

Global PAYplus Version 4.6.6

Clearing Processing

Business Guide

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Version	Date	Summary of Changes
1.0		Document created with MEPS, Target2, Euro1 and UK CHAPS
2.0	Oct 2015	Added Multi Office setup, Australia RITS PDS, Hong Kong CHATS, removed Statement Messages section under MEPS
3.0	Dec 2015	Added Australia - RITS PDS, New Zealand - HVCS, Malaysia - RENTAS and Ripple
4.0	Mar 2015	Added Immediate Payments - NPP and Mass Payments - AC
5.0	Jun 2016	Updated Malaysia - RENTAS
6.0	Dec 2016	Update Australia - NPP, added Mass Payments, Austria - CS.A
7.0	April 2017	Added Australia - Austraclear to Single Payment APAC Clearing; updated Australia - RITS

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1 Introduction

Note: This guide has not yet been certified for GPP V4.6; therefore, there may be inaccuracies in this document that may require amendments in the future. For more information, please contact your D+H Project Manager.

This business guide describes the processing of clearing houses (local or regional) and SWIFT certified by Global PAYplus (GPP). The details provided is additional information specific for the clearings, on top of the offering, for example, Single Payment, Mass Payment, Immediate Payment.

1.1 Target Audience

This business guide is designed for business analysts and system administrators who need understand the clearings supported by GPP. It is also of value to anyone who wants to know more about how this feature is implemented. A basic understanding of GPP functionality is assumed.

For a list of terms and their definitions used in this document, see [Appendix A: Glossary](#).

2 Generic Clearing Processing

2.1 SWIFT Based Message Types and Processing

GPP processes and handles SWIFT payments as described in this section and supports FINcopy and cross-border SWIFT payments.

2.1.1 SWIFT Message Types

This table lists the SWIFT Message Types supported in GPP.

Note: For format and rules, refer to the SWIFT Book, Category 1 to 9.

Message Type	Sub Type	Description
103		Single customer credit transfer. It may only be used for clean payment instructions. It conveys a funds transfer instruction in which the ordering customer and/or the beneficiary customer are non-financial institutions from the perspective of the Sender.
103	PLS	Single customer credit transfer. The PLS refers to payment STP, which allows the exchange of single customer credit transfers using a restricted set of fields and format options of the core MT103.
190		Advice of Charges, Interest and Other Adjustments.
191		Request for payment of charges, interest and other expenses.
192		Request for cancellation.
195		Queries.
196		Answers.
198		Inward direct debit and inward credit transfer for HV (high value) payments
199		Free format message - message used by Financial Institution to send or receive Information.
202		General Financial Institution transfer. It is used to order the movement of funds to the beneficiary institution. This message may also be sent to a financial institution servicing multiple accounts for the Sender to transfer funds between these accounts. In addition, it can be sent to a financial institution to debit an account of the Sender serviced by the Receiver and to credit an account, owned by the Sender at an institution specified in field 57a.
202	COV	General Financial Institution transfer.
205		Financial institution transfer execution. It is used to further transmit a funds transfer instruction domestically.
210		Notice to receive. A notice in advance for the account servicing institution that it receives funds to be credited to the Sender's account.
290		Advice of charges, interest and other adjustments.
291		Request for payment of charges, interest and other expenses.
292		Request for payment cancellation.
295		Queries.

Message Type	Sub Type	Description
296		Answers.
299		Free Format Message - message used by Financial Institution to send or receive Information.
900		Confirmation of Debit. Advises an account owner of a debit to its account.
910		Confirmation of Credit. Advises an account owner of a credit to its account.

2.1.2 FINCopy

SWIFTNet is a secure, dedicated, global communication network that supports a range of financial messaging services, which includes the FIN store-and-forward message-processing service.

FIN provides users with a wide range of message types for transaction and information processing and settlement. FIN messages consist of structured headers, text, and trailers, and conform to internationally accepted standards. SWIFT protects the confidentiality, integrity, and authenticity of FIN messages.

FINCopy is a message duplication service. SWIFT developed FINCopy to assist financial communities in implementing centralized systems, for example, Real-Time Gross Settlement (RTGS) or netting systems.

2.1.2.1 FINCopy Service Modes

The FINCopy service can operate in the following modes:

- In Y-Copy mode, FINCopy copies messages to the service administrator, and stores these messages until it receives authorization or refusal from the service administrator.
- In T-Copy mode, FINCopy copies messages to the service administrator and immediately forwards the messages for delivery to the receiver.
- In Bypass mode, FINCopy does not copy the messages to the service administrator

In normal operations, FINCopy operates in either Y-Copy or T-Copy mode. SWIFT reserves Bypass mode for specific, abnormal situations.

