 25 (IPM Message Reason Code) 4807 and 4808 of the related Arbitration Chargeback/1442 message
	3	1	Constant Space
	4	1	Values for Condition indicator. A = 4808 Authorization-related chargeback (declined) B = 4808 Authorization-related chargeback C = 4808 Authorization-related chargeback D = 4807 Warning bulletin
	5	1	Constant Space
	6	1	Constant 3 to denote Arbitration Chargeback/1422
	7	1	Constant Space
	8-17	10	DE 95 (Card Issuer Reference Data) from the associated First Chargeback/1442 message
	18	1	Constant Space
	19-24	6	Date of the declined Authorization provided with first chargeback if position 4 of the DE 72 (Data Record) is "A". MMDDYY or spaces
	25	1	Constant Space
	26-28	3	Constant 700
	29	1	Constant Space
	30-49	20	Original PDS 0137 (Fee Collection Control Number) assigned by the acquirer in the IPM Fee Collection/1740-700 message with a DE 25 (Message Reason Code) of 7623, or spaces, if the acquirer did not send a Fee Collection/1740-700 message.

	50-63	14	Constant Space
	64-100	37	Explanation for arbitration chargeback, such as, the approved authorization was not for this transaction.
DE 73	Date of the chargeback cycle with which the handling fee is associated		

DE 25	**7625**		
	PIN Management Service at ATM. (Intra-European and inter-European use only).		
Maximum Amount	USD 5		
DE 3	19 (credit to sender of the fee collection)		
DE 72	Position	Length	Contents
	1-100	100	PIN CHANGE xxxx xxxx xxxx xxxx (where xxxx xxxx xxxx xxxx represents the cardholder number) OR PIN TRY COUNTER RESET xxxx xxxx xxxx xxxx (where xxxx xxxx xxxx xxxx represents the cardholder number)
DE 73	Date the service was performed at the ATM		

DE 25	**7626**
	Private Label Merchant Fee for Private Label fee collection messages. This fee collection message reason code is available for business service arrangements level 1 (interregional), level 2 (intraregional), level 3 (intercountry) and level 4 (intracountry) where Private Label exists.
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	**7627**				
	Fees related to the issuer's failure to provide a Merchant Advice Code; for acquirer use only.				
Maximum Amount	USD 100				
DE 3	19 (credit to message originator)				
DE 72	Position	Length	Contents		
	1-2	2	Values 07, 08, or 47 correspond to the IPM DE 25 (Message Reason Code) 4807 and 4808 of the related First Chargeback/1442		
	3	1	Constant Space		
	4	1	Values for Condition indicator.		
			A	=	4808 Authorization-related chargeback (declined)
			B	=	4808 Authorization-related chargeback

			C =	4808 Authorization-related chargeback
			D =	4807 Warning bulletin
	5	1	Constant Space	
	6	1	Constant 1 to denote the first chargeback	
	7	1	Constant Space	
	8-17	10	DE 95 (Card Issuer Reference Data). Chargeback reference number originally assigned by the issuer in the associated First Chargeback/1442 message	
	18	1	Constant Space	
	19-24	6	Date of the declined authorization associated with the disputed clearing record if position 4 of the DE 72 (Data Record) is "A". MMDDYY or spaces.	
	25	1	Constant Space	
	26-28	3	Constant 700	
	29	1	Constant Space	
	30-49	20	PDS 0137 (Fee Collection Control Number) assigned by the issuer. Right justified, leading zeros.	
	50-100	51	Constant Space	
DE 73	Date of the chargeback cycle with which the handling fee is associated			

DE 25	**7628**		
	Reclaim surcharge: Reserved for intra-European, inter-European, and European transaction related services.		
DE 3	19 (credit to message originator)		
DE 72	Position	Length	Contents
	1-100	100	

DE 25	**7700**		
	Intracurrency settlement agreement; for settlement of amounts in accordance with an intracountry agreement between transaction originator and transaction destination parties.		
Maximum Amount	USD 40,000		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		

	1-100	100

DE 25	7704
	Bank Card Interchange fee, reverse interchange for ATM transactions (Mexico Domestic).
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	7705
	Transactions below to threshold published (Mexico Domestic). Customer calculates VAT (Value Added Tax).
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	7706
	Difference in interchange amount between member calculated and Mastercard calculated (Mexico Domestic). Member calculates VAT (Value Added Tax).
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	7707
	Interest for late settlements (Mexico Domestic). Customer calculates VAT (Value Added Tax).
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	7708
	Non fullfiled documentation penalties (Mexico Domestic). Customer calculates VAT (Value Added Tax).
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	7709
	Penalties on code 102 miscellaneous (Mexico Domestic). Customer calculates VAT (Value Added Tax).

Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	**7710**
	Miscellaneous (Mexico Domestic).
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	**7711**
	Pre-fund amount, offset for others (Mexico Domestic).
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	**7712**
	Bank Card Interchange fee, balance inquiry interchange. Customer calculates VAT (Value Added Tax).
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 25	**7716**
	Adjustments to the applied negotiated interchange amount from the First Presentment/1240 message, First Chargeback/1442 message, and Second Presentment/1240 message in the event the recipient disagrees with the applied negotiated interchange amount.
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)
DE 72	Contains information to help the receiver identify the transaction(s) to which this interchange adjustment applies.

DE 25	**7750-7799**
	Bilateral agreement settlement; for settlement of amounts in accordance with a bilateral agreement between transaction originator and transaction destination parties.
Maximum Amount	USD 5,000
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
	1-100	100	
DE 73	Charge date		

DE 25	**7800**		
	MCBS customer settlement; for collection or payment of such things as customer assessments, processed through the Mastercard Consolidated Billing System (MCBS).		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
			"MCBS - IIIIIII SS - XXXXXXXXXXXXXXXXXXXXXX NNN ZZZ,ZZZ,ZZ9.99 BILLING CYCLE DATE - MMM DD, CCYY."
	1-4	4	Constant = MCBS (system identification)
	5	1	Space
	6	1	Constant = Dash (-)
	7	1	Space
	8-14	7	IIIIIII = Customer ID (ICA)
	15-16	2	Spaces
	17-18	2	SS = Service Type
	19	1	Space
	20	1	Constant = Dash (-)
	21	1	Space
	22-43	22	XXXXX...XXX = Service Description
	44-45	2	Spaces
	46-48	3	NNN = Numeric Currency Code
	49-50	2	Spaces
	51-64	14	ZZZ,ZZZ,ZZ9.99 = Dollar Amount
	65-67	3	Spaces

68-85	18	BILLING CYCLE DATE
86	1	Space
87	1	Constant = Dash (-)
88	1	Space
89-91	3	MMM = Calendar Month (alpha)
92	1	Space
93-94	2	DD = Calendar Day
95	1	Constant = Comma (,)
96	1	Space
97-100	4	CCYY = Calendar Year

Fee Collection (Clearing System-generated)/1740–783

This table describes the DE 25 (Message Reason Code) values that apply to Fee Collection (Clearing System-generated)/1740–783 Messages.

NOTE: Transaction amount maximum can be set in currencies other than U.S. dollar. All Fee Collection/1740 message transaction amount maximum settings can be viewed in the IPM MPE Table IP0097T1: Message Reason Code Restrictions for Card Program Identifier and Business Service Arrangement. For example, the maximum amount for MRC 7601 for Europe intraregional business services for MCC and DMC acceptance brand is EUR 115.

DE 25	**7621**
	ATM Balance Inquiry Fee: Reserved for intra-European use
DE 3	19 (credit to sender), 29 (debit to sender)

DE 25	**7625**
	PIN Management Service at ATM: Reserved for intra-European use
DE 3	19 (credit to sender), 29 (debit to sender)

DE 25	**7629**
	Interregional non-financial ATM interchange for collection of interchange due on a non-financial ATM transaction (Single Message System-originated.
Maximum Amount	USD 5
DE 3	19 (credit to message originator), 29 (debit to message originator)

DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
	1-11	11	DE 32 (Acquiring Institution ID Code) from the authorization message. This value contains the acquiring institution identification code. It is right-justified with leading zeros.
	12-22	11	DE 33 (Forwarding Institution ID Code) from the authorization message. This value contains the forwarding institution identification code. It is right-justified with leading zeros.
	23-26	4	DE 13 (Date, Local Transaction) from the authorization message. This value contains the local month and day at which the transaction takes place at the point of service.
	27-32	6	DE 11 (Systems Trace Audit Number) from the authorization message. This value contains the systems trace audit number (STAN) which is a unique identifier assigned to each transaction by the message originator.
	33-44	12	DE 37 (Retrieval Reference Number) from the authorization message. This value contains the retrieval reference number and is supplied by the system, retaining the original document of the transaction.
	45-64	20	DE 127 (Private Data) from the authorization message. This value contains the first 20 positions of Acquirer Private Data. It is left justified with trailing spaces.

DE 25	**7702**
	Domestic ATM VAT Fees/Services: Used for the Mexico Domestic Fee Collection/1740 message on the VAT amount on ATM transactions. Mastercard calculates the VAT when submitted with this message reason code.

DE 25	**7800**		
	MCBS customer settlement; for collection or payment of such things as customer assessments, processed through the Mastercard Consolidated Billing System (MCBS).		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
			"MCBS - IIIIII SS - XXXXXXXXXXXXXXXXXXXXX NNN ZZZ,ZZZ,ZZ9.99 BILLING CYCLE DATE - MMM DD, CCYY."
	1-4	4	Constant = MCBS (system identification)
	5	1	Space

	6	1	Constant = Dash (-)
	7	1	Space
	8-14	7	IIIIIII = Customer ID (ICA)
	15-16	2	Spaces
	17-18	2	SS = Service Type
	19	1	Space
	20	1	Constant = Dash (-)
	21	1	Space
	22-43	22	XXXXX...XXX = Service Description
	44-45	2	Spaces
	46-48	3	NNN = Numeric Currency Code
	49-50	2	Spaces
	51-64	14	ZZZ,ZZZ,ZZ9.99 = Dollar Amount
	65-67	3	Spaces
	68-85	18	BILLING CYCLE DATE
	86	1	Space
	87	1	Constant = Dash (-)
	88	1	Space
	89-91	3	MMM = Calendar Month (alpha)
	92	1	Space
	93-94	2	DD = Calendar Day
DE 72	Position	Length	Contents
	95	1	Constant = Comma (,)
	96	1	Space
	97-100	4	CCYY = Calendar Year

DE 25	**7802**
	Interchange compliance adjustment; for settlement of financial amounts related to interchange compliance.
Maximum Amount	None

DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 73	PDS 0105 (File ID), subfield 2 (File Reference Date) of the File Header/1644		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
	1-33	33	"INTERCHANGE COMPLIANCE ADJUSTMENT"
	34-100	67	Spaces

DE 25	**7803**		
	Interchange compliance adjustment reversal; for settlement of financial amounts related to the reversal of a previous interchange compliance adjustment.		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 73	PDS 0105 (File ID), subfield 2 (File Reference Date) of the File Header/1644		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
	1-41	41	"INTERCHANGE COMPLIANCE BACKOUT ADJUSTMENT"
	42-100	59	Spaces

DE 25	**7804**		
	ATM transaction settlement; for settlement of daily ATM transaction amounts.		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
			Indicates an association with ATM processing: When the issuer receives only summary data from Global Clearing Management System, the message text must be one of the following:
	1-7	7	"NET AMT" = transaction amount field equals the net dollar value of all ATM withdrawals transacted by an issuer's cardholders.
	8-100	93	Spaces

	1-4	4	"FEES" = transaction amount field equals the accumulation of processing fees owed by the issuer for noncash withdrawal transactions and the acquirer interchange fees owed by the issuer
	5-100	96	Spaces
	1-5	5	"SWFEE" = transaction amount field represents the Mastercard ATM Network fees owed by the issuer for ATM transactions
	6-100	95	Spaces
			When the issuer receives Global Clearing Management System detail data, the message text must be one of the following:
	1-4	4	"FEES" = transaction amount field represents the accumulated processing fees owed by the issuer for noncash withdrawal transactions
	5-100	96	Spaces
	1-5	5	"SWFEE" = transaction amount field represents the Mastercard ATM Network fees owed by the issuer for ATM transactions
	6-100	95	Spaces
			When an ATM acquirer receives Global Clearing Management System settlement information in the Fee Collection/1740 message, the message text must be one of the following:
	1-5	5	"NETAQ" = if summarizing the ATM cash disbursement "FEEAQ" = if summarizing the ATM fees owed by the acquirer
	6-100	95	Spaces
DE 25	**7805**		
	ATM intracountry switch fee settlement; for settlement of daily ATM transaction intracountry switch fees.		
Maximum Amount	None		
DE 3	19 (credit to message originator)		
DE 72	Position	Length	Contents
			When the issuer receives Global Clearing Management System summary or detail data, the message text must be:
	1-5	5	"ISISW" = transaction amount represents Cirrus ATM fees owed by the issuer for intracountry ATM activity
	6-100	95	Spaces
DE 25	**7806**		

	ATM Single Message Transaction Manager switch fee settlement; for settlement of MDS Single Message Transaction Manager Switch Fees.
Maximum Amount	None
DE 3	19 (credit to message originator), 29 (debit to message originator)
DE 72	Position / Length / Contents For both credit to message originator and debit to message originator: 1-100 / 100

DE 25	**7807**		
	ATM intracountry first chargeback settlement; for settlement of daily ATM transaction intracountry first chargeback amounts.		
Maximum Amount	None		
DE 3	29 (debit to message originator)		
DE 72	Position	Length	Contents
			When the issuer receives Global Clearing Management System detail data, the message text must be:
	1-5	5	"ICHBK" = transaction amount represents chargeback funds owed to the issuer for intracountry ATM activity
	6-100	95	Spaces

DE 25	**7808**		
	Miscellaneous Override Financial Adjustment.		
Maximum Amount	None		
DE 3	19 (credit to message originator [Mastercard]), 29 (debit to message originator [Mastercard])		
DE 72	Position	Length	Contents
	1-29	29	"INTERCHANGE ADJUSTMENT FOR:"
	30-37	8	Process Date in MM/DD/YY format
	38-38	1	Blank (only when the fee collection is for the issuer)
	39-76	78	Account Range (only when the fee collection is for the issuer)

DE 25	**7811**
	Reimbursement of State Fuel Tax.

Maximum Amount	None		
DE 3	19 (credit to message originator [Mastercard]), 29 (debit to message originator [Mastercard])		
DE 72	Position	Length	Contents
	For credit to message originator:		
	1-80	80	"TAX REIMBURSE DEBIT FROM JURISDICTION SSSS VIA OIL AAA TO AGENCY NNN PERIOD YYMM"
	81-100	20	Spaces
	For debit to message originator:		
	1-81	81	"TAX REIMBURSE CREDIT FROM JURISDICTION SSSS VIA OIL AAA TO AGENCY NNN PERIOD YYMM"
	82-100	19	Spaces

DE 25	**7812**		
	Collection or return of collateral for security arrangement.		
Maximum Amount	None		
DE 3	19 (credit to message originator [Mastercard]), 29 (debit to message originator [Mastercard])		
DE 72	Position	Length	Contents
	For credit to message originator:		
	1-49	49	"COLLECTION OF COLLATERAL FOR SECURITY ARRANGEMENT"
	50-100	51	Spaces
	For debit to message originator:		
	1-46	46	"RETURN OF COLLATERAL FROM SECURITY ARRANGEMENT"
	47-100	54	Spaces

DE 25	**7813**		
	IVA fees		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 73	PDS 0105 (File ID), subfield 2 (File Reference Date) of the File Header/1644		
DE 72	Position	Length	Contents

	For both credit to message originator and debit to message originator:		
	1-15	15	IVA on IC/Fee
	16-100	85	Spaces
DE 25	**7820**		
	Disaster Relief Fund (credit to sender).		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 73	PDS 0105 (File ID), subfield 2 (File Reference Date) of the File Header/1644		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
	1-100	100	
DE 25	**7821**		
	MCBS Credit Emergency.		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 72	Position	Length	Contents
	For both credit to message originator and debit to message originator:		
	1-100	100	
DE 25	**7822**		
	Settlement Adjustment		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 73	The date of the settlement adjustment		
DE 72	Position	Length	Contents
	1-21	21	"SETTLEMENT ADJUSTMENT"
	22-100	79	Spaces
DE 25	**7823**		

	Single Message System Offline Debit Settlement (Mastercard Internal Use Only).		
Maximum Amount	None		
DE 3	19 (credit to message originator)		
DE 72	Position	Length	Contents
	1-100	100	Single Message System feed through S.A.M.
DE 25	**7824**		
	Collection of Reward Amount as agreed upon between the customers.		
Maximum Amount	None		
DE 3	29 (debit to message originator)		
DE 72	Position	Length	Contents
	1-27	27	"Collection of reward amount"
	28-100	73	Spaces
DE 25	**7627**		
	EDP Adjustment Amount (Used only by the Mastercard Network for the EDP Service).		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 25	**7949**		
	Funds movement for disputes resolved via the Nigeria domestic disputes system.		
Maximum Amount	None		
DE 3	19 (credit to message originator), 29 (debit to message originator)		
DE 72	Contains the Dispute Ticket ID assigned when the dispute was initiated through IDRS.		

Chapter 23 Reversals

This section describes how to create reversals and how Global Clearing Management System will process them.

How to create reversals

A reversal message informs the receiver to disregard the original message.

The settlement values for a reversal message and its original together produce a net settlement value of zero.

Customers can reverse one or more individual messages or an entire clearing file.

Identification of reversal messages

Customers must identify a single reversal message by adding PDS 0025 (Message Reversal Indicator) to the message and populating its subfields correctly.

In...	The customer provides...
Subfield 1	A value of R.
Subfield 2	The original Global Clearing Management System processing date of the message being reversed.

When a Single Message System to Dual Message System (Authorization) transaction (that is, bridged transaction) has been reversed due to an ATM Withdrawal failure, a reversal message is generated by Mastercard for the original 1240/Presentment message. The Global Clearing Management System would directly deduct the non-financial fee into the reversal message and no longer generate a Fee Collection (Retrieval Fee Billing)/1740 message non-financial fee.

Identification of reversal files

Customers have two options for identifying a reversal file.

- Add PDS 0026 (File Reversal Indicator) to the File Header message of the file, and populate subfield 1 (File Reversal Indicator) with a value of R. In subfield 2 (Central Site Processing Date of Original File), provide the original Global Clearing Management System processing date of the file being reversed.
- Add PDS 0025 (Message Reversal Indicator) to every message in the file except for the File Header and File Trailer messages. Subfield 1 (Message Reversal Indicator) must contain a value of R. Subfield 2 (Central Site Processing Date of Original Message) must contain the original Global Clearing Management System processing date of the message being reversed.

How to send reversal messages

Customers will follow the procedure below to reverse an individual message.

Procedure

1. The customer realizes that it needs to reverse an individual message.
2. The customer extracts the message to be reversed. For example, if a customer wants to reverse a message containing a specific cardholder account number, the customer can use the Message Selection Criteria utility to select and extract the message containing that cardholder account number.
3. The customer adds PDS 0025 (Message Reversal Indicator) to the message, with the value R in subfield 1 (Message Reversal Indicator) and the original Global Clearing Management System processing date in subfield 2.
4. The customer adds the reversal message to one of its outgoing clearing files.
5. If the customer's original message needs to be resent because it contained incorrect data, the customer corrects the data in the original message and resubmits it.

   Global Clearing Management System will recognize and process individual reversal messages submitted in a file. There is no requirement to isolate reversal messages or to send them in separate files.

How to send reversal files: full files

Global Clearing Management System allows customers to send one original file and one reversal file using the same file ID. This allows customers to correct invalid files with minimal changes to the original file. Customers will follow the procedure below to reverse full files.

Procedure

1. The customer realizes that it needs to reverse an entire file.
2. The customer sends a full file reversal using the same file ID or a new file ID. The customer adds PDS 0026 (File Reversal Indicator) to the file header message with the value R in subfield 1 (File Reversal Indicator) and the original Global Clearing Management System processing date in subfield 2 (Central Site Processing Date of Original File).

   Because PDS 0026 is present in the File Header message, Global Clearing Management System recognizes the file as a full file reversal. Global Clearing Management System inserts PDS 0025 (Message Reversal Indicator) into each individual message in the file and processes and distributes each message as a single-item reversal.
3. If the customer's original file needs to be resent because it contained incorrect data, the customer corrects the data in the original file and resubmits it using a different file ID.

   Example

   For example, suppose that customer 001234 sends file ID 00204061500000000123400001 on 15 June 2004.

   1. The customer realizes that the data is incorrect and that the customer needs to reverse the file and resubmit the data.

2. Customer 001234 sends a full file reversal using the same file ID 002040615000000123400001, on 16 June 2004 to reverse the incorrect data. The customer adds PDS 0026 to the File Header message of this file before sending it. The date provided in PDS 0026, subfield 2 must be the 15 June 2004 date. This is the original file processing date. Global Clearing Management System processes each individual message in the file as a reversal; however, if an individual message is already a reversal transaction, it will be processed as an original transaction.
3. Customer 001234 then corrects the data in the original file and resubmits it using a different file ID, such as 002040615000000123400002.