2.1.2.2 FINCopy Service Code

The FINCopy service code parameter is a unique Identifier which the user that participates in a FINCopy closed user group inserts into field 103 of the user header, to identify a message for FINCopy.

FIN also uses this parameter in undelivered message reports, for the same purpose. Single Payment Clearings

For a detailed description of the Single Payment flows, use cases and processes, see GPP Business Guide Single Payment.

2.2 Generic Processing

The selection of a clearing for an outward payment is performed in the MOP selection process.

The identification of the clearing for an inward payment is performed in the debit side processing.

2.2.1 Y-Copy RTGS Flow Processes

This is the flow processes for Y-Copy RTGS. It is the same flow for all Y-Copy RTGS service types (for example, Target2, EURO1) and supported by GPP.

MT	Outward/ Inward	Processing Flow	Clearing Response	GPP Queue	Comments
103, 103+, 202, 202COV	Outward to clearing	Outward to clearing before cut-off time	No response from clearing	Wait confirmation	The queue is configurable
	Outward to clearing	Outward to clearing before cut-off time	MT012 (sender notification) from clearing	Complete	
	Outward to clearing	Outward to clearing before cut-off time	MT019 (abort Notification) from clearing	Reject	MT019 is received when: SWIFT cannot deliver the message to the clearing The clearing refuses to settle the transaction Clearing accepted the message but cannot deliver it to the receiver The queue is configurable
	Outward to clearing	Outward to clearing after cut-off time (warehouse in GPP)	N/A	Scheduled	
	Outward to clearing	Outward to clearing after cut-off time (no warehouse in GPP)	MT012 (sender notification) from clearing	Complete	As clearing accepts future payments up to 14 business days in advance
	Outward to clearing	Outward to clearing invalid format	SWIFT NAK	Repair	The queue is configurable
	Outward to clearing	Outward to clearing duplicate	MT019 (abort Notification) from clearing	Reject	The queue is configurable
	Outward to clearing	Outward to clearing but insufficient funds	MT019 (abort Notification) from clearing	Repair	The queue is configurable

MT	Outward/ Inward	Processing Flow	Clearing Response	GPP Queue	Comments
103, 103+, 202, 202COV	Inward from clearing	Inward STP payment from clearing	N/A	Complete	
	Inward from clearing	Inward Non- STP payment from clearing	N/A	Repair	GPP send the payment to manual intervention queue. The user can correct the payment or send Return/Reject to clearing
MT012	Inward from clearing	Inward MT012	N/A	Complete	The payment is matched and added to original payment.
MT019	Inward from clearing	Inward MT019	N/A	Reject	Payment is matched and added to original payment. Original payment is routed to Rejected queue. The queue is configurable
MT900	Inward from clearing	Inward debit notification	N/A	Complete	The payment is matched and added to original payment
MT910	Inward from clearing	Inward credit notification	N/A	Complete	The payment is matched and added to original payment
MT940/950	Inward from clearing	Inward statement	N/A	Complete	Update the closing and available balance

2.2.2 Message Types

Message types supported for High Value Y copy (SWIFT based Fin messages) clearing are:

- MT103
- MT103+
- MT202
- MT202COV
- MT012
- MT019
- MT900
- MT910
- MT940/950

2.3 Single Payment EU Clearing

2.3.1 TARGET2

2.3.1.1 Overview

TARGET2 (Trans-European Automated Real-time Gross Settlement Express Transfer System) is the real-time gross settlement (RTGS) system owned and operated by the Eurosystem. This interbank payment system is used for the real-time processing of cross-border transfers throughout the European Union.

TARGET2 is operated on a single technical platform. The business relationships are established between the TARGET2 users and their National Central Bank. In terms of the value processed, TARGET2 is one of the largest payment systems in the world.

The TARGET2 directory lists the institutions that can be addressed in TARGET2. It contains Direct and Indirect participants' BIC addresses. The Directory provides the routing information for TARGET2 payments and is organized alphabetically by institution.