If customer 001234 submits the corrected data using file ID 002040615000000123400001 again, Global Clearing Management System will reject this third file because it contains a duplicate file ID. Global Clearing Management System allows one original file and one reversal file for each file ID.

Allowing customers to reverse files using the same file ID simplifies the creation of reversal files. Customers only need to populate PDS 0026 in the File Header message with an R to indicate that the entire file is being reversed.

NOTE: Customers will not receive an entire file that is a full file reversal file (that is, PDS 0026 will not be present in the customer inbound file header). In the receiving customer's clearing file, reversal messages will be mixed with non-reversal messages.

How to send reversal files: partial files

To send a partial reversal file, follow the steps outlined in this section.

Procedure

1. Extract the messages to be reversed into a new file. For example, if a customer wants to reverse all of the first chargebacks from a file, the customer can extract all first chargebacks from the original file.
2. Create a file header message with a value of R in PDS 0026 (File Reversal Indicator).
3. Create a file trailer containing zeros in PDS 0301 (File Amount, Checksum) and PDS 0306 (File Message Counts).
4. Submit the file for processing.

   Customers should not combine messages from more than one processing date to be reversed. This is because the date in subfield 2 (Central Site Processing Date of Original File) of PDS 0026 will allow specification of only one original processing date for the currency conversion rate history. The Global Clearing Management System uses that date's currency conversion rate (if necessary) to apply to the reversal transactions.

NOTE: Customers submitting a full or partial reversal file (indicated by the presence of PDS 0026 in the File Header) are not required to use a File ID that has already been processed. For example, customers creating a partial reversal file may choose to assign a new File ID instead of using the original File ID.

NOTE: If multiple partial reversals are required before clearing a transaction, each reversal should always reference the original transaction data. For example, within DE 48 (Additional Data: Private Use), subelement 63 (Trace ID), DE 90 (Original Data Elements) and DE 4 (Amount, Transaction) of the Reversal Request/0400 message, the amount value should be the authorized amount from the original transaction to support issuer matching (do not use the adjusted amount from DE 95 (Replacement Amounts) within a previous reversal, nor the requested amount if a partial approval applies). If an incremental authorization has been submitted, a reversal should reference original transaction data and DE 4 should be the sum of the original authorized amount plus any incremental amounts.

Using the Clearing Optimizer Message Selection Utility to create reversals

Mastercard's Clearing Optimizer software includes a number of useful utilities, one of which is the IPM Message Selection Criteria Utility that can be used to simplify the process of creating reversal messages and files.

This utility reads a given IPM clearing file and selects messages that match the customer-specified criteria. Its output is an IPM file containing a File Header message and the messages that match the selection criteria.

A customer can use the IPM Message Selection Criteria Utility to select the messages it wants to reverse. For example, if a customer needs to reverse all first presentments submitted for the U.S. region Merit III interchange program with a transaction date of 21 August 2003, the customer can create selection criteria for these conditions. The customer uses the selection criteria as input to the IPM Message Selection Criteria Utility, along with the original file.

The utility selects all messages that match the input criteria and puts them in an output file along with the file header message of the original file. The customer would then insert PDS 0026 (File Reversal Indicator) into this file header message and optionally change the value of PDS 0105 (File ID). Finally, the customer would add a file trailer message to the end of this file, with values of all zeros in PDS 0301 (File Amount, Checksum) and PDS 0306 (File Message Counts). Then the customer would send this file to Mastercard for processing within Global Clearing Management System.

NOTE: For more information about the IPM Message Selection Criteria, refer to either the *Clearing Optimizer Mainframe* guide or the *Clearing Optimizer AutoEdit* guide.

Full File Reversal Utility

The IPM File Reversal Utility can be used for building a full file reversal.

About IPM File Reversal Utility

Customers inadvertently send duplicate IPM clearing files to Mastercard, and it is critical that the duplicate files are reversed quickly to avoid processing and financial impact. To reverse the duplicated files, customers can utilize the IPM file reversal utility to easily create a full file reversal and validate the file using the Clearing Optimizer software before submitting the clearing file to Mastercard.

For example, if a customer inadvertently sent duplicate clearing files for GCMS processing date 29 August 2019, the impacted customer can now utilize the IPM file reversal utility to create a full file reversal using the processing date of 29 August 2019.

The IPM file reversal utility will insert PDS 0026 (File Reversal Indicator) in the file header with the information provided from the processing date on the Reversal Processing Date Selection field. Using the noted example, the values in PDS 0026 will be PDS 0026, subfield 1 (File Reversal Indicator) = R and PDS 0026, subfield (Central Site Processing Date of Original File) = 190829.

NOTE: The IPM file reversal utility can be used on a clearing file with one header and one trailer. Clearing files with multiple logical files (multiple headers and trailer) cannot be used.

For more information regarding reversals and PDS 0026, refer to the *IPM Clearing Formats* manual. It is critical to select the correct processing date for the reversal files and validate the reversal files before submitting the files to the Mastercard central site.

Having Mastercard reverse files

Mastercard will submit full file reversals at the customer's request.

Customers that want to request this service must provide the File ID of the file to be reversed and the original Global Clearing Management System processing date of that file to their Global Customer Service team, regional office representative, or Strategic Operations representative. Mastercard will use this information to create and submit a full-file reversal as documented in the How to send Reversal Files: Full Files section.

Editing reversal messages

Global Clearing Management System automatically excludes reversal messages from most interchange qualification edits. For example, Global Clearing Management System excludes reversal First Presentment/1240 messages from interchange timeliness and industry-related addendum requirements.

Global Clearing Management System does edit the file ID in all full-file reversals to ensure that it has not been previously reversed. As noted, the file ID in a reversal file does not have to be the original file ID, but it cannot be a file ID that has been used in a previous full-file reversal.

Reporting reversal rejects

Global Clearing Management System generates Message Exception/1644 or File Reject/1644 messages for all rejected messages or files. Within these error messages, Global Clearing Management System designates reversal transactions by the presence of PDS 0025 (Message Reversal Indicator) in the individual message for individual transaction reversals and PDS 0026 (File Reversal Indicator) in the header message for full file reversals.

Chapter 24 Duplicate Global Clearing Management System files, postings, and potential duplicate rejects

A duplicate file occurs when the Global Clearing Management System (GCMS) processes a file more than once. The Global Clearing Management System has edits and built-in controls to detect and reject complete duplicate files or individual transactions when submitted by acquirers. A potential duplicate transaction reject occurs when the Global Clearing Management System detects the transaction is a potential duplicate of a transaction that was previously processed.

Global Clearing Management System editing for duplicate files

To prevent a duplicate file from being processed, Global Clearing Management System rejects the entire file if PDS 0105 (File ID) in the File Header/1644 message matches one that was processed within the last 180 days for the customer or processor (specified in PDS 0105, subfield 3 [Processor ID]).

For example, suppose that customer 1234 sends file ID number 002040615000000001234000001. If the Global Clearing Management System File ID History File contains the same file ID number within the last 180 days of file IDs from customer 1234, Global Clearing Management System will reject that second file 002040615000000001234000001 as a duplicate file.

Reasons for duplicate Global Clearing Management System files or postings

Duplicate postings may occur for various reasons, such as

- an operator changes the file ID number on a previously processed file and resends it
- previously processed merchant deposits are processed again, or
- the merchant deposits the same transaction more than once.

Mastercard recommends that customers establish controls to prevent and detect these and other errors to help prevent duplicate files and postings.

Identification of duplicate Global Clearing Management System postings

If a duplicate posting does occur, either the sending customer or the receiving customer may identify it.

If the receiving customer discovers a duplicate posting, it must notify the sending customer. The sending customer must inform the St. Louis Operations Center by telephone and then take action to correct the duplicate postings by submitting reversals.

When the sending customer notifies Mastercard about a duplicate posting, the customer must provide the

- File ID numbers and
- Net amounts

for both the original and the duplicated postings.

Potential duplicate clearing transaction rejections

The GCMS rejects 1240/200 First Presentment transactions if it is determined to be a potential duplicate of a previously processed transaction. A specific process must be followed to resubmit the transaction if the acquirer determines the transaction not to be a duplicate.

Potential duplicate rejection

Mastercard has logic designed to identify potential duplicate First Presentment/1240/200 clearing messages by performing matching logic against the associated authorization message, as well as a comparison against other 1240/200 messages. There will be occasions where a false-positive is identified. When those instances occur, acquirers have the ability to resubmit the rejected clearing message.

Mastercard's goal is to reject as many potential duplicate clearing messages as possible, but issuers might still receive some duplicate clearing messages.

Acquirers receive 1644/691 rejection messages that indicate the transaction is being rejected due to a potential duplication.

Potential duplicate resubmission process

A rejected transaction that is verified to be a non-duplicate can be reprocessed by retaining and returning information from the reject message. PDS 0444: Resubmission Code will be included in the Message Exception/1644 message. PDS 0444 will contain a resubmission code that must be included in any resubmitted First Presentment/1240 message that was previously identified as a potential duplicate. The presence of a valid value in PDS 0444 will allow the resubmitted First Presentment/1240message to bypass the potential duplicate detection and rejection process.

Mastercard will accommodate the additional time taken to receive, research, and respond to rejected potential duplicate clearing transactions. Resubmitted First Presentment/1240 messages that contain a valid resubmission code will not be subject to any interchange program timeliness requirements that may be required to qualify for some interchange programs.

As a reminder, Mastercard can identify up to 10 error codes, which are reasons for which a transaction is being rejected. Acquirers must ensure that they are not only submitting PDS 0444 on the resubmission, but also that they are correcting any other identified reasons for which the transaction was rejected.

Chapter 25 Collection-only transaction reporting

This chapter describes collection-only transactions and the Global Collection Only (GCO) Data Collection Program.

Collection-only transactions

A collection-only transaction is a transaction that is reported to Mastercard by means of the Global Clearing Management System, but which has not been cleared nor settled through the Mastercard Network. A customer must identify each collection-only transaction by populating PDS 0165 (Settlement Indicator), subfield 1 (Settlement Indicator), value C (Collection Only).

Any new customer processing infrastructure that generates and sends collection-only messages on the Mastercard Network must provide separate files for GCO and GCMS financial activity.

Global Collection Only Data Collection Program

Transactions are processed in a variety of ways.

To ensure compliance with the Global Collection Only (GCO) Data Collection Program, a Mastercard customer must submit all purchase, purchase with cash back, unique/quasi-cash, ATM cash withdrawal, manual cash disbursement, payment transaction, and refund/credit transactions to Mastercard as collection-only if

- the transaction was effected with a card or account issued under a Mastercard-assigned BIN and bearing any one or more of the Mastercard brands (including (including Mastercard, Debit Mastercard, Maestro, or Cirrus), and
- the transaction was not switched on the Mastercard Network.

For the purposes of this program, switched on the Mastercard Network means the submission of a financial transaction message to the Single Message System or the Global Management Clearing System in request for the settlement of an outstanding debit or credit position in connection with an original completed transaction.

These transaction types are identified with values

- Purchase (DE 3 [Processing Code], subfield 1 [Cardholder Transaction Type] = 00)
- ATM cash withdrawal (DE 3, subfield 1 = 01)
- Purchase with cash back (DE 3, subfield 1 = 09)
- Manual cash disbursement (DE 3, subfield 1 = 12)
- Unique/quasi-cash (DE 3, subfield 1 = 18)
- Refund/credit (DE 3, subfield 1 = 20), and
- Payment Transaction (DE 3, subfield 1 = 28).

Although not required, customers may also submit balance inquiries (DE 3, subfield 1 = 30), balance transfers (DE 3, subfield 1 = 50) and convenience checks (DE 3, subfield 1 = 17) to Mastercard as collection-only transactions. If submitted, these transaction types must contain a Acceptor Business Code (MCC) of 6012 (Financial Institutions: Merchandise and Services).

Collection-only transactions that are not permitted for Global Collection Only

These sections describe requirements for the reporting of collection-only transactions, including such reporting performed pursuant to the GCO Data Collection Program.

Transactions that should not be submitted as collection-only are

- Retrieval Request/1644
- First Chargeback/1442
- Second Presentment/1240
- Arbitration Chargeback/1442
- Fee Collection (Retrieval Fee Billing)/1740
- Fee Collection (Other)/1740, and
- Fee Collection (Handling Fees)/1740.

Reversing Collection-only data

A customer should reverse collection-only data only in limited circumstances.

A customer should reverse collection-only data if

- the previously submitted collection-only data was duplicated (same messages sent twice), or
- the previously submitted collection-only data was incorrect.

NOTE: For instructions for reversing a single message or an entire file (applicable to both collection-only and non-collection-only activity), refer to Bilateral Settlement Activity.

Editing collection-only data

The Global Clearing Management System automatically excludes collection-only transactions from most interchange qualification edits.

For example, the Global Clearing Management System excludes collection-only First Presentment/1240 transactions from authorization code, interchange timeliness, and industry-related addendum requirements.

Reporting GCO Data Collection Program rejects

The Global Clearing Management System generates Message Exception/1644 or File Reject/1644 messages for all rejected messages and files. Within these error messages, collection-only activity is designated by a value of C in PDS 0165 (Settlement Indicator), subfield 1 (Settlement Indicator).

The Global Clearing Management System reports rejected GCO Data Collection Program data through the Global Collection Only Error Detail Report, report number IP857010-BB. Refer to the Clearing Processing Details chapter of this manual for more information.

Collection-only activity in relation to reconciliation messages

IPM Financial Position Detail Reconciliation messages provide amount and fee totals in each customer's reconciliation currency. These totals are also optionally available in transaction currency.

Because Mastercard does not clear or settle collection-only transactions, IPM Financial Position Detail Reconciliation message totals for these transactions in the customer's reconciliation currency will contain zeros. If the customer has requested the "transaction currency" option for reconciliation messages, IPM Financial Position Detail Reconciliation message totals for these transactions in the transaction currency will be present and will contain the correct (non-zero) amounts.

Customers that want to receive reconciliation totals for collection-only activity should request both the transaction currency option and the settlement indicator option for IPM Financial Position Detail Reconciliation messages to differentiate amount totals for these transactions.

Customers may select category options by contacting their account manager or Mastercard Customer Implementation Specialist.

Global Clearing Management System offers one report, IP727010-AA, Clearing Cycle Acknowledgment, for the reconciliation of Global Collection Only clearing activity. However, because Global Clearing Management System does not calculate the reconciliation amount on these transactions, the amount fields will be zero. The counts field will contain the number of collection items processed.

IPM First Presentment/1240: Global Collection Only format

A customer must submit various data as collection-only using the IPM First Presentment/1240 transaction format in order to comply with the GCO Data Collection Program, referred to in this section as the IPM First Presentment/1240: Global Collection Only format).

IPM 1240 Global Collection Only data elements

This table identifies all mandatory and optional data elements and private data subelements for the IPM First Presentment/1240: Global Collection Only transactions.

Data Element: IPM 1240	Data Element Name: IPM 1240	M: Mandatory/O: Optional
-	Message Type Identifier	M
-	Bit Map, Primary	M
1	Bit Map, Secondary	M
2	PAN	M
3	Processing Code	M
4	Amount, Transaction	M

Data Element: IPM 1240	Data Element Name: IPM 1240	M: Mandatory/O: Optional
5	Amount, Reconciliation	O
6	Amount, Cardholder Billing	O
12	Date and Time, Local Transaction	M
14	Date, Expiration	O
22	Point of Service Data Code	M
23	Card Sequence Number	O
24	Function Code	M
25	Message Reason Code	O
26	Acceptor Business Code	M
30	Amounts, Original	O
31	Acquirer Reference Data	O
32	Acquiring Institution ID Code	O
33	Forwarding Institution ID Code	M
37	Retrieval Reference Number	O
38	Approval Code	O
40	Service Code	O
41	Acceptor Terminal ID	M
42	Acceptor ID Code	M
43	Acceptor Name/Location	M
48	Additional Data	M
p0023	Terminal Type	O
p0025	Message Reversal Indicator	O
p0043	Program Registration ID	O
p0052	Electronic Commerce Security Level Indicator	O
p0057	Transaction Category Indicator	O
p0058	Token Assurance Level	O
p0059	Token Requestor ID	O
p0080	Amount, Tax	O
p0145	Amount, Alternate Transaction Fee	O
p0146	Amounts, Transaction Fee	O

Data Element: IPM 1240	Data Element Name: IPM 1240	M: Mandatory/O: Optional
p0148	Currency Exponents	M
p0149	Currency Codes, Amounts, Original	O
p0157	Alternate Processor Indicator	O
p0158	Business Activity	O
p0159	Settlement Data	O
p0165	Settlement Indicator	M
p0170	Acceptor Inquiry Information	O
p0171	Alternate Acceptor Description	O
p0172	Sole Proprietor Name	O
p0173	Legal Corporate Name	O
p0174	Dun & Bradstreet Number	O
p0175	Acceptor URL	O
p0176	Mastercard Assigned ID	O
p0177	Cross-border	O
p0178	Alternate Acceptor Description Data 2	O
p0179	Long Running Transaction (LRT) Indicator	O
p0180	Domestic Acceptor Tax ID	O
p0181	Installment Payment Data	O
p0189	Point-of-Interaction (POI) Phone Data	O
p0190	Partner ID Code	O
p0191	Originating Message Format	O
p0193	Subscriber Reference Data	O
p0194	Remote Payment Program Date	O
p0195	Installment Data	O
p0196	Mobile Phone Reload Data	O
p0197	National Use Tax Data	O
p0198	Device Type	O
p0199	Funding Transaction Information	O
p0202	PPAN Syntax Error	O

Data Element: IPM 1240	Data Element Name: IPM 1240	M: Mandatory/O: Optional
p0204	Amount, Syntax Error	O
p0205	Syntax Return, Message Error Indicator	O
p0207	Wallet Identifier	O
p0208	Additional Merchant Data	O
p0209	Independent Sales Organization ID	O
p0210	Transit Program	O
p0211	Terminal Compliant Indicator	O
p0220	Brazil Merchant Tax ID	O
p0225	Syntax Return, Original Message Reason Code	O
p0261	Risk Management Approval Code (Rejected by Mastercard)	O
p0375	Member Reconciliation Indicator 1	O
p0446	Transaction Fee Amount, Syntax Error	O
p0502	Custom Identifier	O
p0596	Acceptor Tax ID	O
p0597	Total Tax Amount	O
p0623	Motor Fuel Information	O
p0629	Odometer Reading	O
p0799	Test Case Traceability Identifiers	O
p10XX	Member-to-Member Proprietary Data (p1000 through p1099)	O
49	Currency Code, Transaction	M
50	Currency Code, Reconciliation	O
51	Currency Code, Cardholder Billing	O
54	Amounts, Additional	O
55	Integrated Circuit Card (ICC) System Related Data	O
62	Additional Data 2	O
63	Transaction Life Cycle ID	O
71	Message Number	M

Data Element: IPM 1240	Data Element Name: IPM 1240	M: Mandatory/O: Optional
94	Transaction Originator Institution ID Code	M
123	Additional Data 3	O
124	Additional Data 4	O
125	Additional Data 5	O

Global Collection Only mapping for single message system transactions

This section shows how to map a Financial Transaction Request/0200 transaction to the IPM format using field mapping.

Mapping 0200 to 1240

Single Message System Financial Transaction Request/0200 data can be mapped to IPM First Presentment/1240: Global Collection Only transactions. Note that some of the data will have to be set directly in IPM 1240 and cannot be used from 0200 message, that is, DE 24 function code needs to be set to 0200 in IPM 1240 message.

An example also is provided on how to build an IPM First Presentment/1240: Global Collection Only transaction using Mastercard Single Message System ISO 8583–1987 format as the source.

This may be useful for customers that switch their global or cross-border transactions through the Single Message System and are required to report collection-only transactions to Global Clearing Management System in the IPM First Presentment/1240: Global Collection Only format. The Single Message System format may differ slightly from a customer's local switch; however, it should provide a general baseline for customers.