Additional Information related to TARGET2:

Information	Value
FIN Copy service identifier code	TGT
Service Type	Y-Copy
Currency code	EUR
Operating hours of TARGET2	Start of the business day (06:45 – 19:00) Night-time settlement (NTS) procedures (19:30 – 07:00) Business window (06:45 – 07:00) Day trade phase (07:00 – 18:00)
Cut-off time	17:00: customer payments cut-off time 18:00: interbank payments cut-off time
Special Processing	Tag {113:4!x} banking priority Character 1: H = highly urgent payment U = urgent payment N = normal payment Character 2: Y = MT012 requested N = MT012 not requested Character 3 + 4: Not used and not checked In TARGET2, the default value for field 113 is NYNN (normal payment, MT012 requested)

2.3.1.2 Inward/Outward Processing

2.3.1.2.1 Inward Processing from TARGET2

1. A payment received from TARGET2 has these values:

- Sender = TARGET2 member BIC
 - Fin copy service in field 103 block 3 = TGT
2. When GPP identifies the values in step 1, the Debit MOP is set to TARGET2.
 3. Debit MOP validation is performed as per MOP attributes.
 4. Debit account is set to TARGET2 settlement account.

2.3.1.2.2 Outward Processing to TARGET2

1. When Target2 is selected as the credit MOP, GPP performs MOP validation.
For example:
 - Settlement currency (SWIFT tag 32A) is EUR
 - Settlement date (SWIFT tag 32A) is within the range available for TARGET2
 - As membership validation is required for TARGET2 (setup in the MOP profile), GPP checks that the first in credit chain is a member or associate member of TARGET2
2. If validation is successful and MOP TARGET2 is selected by the rule, then GPP sends the payment with the following enrichments:
 - Field 103 in block 3 (Fin copy) is be set to TGT
 - Local office BIC (defined as the MOP identifier) is written as the sender in block 1
 - Field 113 with a default value of NYNN unless setup differently

SWIFT standard validations are applied on outgoing payments to TARGET2.

Outgoing payments that missed TARGET2 cut-off time and no other relevant MOPs are available are stored in the Scheduled queue and processed on the next business day.

2.3.1.3 Flow Processes with TARGET2

The flow process for all Y-Copy RTGS is the same and supported by GPP. As TARGET2 is a Y-Copy service type, see [Y-Copy RTGS Flow Processes](#) for a description of the process.

2.3.1.4 Business Setup

	Setup	Additional Information
System Parameters	N/A	
Profiles	MOP, Cut Off Times, Membership, Identifiers.	Profiles
Rules	MOP selection, Clearing Cut-off	Rules
Permissions	N/A	
Tasks	N/A	
Queues	N/A	

2.3.1.5 Profiles

These are the details of the required setup in GPP profiles for the Clearing Certification.

Note: For a detailed description of all the fields in the profiles, see GPP Online Help.

2.3.1.5.1 Method of Payment Profile - Single Office Setup

To successfully identify the local office and the debit MOP, when an incoming message is received from TARGET2, the local office's BIC (provided in Block 1 of the incoming payment) needs to be set as a valid identifier for this MOP in the MOP profile.

TARGET2 can be setup in GPP as a EUR Method of Payment. A respective MOP selection rule needs to be created to define the scenarios in which TARGET2 is selected.

These are the specific attributes that need to be defined in the Method of Payment profile for TARGET2 Clearing.

Field	Value for TARGET2	Comment
Name	TARGET2	
Calendar	Relevant calendar or no value	
MOP Business Date	Current business day for the MOP	The business date can be changed manually or by an end-of-day task that advances the MOP business date to the next valid business date for the MOP.
Currency	EUR	
Settlement accounting	TARGET2 settlement account	
Membership Required	Must be selected	
Membership type	MOP	
Send outgoing message	Must be selected	
Settlement account exists	Must be selected	
Processing Tab		
FIN copy service	TGT	
Communication preferences	Wait for confirmation	

2.3.1.5.2 Method of Payment Profile - Multi Office Setup

For multi office setup, the list of MOPs in the MOP selection of the indirect Office includes MOP EURO1 as the Multi Office MOP. When this MOP is selected, a payment is sent to EURO1 where the Sender is the direct participant.

Field	Value for Direct Participant Office
Name	TARGET2
Calendar	Relevant calendar or no value
MOP Business Date	Current business day for the MOP
Currency	EUR
Settlement accounting	TARGET2 settlement account in office Y
Membership Required	Must be selected
Membership type	MOP

Field	Value for Direct Participant Office
Send outgoing message	Must be selected
Settlement account exists	Must be selected
Cross Office	Must be selected
Processing Tab	
FIN copy service	TGT
Communication preferences	Wait for confirmation

2.3.1.5.3 Cut-off Times Profile

The Cut-off Times profile defines the latest time for transactions to be processed for TARGET2 MOP.

The TARGET2 calendar is required for the TARGET2 Clearing. The calendar sets the holidays and weekends which are non-working days in Singapore.

The TARGET2 Calendar profile for the office is defined under System Setup > Geographic Settings > Calendars.

This is the suggested setup with specific attributes that need to be defined in the Cut-off profile for TARGET2 Clearing.

Field	TARGET2 for Customer Payments	TARGET2 for Bank to Bank Payments	Comment
Cut-off name	TARGET2_cust	TARGET2_B2B	
Cut-off type	Clearing	Clearing	
Time zone	GMT	GMT	Time zone for aligning cut-off times
Description	TARGET2 Clearing Cut-off for customer payments	TARGET2 Clearing Cut-off for bank to bank payments	
Cut-off time	17:00	18:00	

2.3.1.5.4 Membership Profile

The TARGET2 Membership profile defines whether the payment receiver and sender parties are members of the clearing house.

These are the specific attributes that need to be defined in the Membership profile for TARGET2 Clearing for the Singapore office.

Field	Value for TARGET2	Comment
MOP	TARGET2	
Type of Membership	Full member for TARGET2 participants (or associates)	This membership record needs to be setup only for the direct participant

2.3.1.5.5 Identifiers Profile

The TARGET2 Identifiers profile is used to set up and view the party identifiers and settlement account information for the MOP.

These are the specific attributes that need to be defined in the Identifiers profile for TARGET2 Clearing.

Field	Value for TARGET2	Comment
MOP	TARGET2	
Identifier	Bank BIC	
Settlement account	Office, Account number, Currency	In a multi office setup the identifier is setup only for the direct participant office

2.3.1.5.6 User Codes

User codes for liquidity priority codes should be defined for T2 payments tag 113 (for example, BI, NN, UP).

Field	Value for TARGET2	Comment
Type	LIQ_PRTY	A retrofit is required for versions that do not have this type, in order to setup field 113 for T2
Code	Example: UP, NN	
Description	Example: Target2 – Banking priority urgent	

2.3.1.6 Rules

These are examples of user-defined rules.

2.3.1.6.1 MOP Selection

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
TARG ET21	N/A	TARGET2 MOP selection rule	Local office		[Sttl m Ccy]	=	EUR	SET MOP Profile TARGET 2
				AND	[Msg tp]	IN	SWIFT_1 03, SWIFT_2 02	
				AND	[Cdtr Agt ctry]	=	DE, FR, IT,	

2.3.1.6.2 Clearing Cut Off

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
TARGET2_Cust	N/A	TARGET2 cut off selection rule for MT103	Local office		[Cdt MOP]	=	TARGET2	SET TARGET2_cust cut off (17:00)
				AND	[Msg tp]	=	SWIFT_103	
TARGET2_B2B	N/A	TARGET2 cut off selection rule for MT202	Local office		[Cdt MOP]	=	TARGET2	SET TARGET2_B2B cut off (18:00)
				AND	[Msg tp]	=	SWIFT_202	

2.3.1.6.3 Liquidity Priority Selection Rules

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
TGT_PRIORITY_1	N/A	Set NYNN priority for all TGT payments	Local office		[Cdt MOP]	=	TARGET2	NN

2.3.1.7 Target2 Directory Upload

The upload task can be executed from the GPP user interface using the option TARGET2 Upload. It uses the system parameter T2DIRFPATH to locate the TARGET2 Directory file on the server.

The user has two modes of directory upload; Partial and Full. The user can browse for a required TARGET2 file and click Execute to load it in the system. Based on file naming convention, different files are shown to the user for different upload types (Full or Partial).

2.3.1.7.1 Target2 Directory Processing

The following validations are performed on an individual record in the file before updating the data in the Membership table.

- Record is skipped if any of its mandatory field is blank.
- Record is skipped if the field format does not have a value specified in format standards (for example, Modification Flag is not A, M, U or D).
- Record is skipped if any of the field's length is more than specified in the format.
- Record is skipped if its Valid from Date is greater than Valid to Date.
- Record is skipped if Valid from Date of new record is earlier than the Valid from Date of existing record and the date ranges of these two records overlaps.