Data Element: IPM 1240	Data Element Name: IPM 1240	M:Mandatory / O:Optional	Guiding Comments or Maps to Value	Data Element No.: Single Message 0200	Data Element Name: Single Message System 0200
-	Message Type Identifier	M	1240		
-	Bit Map, Primary	M			
1	Bit Map, Secondary	M			
2	PAN	M		2	PAN
3	Processing Code	M		3	Processing Code

Data Element: IPM 1240	Data Element Name: IPM 1240	M:Mandatory / O:Optional	Guiding Comments or Maps to Value	Data Element No.: Single Message 0200	Data Element Name: Single Message System 0200
4	Amount, Transaction	M		4	Amount, Transaction
5	Amount, Reconciliation	O		5	Amount, Settlement
6	Amount, Cardholder Billing	O		6	Amount, Cardholder Billing
12	Date and Time, Local Transaction	M		13	Date, Local Transaction
14	Date, Expiration	O		14	Date, Expiration
22	Point of Service Data Code	M		22	Point-of-Service Entry Mode
-	s7 Card Data: Input Mode	M		22/1	Point-of-Service Entry Mode
23	Card Sequence Number	O		23	Card Sequence Number
24	Function Code	M	200		
25	Message Reason Code	O			
26	Acceptor Business Code	M		18	Merchant Type (MCC)
30	Amounts, Original	O		4 5	Amount, Transaction Amount, Settlement
31	Acquirer Reference Data	M		63/5	Network Data
32	Acquiring Institution ID Code	O		32	Acquiring Institution Identification Code
33	Forwarding Institution ID Code	M		33	Forwarding Institution Identification Code

Data Element: IPM 1240	Data Element Name: IPM 1240	M:Mandatory / O:Optional	Guiding Comments or Maps to Value	Data Element No.: Single Message 0200	Data Element Name: Single Message System 0200
37	Retrieval Reference Number	O		37	Retrieval Reference Number
38	Approval Code	O			
40	Service Code	M		35	Track 2 Data
41	Acceptor Terminal ID	M		41	Acceptor Terminal Identification
42	Acceptor ID Code	M		42	Acceptor Identification Code
43	Acceptor Name/ Location	M		43	Acceptor Name and Location
48	Additional Data	M		48	Additional Data
p0023	Terminal Type	O		61/10	POS Data
p0025	Message Reversal Indicator	O			
p0043	Transaction Type Identifier	O		110/2	Additional Data - 2
p0052	Electronic Commerce Security Level Indicator	O		48/42	Additional Data
p0057	Transaction Category Indicator	O		48/61	Additional Data
p0058	Token Assurance Level	O			
p0059	Token Requestor ID	O			
p0080	Amount, Tax	O			
p0145	Amount, Alternate Transaction Fee	O			

Data Element: IPM 1240	Data Element Name: IPM 1240	M:Mandatory / O:Optional	Guiding Comments or Maps to Value	Data Element No.: Single Message 0200	Data Element Name: Single Message System 0200
p0146	Amounts, Transaction Fee	O		28	Amount, Transaction Fee
p0148	Currency Exponents	M	ISO Currency Exponent from the FIT file or Member Parameter Extract (MPE) for each currency code used in the transaction		
p0149	Currency Codes, Amounts, Original	O		49 50	Currency Code, Original Transaction Amount Currency Code, Original Reconciliation Amount
p0157	Alternate Processor Indicator	O			
p0158	Business Activity	O		110	Additional Data - 2
p0159	Settlement Data	O		110/7	Additional Data - 2
p0165	Settlement Indicator	M	C		
p0170	Acceptor Inquiry Information	O			
p0171	Alternate Acceptor Description	O			
p0172	Sole Proprietor Name	O			
p0173	Legal Corporate Name	O			

Data Element: IPM 1240	Data Element Name: IPM 1240	M:Mandatory / O:Optional	Guiding Comments or Maps to Value	Data Element No.: Single Message 0200	Data Element Name: Single Message System 0200
p0174	Dun & Bradstreet Number	O			
p0175	Acceptor URL	O			
p0176	Mastercard Assigned ID	O		48/32	Additional Data
p0177	Cross-border	O		126	Switch Private Data
p0178	Alternate Acceptor Description Data 2	O			
p0179	Long Running Transaction (LRT) Indicator	O			
p0180	Domestic Acceptor Tax ID	O			
p0181	Installment Payment Data	O			
p0189	Point-of-Interaction (POI) Phone Data	O			
p0190	Partner ID Code	O			
p0191	Originating Message Format	O			
p0193	Subscriber Reference Data	O			
p0194	Remote Payment Program Date	O			
p0195	Installment Data	O			
p0196	Mobile Phone Reload Data	O			
p0197	National Use Tax Data	O			
p0198	Device Type	O			

Data Element: IPM 1240	Data Element Name: IPM 1240	M:Mandatory / O:Optional	Guiding Comments or Maps to Value	Data Element No.: Single Message 0200	Data Element Name: Single Message System 0200
p0199	Funding Transaction Information	O			
p0202	PAN Syntax Error	O			
p0204	Amount, Syntax Error	O			
p0205	Syntax Return, Message Error Indicator	O			
p0207	Wallet Identifier	O			
p0208	Additional Merchant Data	O			
p0209	Independent Sales Organization ID	O			
p0210	Transit Program	O			
p0211	Terminal Compliant Indicator	O			
p0220	Brazil Merchant Tax ID	O			
p0225	Syntax Return, Original Message Reason Code	O			
p0261	Risk Management Approval Code (Rejected by Mastercard)	O			
p0375	Member Reconciliation Indicator 1	O			
p0446	Transaction Fee Amount, Syntax Error	O			

Data Element: IPM 1240	Data Element Name: IPM 1240	M:Mandatory / O:Optional	Guiding Comments or Maps to Value	Data Element No.: Single Message 0200	Data Element Name: Single Message System 0200
p0502	Custom Identifier	O			
p0596	Acceptor Tax ID	O			
p0597	Total Tax Amount	O			
p0623	Motor Fuel Information	O			
p0629	Odometer Reading	O			
p0799	Test Case Traceability Identifiers	O			
p10XX	Member-to-Member Proprietary Data (p1000 through p1099)	O			
49	Currency Code, Transaction	M		49	Currency Code, Transaction
50	Currency Code, Reconciliation	O		50	Currency Code, Settlement
51	Currency Code, Cardholder Billing	O		51	Currency Code, Cardholder Billing
54	Amounts, Additional	O		54	Additional Amounts
55	Integrated Circuit Card (ICC) System Related Data	O		55	Integrated Circuit Card (ICC) System-Related Data
62	Additional Data 2	O		62	INF Data
63	Transaction Life Cycle ID	O		63	Network Data
71	Message Number	M	Per definition in IPM Manual		

Data Element: IPM 1240	Data Element Name: IPM 1240	M:Mandatory / O:Optional	Guiding Comments or Maps to Value	Data Element No.: Single Message 0200	Data Element Name: Single Message System 0200
94	Transaction Originator Institution ID Code	M		32	Acquiring Institution Identification Code
123	Additional Data 3	O			
124	Additional Data 4	O			
125	Additional Data 5	O			

Chapter 26 Bilateral settlement activity

This section describes what bilateral settlement is and how Global Clearing Management System will process these transactions.

Definition of bilateral settlement agreement

A bilateral settlement agreement is an arrangement between two Mastercard customers to settle transactions directly, rather than through the Mastercard Settlement Account Management (S.A.M.) system.

If this arrangement is in place, Mastercard clears transaction data between the participating customers but does not perform settlement on the data.

Customers interested in establishing a bilateral settlement agreement with other customers should contact their Global Customer Service team.

Identification of bilateral settlement transactions

Customers requesting bilateral settlement for a given transaction must indicate this by populating PDS 0165 (Settlement Indicator), subfield 1 (Settlement Indicator) with a value of B to denote bilateral settlement.

This causes the Global Clearing Management System to edit and clear the transactions but not initiate settlement. Customers may combine bilateral transactions with all other transactions in the same file.

These customers also may optionally populate PDS 0165, subfield 2 (Settlement Agreement Information) with additional information related to the bilateral settlement.

Editing bilateral transactions

Global Clearing Management System will edit bilateral settlement transactions to ensure that a bilateral settlement agreement is on file between the sending and receiving customer IDs.

Tables indicating bilateral settlement agreements and customer participation are available in the Integrated Product Messages (IPM) Mastercard Parameter Extract (MPE).

Global Clearing Management System will automatically exclude bilateral settlement chargeback transactions from

- Chargeback timeliness edits
- Cycle appropriateness edits
- Retrieval history edits, and
- Documentation history edits.

Global Clearing Management System does not exclude bilateral settlement transactions from any other edits. For example, bilateral settlement First Presentment/1240 transactions must conform to data format and content edits, and to interchange program requirements, the same as transactions settled by Mastercard.

Global Clearing Management System calculations for bilateral settlement transactions

This section includes information about the bilaterally settled transactions for which Global Clearing Management System calculates amounts.

Global Clearing Management System does not calculate

- DE 6 (Amount, Cardholder Billing) or
- Amounts resulting from Currency Conversion Assessment

for bilaterally settled transactions.

DE 5 (Amount, Reconciliation) and DE 50 (Currency Code, Reconciliation)

Global Clearing Management System does calculate DE 5 (Amount, Reconciliation) and determine DE 50 (Currency Code, Reconciliation) for bilaterally settled transactions. To do this, Global Clearing Management System obtains the reconciliation currency by performing settlement service selection. The settlement service selection process for regional and intracurrency settlement transactions is documented in the Business Service chapter of the *Global Clearing Management System Reference Manual*.

Just as customers can specify settlement service selection criteria for regionally settled transactions (as described in the Business Service chapter of the *Global Clearing Management System Reference Manual*), they can also specify settlement service selection criteria for bilaterally settled transactions. If customers do not specify any settlement service selection criteria for bilaterally settled transactions, Global Clearing Management System will use the reconciliation currency associated with the customer's default regional settlement agreement.

Global Clearing Management System then performs any necessary currency conversion to convert DE 4 (Amount, Transaction) to the customer's reconciliation currency. To do this, Global Clearing Management System uses market buy and sell rates or a fixed rate if one exists. The currency conversion process for bilaterally settled transactions is similar to that described for regionally settled transactions in the Reconciliation chapter of the *Global Clearing Management System Reference Manual*.

Interchange fees

Global Clearing Management System offers several options related to interchange fees for bilaterally settled transactions:

- If the Business Service assigned to a bilaterally settled transaction indicates that Global Clearing Management System should calculate interchange fees, Global Clearing Management System will calculate the interchange fees, convert them to the receiving customer's reconciliation currency, and populate PDS 0146 (Amounts, Transaction Fees), subfield 4 (Currency Code, Fee), subfield 5 (Amount, Fee), subfield 6 (Currency Code, Fee, Reconciliation), and subfield 7 (Amount, Fee, Reconciliation) PDS 0147 (Extended Precision Amounts), subfield 4 (Currency Code, Fee), subfield 5 (Amount, Fee), subfield 6 (Currency Code, Fee, Reconciliation), and subfield 7 (Amount, Fee, Reconciliation) with the correct interchange fees and associated currency codes before forwarding the message to the receiver.