2.3.2 EURO1

2.3.2.1 Overview

EURO1 is the only private sector large-value payment system for single same-day euro transactions at a Pan-European level. The EURO1 system processes transactions of high priority and urgency, and primarily of large amount, both at a domestic and at a cross-border level.

The service provides a unique RTGS-equivalent multilateral net settlement arrangement, duly approved by the European Central Bank (ECB).

Additional Information related to EURO1:

	Value
FIN Copy service identifier code	The User Header, Block 3, of payment messages to be processed by EURO1, must contain Field 103 set to EBA to denote processing for processing through the EURO1 Clearing System.
Service Type	Y-Copy
Currency code	EUR
Operating hours of EURO1	Settlement Days (also known as Clearing Days) are normally Monday to Friday each week. The service is processed euro payments on all days when the TARGET2 system is open to settle euro payments. The maximum forward Settlement Day is set to 5 future Settlement Days (not including the current Settlement Day) within a maximum of 14 calendar days. Payments sent ahead of Value Date are validated and stored for future processing.
Cut-off time	16:00
Special Processing	This field can be used to identify a prioritized payment. In this field, four characters are available. If the first character is H or U, or if the third and fourth characters are UP then this payment is identified as a prioritized payment. There is no distinction between the payments marked with H or U or UP. In addition, a bank may request that an MT012 Sender Notification is sent back to them on an individual payment basis. To receive this, the character 2 of field 113 in the user header in the sent payment message must be set to Y (any other identifier is ignored by the central server).

2.3.2.2 Inward/Outward Processing

EURO1 can be setup in GPP as a EUR Method of Payment. A respective MOP selection rule needs to be created to define the scenarios in which EURO1 is selected.

SWIFT standard validations are applied on outgoing payments to EURO1.

Outgoing payments that missed EURO1 cut-off time and no other relevant MOPs are available, are stored in the Scheduled queue and processed on the next business day.

2.3.2.2.1 Inward Payments from EURO1

1. A payment received from EURO1 has these values:
 - a. Sender = EURO1 member BIC
 - b. Fin copy service in field 103 block 3 = EBA
2. When GPP identifies the values in step 1 the Debit MOP is set to EURO1.
3. Debit MOP validation is performed as per MOP attributes.
4. Debit account is set to EURO1 settlement account.

2.3.2.2.2 Outward Payments to EURO1

To select EURO1 as the credit MOP, GPP performs MOP validation. For example:

- Settlement currency (SWIFT tag 32A) is EUR
- Settlement date (SWIFT tag 32A) is within the range available for EURO1
- As membership validation is required for EURO1 (setup in the MOP profile), GPP checks that the first in credit chain is a member or associate member of EURO1
 - If validation is successful and MOP EURO1 is selected by the rule, then GPP sends the payment with the following enrichments:
 - ❖ Field 103 in block 3 is set to EBA
 - ❖ Local office BIC (defined as the MOP identifier) is defined as the sender in block 1

2.3.2.3 Flow Processes with EURO1

The flow process for all Y-Copy RTGS is the same and supported by GPP. As Target2 is a Y-Copy service type, see [Y-Copy RTGS Flow Processes](#) for a description of the process.

2.3.2.4 Business Setup

	Setup	Additional Information
System Parameters	N/A	
Profiles	MOP, Cut Off Times, Membership, Identifiers.	Profiles
Rules	MOP selection, Clearing Cut-off	Rules
Permissions	N/A	
Tasks	N/A	
Queues	N/A	

2.3.2.4.1 Profiles

These are the details of the required setup in GPP profiles for the Clearing Certification.

Note: For a detailed description of all the fields in the profiles, see GPP Online Help.

2.3.2.4.1.1 Method of Payment Profile - Single Office Setup

To successfully identify the local office and the debit MOP, when an incoming message is received from EURO1, the local office's BIC (provided in Block 1 of the incoming payment) needs to be set as a valid identifier for this MOP in the MOP profile.

These are the specific attributes that need to be defined in the Method of Payment profile for EURO1 Clearing.

Field	Value for EURO1	Comment
Name	EURO1	
Calendar	Relevant calendar or no value	
MOP Business Date	Current business day for the MOP	The business date can be changed manually or by an end-of-day task that advances the MOP business date to the next valid business date for the MOP.
Currency	EUR	
Settlement accounting	EURO1 settlement account	
Membership Required	Must be selected	
Membership type	MOP	
Send outgoing message	Must be selected	
Settlement account exists	Must be selected	
Processing Tab		
FIN copy service	EBA	
Communication preferences	Wait for confirmation	

2.3.2.4.1.2 Method of Payment Profile - Multi Office Setup

For multi office setup, the list of MOPs in the MOP selection of the indirect Office includes MOP EURO1 as the Multi Office MOP. When this MOP is selected, a payment is sent to EURO1 where the Sender is the direct participant.