- If the Business Service assigned to a bilaterally settled transaction indicates that Global Clearing Management System should not calculate interchange fees, the sending customer may optionally populate PDS 0146, subfields 4 and 5 with the relevant interchange fees. Global Clearing Management System will forward PDS 0146, subfields 4 and 5 to the receiving customer without altering the data. In addition, Global Clearing Management System will convert the fees that were provided in PDS 0146, subfields 4 and 5 to the receiving customer's reconciliation currency and place this amount and currency into PDS 0146, subfields 6 and 7 before forwarding the message to the receiver.
- If the Business Service assigned to a bilaterally settled transaction indicates that Global Clearing Management System should not calculate interchange fees, and the sending customer does not provide fees in PDS 0146, Global Clearing Management System will process the transaction with no interchange fees. PDS 0146 will not be present in the message sent to the receiver.

Bilateral transactions in relation to reconciliation messages

IPM Financial Position Detail Reconciliation messages provide amount and fee totals in each customer’s reconciliation currency. These totals are also optionally available in transaction currency.

Because Mastercard does not settle bilateral settlement transactions, IPM Financial Position Detail Reconciliation message totals for these transactions in the customer’s reconciliation currency will contain zeros. If the customer has requested the transaction currency option for reconciliation messages, IPM Financial Position Detail Reconciliation message totals for these transactions in the transaction currency will be present and will contain the correct (non-zero) amounts.

Customers that want to receive reconciliation totals for bilateral settlement activity should request both the transaction currency option and the settlement indicator option for IPM Financial Position Detail Reconciliation messages to differentiate amount totals for these transactions.

Chapter 27 Electronic commerce

This chapter describes how Global Clearing Management System performs transaction processing for applicable electronic commerce services.

Electronic commerce

Electronic commerce (e-commerce) transactions are non–face-to-face, online transactions that use electronic media over any public network such as the Internet, or private network such as an extranet. E-commerce processing allows transactions to be initiated from a cardholder-controlled device, such as a PC or mobile phone, for purchasing goods and services on the Internet.

Customer requirements

To process e-commerce transactions,

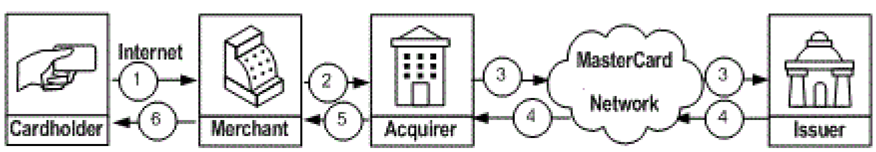
- all issuers must be able to receive and process all e-commerce data present in the Authorization Request/0100 messages; and
- all acquirers must properly identify e-commerce messages within the Authorization Request/0100 message. They must be able to receive and to process e-commerce Authorization Request Response/0110 messages.

For detailed transaction flows and requirements associated with participation in the Mastercard® SecureCode™ /Identity Check program, refer to the *Mastercard Identity Check Program Guide*. For details about data requirements and transaction processing specifications, refer to the *Customer Interface Specification* manual.

Process for an electronic commerce transaction

The process by which an e-commerce transactions undergoes is described here.

The following diagram illustrates the flow of a typical e-commerce transaction.



1. The cardholder accesses a merchant's Web site through the Internet and requests to make a purchase.
2. The merchant submits the cardholder's information to the acquirer.
3. The acquirer sends an Authorization Request/0100 message through the Mastercard Network to the issuer.
4. The issuer makes the authorization decision and replies using an Authorization Request Response/0110 message.
5. The acquirer responds to the merchant.
6. The merchant completes the transaction according to the authorization response returned.

Security of electronic commerce transactions

There are various methods for securing e-commerce transactions that customers may process through the Mastercard Network.

Mastercard messaging requirements regarding e-commerce may vary depending on the security protocol involved in the transactions. Security protocols may include

- no security protocol
- channel encryption, which is a security layer that resides between an application and its transport layers, for example, SSL (Secure Sockets Layer) and HTTPS (Hypertext Transfer Protocol Secure), and
- *SecureCode*/Identity Check transaction using the Universal Cardholder Authentication Field™ (UCAF).

If an e-commerce item that ships late is re-authorized for message reason code 4808 (Authorization-Related Chargeback) chargeback protection, this transaction will take on the security characteristics of the original authorization within a dispute resolution.

NOTE: Without UCAF data present, a re-authorized transaction must be presented within clearing for non-UCAF interchange (as applicable by region).

For more information about *SecureCode*/Identity Check, including detailed transaction flows and participation requirements, refer to the *Mastercard Identity Check Program Guide*.

Universal Cardholder Authentication Field

The Universal Cardholder Authentication Field™ (UCAF) is a standard, globally interoperable method of collecting cardholder authentication data at the point of interaction.

Within the Mastercard authorization networks, UCAF™ is a universal, multipurpose data transport infrastructure that is used to communicate authentication information between cardholders, merchants, issuers, and acquirers.

Accountholder Authentication Value

The Accountholder Authentication Value (AAV) is a Mastercard Identity Check-specific implementation of UCAF™ related to issuer authentication platforms that incorporate the Secure Payment Application (SPA) algorithm. SPA is a Mastercard security method designed to authenticate cardholders when they pay online. All AAVs must be generated using the Mastercard SPA algorithm. With the EMV® 3-D Secure protocol and the Mastercard Identity Check program, Mastercard has created a new SPA algorithm called SPA2. For more information about this new algorithm, refer to the *SPA2 AAV for the Mastercard Identity Check Program* manual on Mastercard Connect™.

AAV are generated by Mastercard and presented to the merchant for placement in the authorization request upon successful authentication of the cardholder or attempted authentication of the cardholder.

UCAF is used to transmit the AAV from the merchant to the issuer for authentication purposes during the authorization process.

Customers must perform AAV validation during the Authorization Request/0100 messages, either through their own self-validation process of their IAV (Issuer Authentication Value) or through the Mastercard Identity Check AAV Verification service.

All customers must participate in Mastercard Identity Check Dynamic AAV Verification in Stand-In Processing. This is now an automated rule based process within Authorization for Stand-In Processing Authorization and Stand-In generated AAVs with Smart Authentication, IDC Insights and IDC Express.

To implement the Mastercard Identity Check Dynamic AAV Verification service, login to the ISSM (Identity Solutions Services Management) application within MCConnect. This is only for ACS enrolled account ranges for ACS authenticated AAVs. .

NOTE: All issuers globally that participate in Stand-In processing must have Mastercard Identity Check Dynamic AAV verification in Stand-In performed during Stand-In processing.

All issuers globally that participate in Stand-In processing must have Dynamic CVC 3 Validation in Stand-In performed during Stand-In processing.

Relationship between e-commerce and Mastercard Identity Check

Mastercard Identity Check builds upon the infrastructure requirements for channel encryption with the additional benefit of cardholder authentication.

When used in conjunction with components of the Mastercard payment infrastructure, Mastercard Identity Check provides a mechanism for online merchants to potentially receive an enhanced payment guarantee similar to what retailers (non-Internet) receive with qualifying physical point-of-sale transactions.

UCAF in Digital Secure Remote Payments

The UCAF field is also used to support Digital Secure Remote Payments (DSRP) submitted as electronic commerce transactions that are initiated with MDES tokens.

In this case, the UCAF field contains an encoded list of data constructed according to UCAF format. Refer to the *Digital Remote Secure Payments: UCAF Formats* manual for information on the UCAF formats supported by Mastercard.

Chapter 28 Acquirer interchange reporting

The Global Clearing Management System report can be used in the acquirer interchange process.

Interchange Detail Report (IP755020-AA)

The Interchange Detail Report (IP755020-AA) is offered to acquirers in the Europe region and South Africa to comply with regulatory requirements by providing details regarding their fees, including the interchange amounts applied per transaction. Customers can sign up for this report.

The report (in the form of a raw data file) provides acquirers automated access to the following detailed information per transaction after each clearing cycle.

- PAN
- Transaction and interchange amounts
- Interchange details including the interchange amount actually applied by Global Clearing Management System
- Merchant details
- Transaction identifiers to allow easy reconciliation with the acquirer's internal data
- PDS 0159: Settlement Data (Acquirer Settlement Data)

Per transaction, the report will contain the following Detail Record. For the corresponding data element and private data subelement, refer to the *IPM Clearing Formats* manual.

Detail record

Field Name	DE	PDS	Subfield	Length	Starting Position
D (Detail Record)	static value			1	1
Acquirer ICA				11	2
Message Type Indicator	MTI			4	13
PAN	2			19	17
Processing Code (includes all subfields)	3		1, 2, 3	6	36
Amount, Transaction	4			12	42
Reconciliation Amount	5			12	54
Date and Time, Local Transaction	12			12	66

Field Name	DE	PDS	Subfield	Length	Starting Position
Point of Service Data Code	22		1–12	12	78
Function Code	24			3	90
Message Reason Code	25			4	93
Acceptor Business Code	26			4	97
Acquirer Reference Data	31			23	101
Approval Code	38			6	124
Service Code	40			3	130
Acceptor Terminal ID	41			8	133
Acceptor ID Code	42			15	141
Acceptor Name and Location	43		1, 2, 3	83	156
Acceptor Post Code	43		4	10	239
Global Clearing Management System Product Identifier		2		3	249
Licensed Product Identifier		3		3	252
Terminal Type		23		3	255
Message Reversal Indicator		25	1	1	258
Electronic Commerce Security Level Indicator		52	1,2,3	3	259
File ID: File Reference Date		105	2	6	262
Fee Type Code		146	1	2	268

Field Name	DE	PDS	Subfield	Length	Starting Position
Fee Processing Code		146	2	2	270
Fee Settlement Indicator		146	3	2	272
Currency Code		146	4	3	274
Amounts, Transaction Fee		146	5	12	277
Currency Code Fee Reconciliation		146	6	3	289
Amount Fee Reconciliation		146	7	12	292
Extended: Fee Type Code		147	1	2	304
Extended: Fee Processing Code		147	2	2	306
Extended: Fee Settlement indicator		147	3	2	308
Extended: Currency Code, Fee		147	4	3	310
Extended: Interchange Amount, Fee		147	5	18	313
Extended: Currency Code, Fee, Recon.		147	6	3	331
Extended: Interchange Amount, Fee, Recon.		147	7	18	334
Currency Exponents		148	1, 2	4	352
Card Program Identifier		158	1	3	356

Field Name	DE	PDS	Subfield	Length	Starting Position
Business Service Arrangement Type Code		158	2	1	359
Business Service ID Code		158	3	6	360
Interchange Rate Designator		158	4	2	366
Central Site Business Date		158	5	6	368
Business Cycle		158	6	2	374
Acceptor Classification Override Ind.		158	7	1	376
Product Class Override Indicator		158	8	3	377
Corporate Incentive Rates Apply Indicator		158	9	1	380
Special Conditions Indicator		158	10	1	381
Mastercard Assigned ID Override Indicator		158	11	1	382
ALM Account Category Code		158	12	1	383
Rate Indicator		158	13	1	384
MasterPass Incentive Indicator		158	14	1	385
Settlement Service Transfer Agent ID		159	1	11	386

Field Name	DE	PDS	Subfield	Length	Starting Position
Settlement Service Transfer Agent Account		159	2	28	397
Settlement Service Level Code		159	3	1	425
Settlement Service ID Code		159	4	10	426
Settlement Foreign Exchange Rate Class Code		159	5	1	436
Reconciliation Date		159	6	6	437
Reconciliation Cycle		159	7	2	443
Settlement Date		159	8	6	445
Settlement Cycle		159	9	2	451
Transaction Currency Code	49			3	453
Reconciliation Currency Code	50			3	456
Additional Amount	54			20	459
Trace ID	63		2	15	479
Digital Wallet Interchange Override Indicator		158	15	1	494

The report uses fixed field lengths in fixed positions.