Field	Value for Direct Participant Office
Name	EURO1
Calendar	Relevant calendar or no value
MOP Business Date	Current business day for the MOP
Currency	EUR
Settlement accounting	EURO1 settlement account in office Y
Membership Required	Must be selected
Membership type	MOP
Send outgoing message	Must be selected

Field	Value for Direct Participant Office
Settlement account exists	Must be selected
Cross Office	Must be selected
Processing Tab	
FIN copy service	EBA
Communication preferences	Wait for confirmation

2.3.2.4.1.3 Cut-off Times Profile

The Cut-off Times profile defines the latest time for transactions to be processed for EURO1 MOP.

The EURO1 calendar is required for the EURO1 Clearing. The calendar sets the holidays and weekends which are non-working days.

The EURO1 Calendar profile for the office is defined under [System Setup > Geographic Settings > Calendars](#).

This is the suggested setup with specific attributes that need to be defined in the Cut-off profile for EURO1 Clearing.

Field	EURO1 for Customer Payments	EURO1 for Bank to Bank Payments	Comment
Cut-off name	EURO1_cust	EURO1_B2B	
Cut-off type	Clearing	Clearing	
Time zone	GMT	GMT	Time zone for aligning cut-off times
Description	EURO1 Clearing Cut-off for customer payments	EURO1 Clearing Cut-off for bank to bank payments	
Cut-off time	16:00	16:00	

2.3.2.4.1.4 Membership Profile

The EURO1 Membership profile defines whether the payment receiver and sender parties are members of the clearing house.

These are the specific attributes that need to be defined in the Membership profile for EURO1 Clearing.

Field	Value for EURO1	Comment
MOP	EURO1	
Type of Membership	Full member for EURO1 participants (or associates)	

2.3.2.4.1.5 Identifiers Profile

The EURO1 Identifiers profile is used to set up and view the party identifiers and settlement account information for the MOP.

These are the specific attributes that need to be defined in the Identifiers profile for EURO1 Clearing.

Field	Value for EURO1	Comment
MOP	EURO1	
Identifier	Bank BIC	
Settlement account	Office, Account number, Currency	In a multi-office setup, the identifier is defined only for the direct participant office

2.3.2.4.1.6 User Codes

User codes for liquidity priority codes should be defined for EURO1 payments tag 113 (for example, 25, 40, 42, 45).

Field	Value for EURO1	Comment
Type	LIQ_PRTY	A retrofit is required for versions that do not have this type, in order to setup field 113 for EURO1.
Code	Example: UP	
Description	Example: EURO1 – Banking priority urgent	

2.3.2.4.2 Rules

These are examples of user defined rules.

2.3.2.4.2.1 MOP Selection

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
EURO1_1	N/A	EURO1 MOP selection rule	Local office		[Sttl m Ccy]	=	EUR	SET MOP Profile EURO1
				AND	[Msg tp]	IN	SWIFT_1 03, SWIFT_2 02	
				AND	[Cdtr Agt ctry]	=	DE, FR, IT,	

2.3.2.4.2.2 Clearing Cut Off

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
EURO1	N/A	EURO1 cut off selection rule	Local office		[Cdt MOP]	=	EURO1	SET EURO1 cut off (16:00)

2.3.2.4.2.3 Liquidity Priority Selection Rules

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
TGT_PRIORITY_1	N/A	Set NYNN priority for all TGT payments	Local office		[Cdt MOP]	=	EURO1	NN

2.3.3 UK CHAPS

2.3.3.1 Overview

The Clearing House Automated Payment System (CHAPS) is a UK payments scheme which processes the same day sterling fund transfers. CHAPS is recognized by HM Treasury as an inter-bank payment system and is overseen by the Bank of England. Settlement of payments, within the CHAPS system, is final and irrevocable, and is catered for in their Rules which all participants of CHAPS must adhere to.

In December 2005 the Bank of England decided that it was not viable for the UK to join TARGET2. As a result of this decision CHAPS Euro was decommissioned in May 2008.

CHAPS provides a payment system between its Members, settling in real time across settlement accounts at the Bank of England. The key components of the system are:

- A payment messaging network (SWIFT FIN Copy) connecting the Members of the system.
- SWIFT interfaces, known as CBTs (Computer Based Terminals), located within Members' systems to connect to the network and process messages to and from Member payment systems. The RTGS system also has a CBT, known as the CHAPS Central Bank Interface, to connect to the network to enable settlement to occur.
- Settlement accounts are denominated in all supported currencies held within the Bank of England's RTGS Processor and the supporting collateral arrangements.
- An Enquiry Link facility provided by the Bank of England.
- CHAPS Payments exchanged over the SWIFT network are sometimes referred to as clean payments, so as to distinguish them from payments related to securities settlement (DVP).
- In the RTGS Processor the payment settlement account is the prime account in the Minimum Balance Group (MBG) across which CHAPS and non-CHAPS payments (such as BACS and Cheque and Credit clearings, note transactions) are applied.

Additional information related to CHAPS.

	Value
FIN Copy service identifier code	STG
Service Type	Y-Copy
Currency code	GBP
Operating hours of CHAPS	MT103: 06:00 - 16:05 MT202: 06:00 - 16:20
Cut-off time	MT103: 16:00 MT202: 16:20

2.3.3.1.1 CHAPS Sterling Payments

CHAPS Clearing House operates for payments as follows:

1. Payments are sent from one Member to another.
2. The payments are stored within FIN Copy pending settlement confirmation by the Bank of England.
3. The full payment is sent to the Bank of England for settlement.
4. Once the payment is settled at the Bank of England, a confirmation is returned and the payment is forwarded to the receiving Member. Finality is achieved when the payment is settled.
5. The receiving Member processes the payment as required.

The FIN Copy service provides the transport network for the system and the message handling functionality required to convey settlement requests to (and receive settlement confirmations from) the Bank of England (RTGS).

2.3.3.1.2 Business Day Processing Cycle

The business day follows the following processing cycle:

1. RTGS opens for business
2. Intra-day repurchase transactions and any other pre-business day transactions are initiated between the Bank of England and CHAPS Members. These provide liquidity for the sterling service for those CHAPS Members with sterling settlement accounts. Automated transfers are also made from the settlement accounts used for payments to settlement accounts used for DVP.
3. CHAPS opens for business.
4. Intra-day payments are made.
5. CHAPS closes for normal payments.
6. Balancing payments are made between Members.
7. CHAPS closes for business.
8. Intra-day repurchase transactions are terminated.
9. Close of Day.

Key times in Chaps:

- Start of Business: CHAPS opens for payments at 06:00 on each CHAPS Business Day. Participants must be open by 08:00 and must be sending by 10:00.

- Close of Business:
 - The latest time a customer MT103 payment should enter the SWIFT Network is 16:00. This allows for a five-minute period to meet the SWIFT Service Level processing time. The last time for receipt by the real-time gross settlement (RTGS) system of inward MT103 payments for same day value is 16:05. Participants must, at 16:05, cancel any customer payments for which settlement requests are on the funds queue.
 - MT202 payments, which may be made between 16:00 and 16:20, are Settlement Period Payments, unless bi-laterally agreed. In addition, a Participant can send a total of 9 payments, up to a value of £1million each, to other Participants. The last time for receipt by the RTGS system of inward MT202 payments for same day value is 16:20.

2.3.3.1.3 Bank Identifier Codes (BICs)

The preferred branch identification method used in CHAPS for payments is BICs, and this is the only option available for payments sent to RT. UK Sort Codes are supported in most payment message formats if no BIC is available.

2.3.3.2 Inward/Outward Processing

2.3.3.2.1 Inward Payments from CHAPS

GPP processes incoming MT103 and MT202 payments from CHAPS as follows:

1. A payment received from CHAPS has these values:
 - Sender = CHAPS member BIC
 - Fin copy service in field 103 block 3 = STG
2. When GPP identifies the values in step 1 the Debit MOP is set to CHAPS.
3. Debit MOP validation is performed as per MOP attributes.
4. Debit account is set to CHAPS settlement account.

2.3.3.2.2 Outward Payments to CHAPS

In order for GPP to process the outgoing payments according to CHAPS requirements, the credit Method of Payment (MOP) is set as CHAPS.