The report also includes a header and trailer record (with the total number of records for detail records only). These records include the Global Clearing Management System Report ID, which will be IP755020-AA.

Header record

Field ID	Length	Comments
1	an-17	Value 'HIP755020-AA'
2	an-11	ICA
3	an-07	Endpoint

Trailer record

Field ID	Length	Comments
1	an-17	Value of 'TIP755020-AA'
2	an-11	ICA
3	an-07	Endpoint
4	n-12	Total of detail records only

A report with n transactions will look as follows:

- Header Record
- Detail Record 1
- Detail Record 2
- ...
- Detail Record n
- Trailer Record

One report will be sent at the end of each clearing cycle for all activity in that clearing cycle. If no activity has occurred in a clearing cycle, then an empty report will be sent with just a Header and a Trailer record.

The report will include

- Purchase transactions
- Refunds/Reversals
- Cash withdrawals
- Cash disbursement
- Purchase with cash back
- Payment transactions, and
- Unique transactions.

NOTE: The Interchange Detail Report will not include Collection-Only messages.

It will be sent to acquirers through Global File Transfer using Bulk File TN70. Acquirers can use bulk file TN72 for testing.

Acquirers will be able to choose between 2 versions.

- Version 1: Acquirer only activity
  - 1st Presentments and reversals
  - 2nd Presentments and reversals
- Version 2: Acquirer and Issuer activity
  - 1st Presentments and reversals
  - 2nd Presentments and reversals
  - 1st Chargebacks and reversals
  - 2nd Chargebacks and reversals

Chapter 29 Acquirer clearing detail reporting

The Global Clearing Management System report can be used in the acquirer clearing process.

Clearing Detail Report (IP755120-AA)

The Clearing Detail Report (IP755120-AA) is offered to acquirers to facilitate acquirer reconciliation. Customers can sign up for this report delivered through bulk file TN70 (Production) and TN72 (Test).

The report will be generated and sent after each clearing cycle, including cycle seven.

The report (in the form of a raw data file) provides acquirers transaction-level details from Global Clearing Management System including the currency conversion rate from the transaction amount to the acquirer reconciliation amount in DE 9 (Conversion Rate, Reconciliation).

Per transaction, the report will contain the following Detail Record. For the corresponding data element and private data subelement, refer to the *IPM Clearing Formats* manual.

The report also includes header, detail, and trailer records (with the total number of records for detail records only). These records include the Global Clearing Management System Report ID, which will be IP755120-AA.

Header record

Field ID	Length	Comments
1	ans-17	Value 'HIP755120-AA'
2	n-11	ICA
3	n-07	Endpoint

Detail record

Field Name	DE	PDS	Subfield	Length	Starting Position
D (Detail Record)	static value			1	1
Distribution ICA				11	2
Message Type Indicator	MTI			4	13
Primary Account Number (PAN)	2			19	17
Processing Code (includes all subfields)	3		1, 2, 3	6	36

Field Name	DE	PDS	Subfield	Length	Starting Position
Amount, Transaction	4			12	42
Reconciliation Amount	5			12	54
Reconciliation Conversion Rate	9			8	66
Date and Time, Local Transaction	12			12	74
Point of Service Data Code	22		1-12	12	86
Function Code	24			3	98
Message Reason Code	25			4	101
Acceptor Business Code	26			4	105
Original Amount, Transaction	30		1	12	109
Acquirer Reference Data	31			23	121
Approval Code	38			6	144
Service Code	40			3	150
Acceptor Terminal ID	41			8	153
Acceptor ID Code	42			15	161
Acceptor Name and location	43		1, 2, 3	83	176
Acceptor Post Code	43		4	10	259
Acceptor Country Subdivision Code	43		5	3	269

Field Name	DE	PDS	Subfield	Length	Starting Position
Acceptor Country Code	43		6	3	272
Global Clearing Management System Product Identifier		0002		3	275
Licensed Product Identifier		0003		3	278
Terminal Type		0023		3	281
Message Reversal Indicator		0025	1	1	284
Electronic Commerce Security Level Indicator		0052	1, 2, 3	3	285
File ID		0105	1, 2, 3, 4	25	288
Fee Type Code		0146	1	2	313
Fee Processing Code		0146	2	2	315
Fee Settlement Indicator		0146	3	2	317
Currency Code		0146	4	3	319
Amounts, Transaction Fee		0146	5	12	322
Currency Code Fee Reconciliation		0146	6	3	334
Amount Fee Reconciliation		0146	7	12	337
Extended: Fee Type Code		0147	1	2	349
Extended: Fee Processing Code		0147	2	2	351

Field Name	DE	PDS	Subfield	Length	Starting Position
Extended: Fee Settlement Indicator		0147	3	2	353
Extended: Currency Code, Fee		0147	4	3	355
Extended: Interchange Amount, Fee		0147	5	18	358
Extended: Currency Code, Fee, Recon.		0147	6	3	376
Extended: Interchange Amount, Fee, Recon.		0147	7	18	379
Currency Exponents		0148	1, 2	4	397
Currency Code, Original Transaction Amount		0149	1	3	401
Card Program Identifier		0158	1	3	404
Business Service Arrangement Type Code		0158	2	1	407
Business Service ID Code		0158	3	6	408
Interchange Rate Designator		0158	4	2	414
Central Site Business Date		0158	5	6	416
Business Cycle		0158	6	2	422
Acceptor Classification Override Ind.		0158	7	1	424

Field Name	DE	PDS	Subfield	Length	Starting Position
Product Class Override Indicator		0158	8	3	425
Corporate Incentive Rates Apply Indicator		0158	9	1	428
Special Conditions Indicator		0158	10	1	429
Mastercard Assigned ID Override Indicator		0158	11	1	430
ALM Account Category Code		0158	12	1	431
Rate Indicator		0158	13	1	432
MasterPass Incentive Indicator		0158	14	1	433
Settlement Service Transfer Agent ID		0159	1	11	434
Settlement Service Transfer Agent Account		0159	2	28	445
Settlement Service Level Code		0159	3	1	473
Settlement Service ID Code		0159	4	10	474
Settlement Foreign Exchange Rate Class Code		0159	5	1	484
Reconciliation Date		0159	6	6	485
Reconciliation Cycle		0159	7	2	491

Field Name	DE	PDS	Subfield	Length	Starting Position
Settlement Date		159	8	6	493
Settlement Cycle		0159	9	2	499
Transaction Currency Code	49			3	501
Reconciliation Currency Code	50			3	504
Additional Amount	54			20	507
Trace ID	63		2	15	527
Transaction Destination Institution ID Code	93			11	542
Transaction Originator Institution ID Code	94			11	553
Data Record	72			100	564
Digital Wallet Interchange Override Indicator		0158	15	1	664
Currency Conversion Date		0015	0001	6	665
Currency Conversion Indicator		0015	0002	1	671

Trailer record

Field ID	Length	Comments
1	ans-17	Value of 'TIP755120-AA'
2	n-11	ICA
3	n-07	Endpoint

Field ID	Length	Comments
4	n-12	Total of detail records only

Mastercard sends the Clearing Detail File at the end of each clearing cycle for all activity in that clearing cycle.

NOTE: If the Clearing Detail File Record does not contain data for the customer, then the customer receives only the header and trailer for the Clearing detail file.

Chapter 30 Acquirer ALM reconciliation reporting

The Global Clearing Management System report can be used in the acquirer reconciliation process for Account Level Management-related transactions.

ALM Reconciliation Data Report (IP755220-AA)

The Account Level Management (ALM) Reconciliation Data Report is offered to acquirers to use in conjunction with the Interchange Detail Report (IP755020-AA) and Clearing Detail Report (IP755120-AA) to help facilitate acquirer reconciliation. This report is generated and sent after each clearing cycle. Customers can sign up for this report delivered through bulk file TN70 (Production) and TN72 (Test).

The report (in the form of a raw data file) includes PDS 0275 (Account Level Management Service Data) and PDS 0276 (Fee Amounts, Additional), along with other IPM clearing data, and enables acquirers to match transaction records within their existing back-end systems, or by matching the transactions records within the IP755020/IP755120 reports.

The IP755220-AA report will contain records for any account range that participates in ALM, as well as ALM program/Business Service combinations that have migrated to the new ALM service. ALM transactions with the 'PAN not registered' service code or service errors are not included. Some processing conditions may create a record for transactions that did not have ALM interchange applied. For example, purchase return/refund transactions within some countries that participate in ALM but do not apply ALM interchange. Acquirers can determine if ALM interchange was applied to a transaction by referencing two PDS 0276 subfield values within the IP755220-AA records.

- PDS 0276, subfield 2 (Override Hierarchy) will be a non '00' value ('01' thru '11') if a product class override was applied for the ALM Product Graduation program.
- PDS 0276, subfield 1 (Rate Type) will be populated with one of the '8nn' Rate Type values directly associated with ALM when an adjustment is applied to the Base Rate amount (as shown in the PDS 0276 occurrence with subfield 1 Rate Type '001') for non-Product Graduation programs, e.g. Enhanced Value.

Per transaction, the new report will contain the following Detail Record. For the corresponding data element and private data subelement, refer to the *IPM Clearing Formats* manual.

The report also includes header, detail, and trailer records (with the total number of records for detail records only). These records include the Global Clearing Management System Report ID, which will be IP755220-AA.

Header record

Field ID	Length	Comments
1	ans-17	Value 'HIP755220-AA'
2	n-11	ICA
3	n-07	Endpoint
4	ans-566	Space filler

Detail record

Field Name	DE	PDS	Subfield	Length	Starting Position
D (Detail Record)	Static Value			1	1
Distribution ICA				11	2
Message Type Indicator (MTI)				4	13
Primary Account Number (PAN)	2			19	17
Transaction Amount	4			12	36
Recon Amount	5			12	48
Function Code	24			3	60
Acquirer Ref Data	31			23	63
Transaction Currency	49			3	86
Recon Currency	50			3	89
Trace ID	63		2	15	92
GCMS Product ID		0002		3	107
Licensed Product ID		0003		3	110
Transaction Fee Amount		0146		36	113
Extended Precision Amount		0147		48	149
Central Site Busn Date		0158	5	6	197
ALM Service Data		0275		15	203
* Additional Fee Amounts		0276		384	218

NOTE: * PDS 0276 (Fee Amounts, Additional) provides all fee amounts associated with transactions that have processed for ALM. This PDS may accommodate one to eight fee amount occurrences. GCMS will populate PDS 0276 in the IP755220-AA detail record with all eight fee amounts and any unused occurrences will be space filled.

Trailer record

Field ID	Length	Comments
1	ans-17	Value of 'TIP755220-AA'
2	n-11	ICA
3	n-07	Endpoint
4	n-12	Total of detail records only
5	ans-554	Space filler

Mastercard sends the Clearing Detail File at the end of each clearing cycle for all activity in that clearing cycle.

NOTE: If the Clearing Detail File Record does not contain data for the customer, then the customer receives only the header and trailer for the Clearing detail file.

Chapter 31 Acquirer Currency Conversion Rate File format

This section details the rate file format for the Acquirer Currency Conversion Rate File.

Acquirer Currency Conversion Rate File format

Acquirer Currency Conversion Rate File format

The file header, detail, and trailer records for the Acquirer Currency Conversion Rate File are noted in the following tables.

Mastercard provides the Acquirer Currency Conversion Rate File for

- Regional First Presentments (production bulk file TQQ4, test bulk file TQQ6)
- Regional Second Presentments (production bulk file TQQ8, test bulk file TQR0), and
- Intracurrency Presentments (production bulk file TQX2, test bulk file TQX4).

Table 42: Acquirer Currency Conversion Rate File header record (Regional First Presentments)

Field Number and Name	Position	Length	Format	Comments and Values
1 Header Description	1	1	an	Constant: H
2 Date	2-9	8	n	File creation date. YYYYMMDD
3 Time	10-15	6	n	The time the file was created. Coordinated Universal time (UTC); six digits in military format HHMMSS. For example, 3:30:30 p.m. would show as 153030.
4 Rate File Format Version	16	1	an	This field identifies the file format version. The initial version will be 2 and will be incremented each time the file format changes.
5 Filler	17-60	44	an	Spaces

Acquirer Currency Conversion Rate File format

Table 43: Acquirer Currency Conversion Rate File detail record (regional first presentments)

Field Number and Name	Position	Length	Format	Comments and Values
1 Detail Description	1	1	an	Constant: R
2 Transaction Currency Code	2-4	3	n	Represents transaction currency code.
3 Acquirer Recon Currency Code	5-7	3	n	Represents acquirer reconciliation currency code.
4 Rate Class	8	1	an	• M = Mastercard-issued U.S. dollar rates • F = Mastercard-issued cross rates • X = Calculated cross rates
5 Effective Currency Conversion Rate	9-23	15	n	Eight numbers to the left of the decimal, seven numbers to the right of the decimal.
6 Filler	24-60	37	an	Spaces

Table 44: Acquirer Currency Conversion Rate File trailer record (regional first presentments)

Field Number and Name	Position	Length	Format	Comments and Values
1 Trailer Description	1	1	an	Constant: T

Acquirer Currency Conversion Rate File format

Field Number and Name	Position	Length	Format	Comments and Values
2 Count	2-11	10	n	Total number of detail records. This count does not include the header or trailer records.
3 Filler	12-60	49	an	Spaces

Table 45: Acquirer Currency Conversion Rate File header record (regional second presentments)

Field Number and Name	Position	Length	Format	Comments and Values
1 Header Description	1	1	an	Constant: H
2 Date	2-9	8	n	File creation date. YYYYMMDD
3 Time	10-15	6	n	The time the file was created. Coordinated Universal time (UTC); six digits in military format HHMMSS. For example, 3:30:30 p.m. would show as 153030.
4 Rate File Format Version	16	1	an	This field identifies the file format version. The initial version will be 3 and will be incremented each time the file format changes.
5 Filler	17-60	44	an	Spaces

Acquirer Currency Conversion Rate File format

Table 46: Acquirer Currency Conversion Rate File detail record (regional second presentments)

Field Number and Name	Position	Length	Format	Comments and Values
1 Detail Description	1	1	an	Constant: I
2 Transaction Currency Code	2-4	3	n	Represents transaction currency code.
3 Acquirer Recon Currency Code	5-7	3	n	Represents acquirer reconciliation currency code.
4 Rate Class	8	1	an	• M = Mastercard-issued U.S. dollar rates • F = Mastercard-issued cross rates • X = Calculated cross rates
5 Effective Currency Conversion Rate	9-23	15	n	Eight numbers to the left of the decimal, seven numbers to the right of the decimal.
6 Filler	24-60	37	an	Spaces

Table 47: Acquirer Currency Conversion Rate File trailer record (regional second presentments)

Field Number and Name	Position	Length	Format	Comments and Values
1 Trailer Description	1	1	an	Constant: T

Acquirer Currency Conversion Rate File format

Field Number and Name	Position	Length	Format	Comments and Values
2 Count	2-11	10	n	Total number of detail records. This count does not include the header or trailer records.
3 Filler	12-60	49	an	Spaces

Table 48: Acquirer Currency Conversion Rate File header record (intracurrency presentments)

Field Number and Name	Position	Length	Format	Comments and Values
1 Header Description	1	1	an	Constant: H
2 Date	2-9	8	n	File creation date. YYYYMMDD
3 Time	10-15	6	n	The time the file was created. Coordinated Universal time (UTC); six digits in military format HHMMSS. For example, 3:30:30 p.m. would show as 153030.
4 Rate File Format Version	16	1	an	This field identifies the file format version. The initial version will be 4 and will be incremented each time the file format changes.
5 Filler	17-60	44	an	Spaces

Acquirer Currency Conversion Rate File format

Table 49: Acquirer Currency Conversion Rate File detail record (intracurrency presentments)

Field Number and Name	Position	Length	Format	Comments and Values
1 Detail Description	1	1	an	Constant: S
2 Transaction Currency Code	2-4	3	n	Represents transaction currency code.
3 Acquirer Recon Currency Code	5-7	3	n	Represents acquirer reconciliation currency code.
4 Rate Class	8	1	an	• M = Mastercard-issued U.S. dollar rates • X = Calculated cross rates
5 Effective Currency Conversion Rate	9-23	15	n	Eight numbers to the left of the decimal, seven numbers to the right of the decimal.
6 Filler	24-60	37	an	Spaces

Table 50: Acquirer Currency Conversion Rate File trailer record (intracurrency presentments)

Field Number and Name	Position	Length	Format	Comments and Values
1 Trailer Description	1	1	an	Constant: T
2 Count	2-11	10	n	Total number of detail records. This count does not include the header or trailer records.

Acquirer Currency Conversion Rate File format

Field Number and Name	Position	Length	Format	Comments and Values
3 Filler	12-60	49	an	Spaces

Application of Acquirer Currency Conversion Rate File to determine acquirer reconciliation amount

Acquirers can determine the reconciliation amount within the Acquirer Currency Conversion Rate File by

- locating the record in the Acquirer Currency Conversion Rate File where the transaction currency matches the currency in field 2 and the acquirer reconciliation currency matches the currency in field 3; and
- multiplying the currency conversion rate in field 5 by the transaction amount to determine the acquirer reconciliation amount.

Chapter 32 Originating Institution Payment Transaction Currency Conversion Rate File format

This section details the rate file format for the Originating Institution Payment Transaction Currency Conversion Rate File.

Originating Institution Payment Transaction Currency Conversion Rate File format

Originating Institution Payment Transaction Currency Conversion Rate File format

The file header, detail, and trailer records for the Originating Institution Currency Conversion Rate File are noted below.

Table 51: Originating Institution Payment Transaction Currency Conversion Rate File header

Field Number and Name	Position	Length	Format	Comments and Values
1 Header Description	1	1	an	Constant: H
2 Date	2-9	8	n	File creation date. YYYYMMDD
3 Time	10-15	6	n	The time the file was created. Coordinated Universal time (UTC); six digits in military format HHMMSS. For example, 3:30:29 p.m. would show as 153029.
4 Rate File Format Version	16	1	an	This file identifies the file format version. The initial version will be 2 and will be incremented each time the file format changes.
5 Filler	17-60	44	an	Spaces

Table 52: Originating Institution Payment Transaction Currency Conversion Rate File detail record

Field Number and Name	Position	Length	Format	Comments and Values
1 Detail Description	1	1	an	Constant: R

Originating Institution Payment Transaction Currency Conversion Rate File format

Field Number and Name	Position	Length	Format	Comments and Values
2 Transaction Type Identifier	2-4	3	an	Transaction Type Identifier. Valid value is: • CXX (default value)
3 Transaction Currency Code	5-7	3	n	Represents the transaction currency code of the transaction.
4 Originating Institution Recon Currency Code	8-10	3	n	Represents the originating institution reconciliation currency code of the transaction.
5 Rate Class	11	1	an	Indicates the rate classification. Valid values are: • M = Mastercard-issued U.S. dollar rates • F = Mastercard-issued cross rates • X = Calculated cross rate
6 Effective Currency Conversion Rate	12-26	15	n	Conversion rate (Assumed decimal after position 19). Eight positions to the left of the decimal, seven positions to the right of the decimal.
7 Filler	27-60	34	an	Spaces

Originating Institution Payment Transaction Currency Conversion Rate File format

Table 53: Originating Institution Payment Transaction Currency Conversion Rate File trailer record

Field Number and Name	Position	Length	Format	Comments and Values
1 Trailer Description	1	1	an	Constant: T
2 Record Count	2-11	10	n	Total number of detail records. This count does not include the header or trailer records.
3 Filler	12-60	49	an	Spaces

The following steps explain how originating institutions can determine the reconciliation amount using the Originating Institution Payment Transaction Currency Conversion Rate File.

1. Locate the record in the Originating Institution Payment Transaction Currency Conversion Rate File where the Transaction Type Identifier matches the value in field 2, the transaction currency matches the currency in field 3, and the Originating Institution reconciliation currency matches the currency in field 4. If there is no match in field 2, then use the default value of CXX (as the Transaction Type Identifier) to match.
2. Multiply the effective currency conversion rate in field 6 by the transaction amount to determine the originating institution's reconciliation amount.

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