- When CHAPS is selected as the credit MOP, GPP performs MOP validation. For example:
 - Settlement currency (SWIFT tag 32A) is GBP
 - Settlement date (SWIFT tag 32A) is within the range available for CHAPS. If the payment includes a future value date, GPP warehouses the payment until the value date. On the value date, the payment is processed and released to CHAPS. For more information, see GPP Business Guide Value Date and Cut-off Time.
 - As membership validation is required for CHAPS (setup in the MOP profile), GPP checks that the first in credit chain is a member or associate member of CHAPS
- Receipt of payment confirmation: A bank can define whether to complete the payment processing before confirmation is received from CHAPS. When confirmation from CHAPS is required, the bank must also define that confirmation from SWIFT is required.
 - If validation is successful and MOP CHAPS is selected by the rule, GPP sends the payment with the following enrichments:

- ❖ Field 103 in block 3 is set to STG
- ❖ Local office BIC is defined as the sender in block 1

2.3.3.3 Flow Processes with CHAPS

The flow process for all Y-Copy RTGS is the same and supported by GPP. As CHAPS is a Y-Copy service type, see [Y-Copy RTGS Flow Processes](#) for a description of the process.

2.3.3.4 Business Setup

	Setup	Additional Information
System Parameters	N/A	
Profiles	MOP, Cut Off Times, Membership, Identifiers, User Codes	Profiles
Rules	MOP selection, Clearing Cut-off, Liquidity Priority Selection Rules	Rules
Permissions	N/A	
Tasks	N/A	
Queues	N/A	

2.3.3.4.1 Profiles

These are the details of the required setup in GPP profiles for the Clearing Certification.

Note: For a detailed description of all the fields in the profiles, see GPP Online Help.

2.3.3.4.1.1 Method of Payment Profile - Single Office Setup

To successfully identify the local office and the debit MOP, when an incoming message is received from CHAPS, local office's BIC (provided in Block 1 of the incoming payment) needs to be set as a valid identifier for this MOP in the MOP profile.

These are the specific attributes that need to be defined in the Method of Payment profile for CHAPS.

Field	Value for CHAPS	Comment
Name	CHAPS	
Calendar	Relevant calendar or no value	
MOP Business Date	Current business day for the MOP	The business date can be changed manually or by an end-of-day task that advances the MOP business date to the next valid business date for the MOP.
Currency	GBP	
Settlement accounting	CHAPS settlement account	
Membership Required	Must be selected	
Membership type	MOP	

Field	Value for CHAPS	Comment
Send outgoing message	Must be selected	
Settlement account exists	Must be selected	
Processing Tab		
FIN copy service	STG	
Communication preferences	Wait for confirmation	

2.3.3.4.1.2 Method of Payment Profile - Multi Office Setup

For multi office setup the list of MOPs in the MOP selection of the indirect Office is included MOP EURO1 as the Multi Office MOP. When this MOP is selected, a payment is sent to EURO1 where the Sender is the direct participant.

Field	Value for office Y (direct participant)
Name	CHAPS
Calendar	Relevant calendar or no value
MOP Business Date	Current business day for the MOP
Currency	GBP
Settlement accounting	CHAPS settlement account in office Y
Membership Required	Must be selected
Membership type	MOP
Send outgoing message	Must be selected
Settlement account exists	Must be selected
Cross Office	Must be selected
Processing Tab	
FIN copy service	STG
Communication preferences	Wait for confirmation

2.3.3.4.1.3 Cut-off Times Profile

The Cut-off Times profile defines the latest time for transactions to be processed for CHAPS MOP.

The CHAPS calendar is required for the CHAPS Clearing. The calendar sets the holidays and weekends which are non-working days.

The CHAPS Calendar profile for the office is defined under System Setup > Geographic Settings > Calendars.

This is the suggested setup with specific attributes that need to be defined in the Cut-off profile for CHAPS.

Field	CHAPS for Customer Payment	CHAPS for Bank to Bank Payments	Comment
Cut-off name	CHAPS_cust	CHAPS_B2B	
Cut-off type	Clearing	Clearing	
Time zone	GMT	GMT	Time zone for aligning cut-off times
Description	CHAPS Clearing Cut-off for customer payments	CHAPS Clearing Cut-off for bank to bank payments	
Cut-off time	16:00	16:20	

2.3.3.4.1.4 Membership Profile

The CHAPS Membership profile defines whether the payment receiver and sender parties are members of the clearing house.

These are the specific attributes that need to be defined in the Membership profile for CHAPS.

Field	Value for CHAPS	Comment
MOP	CHAPS	
Type of Membership	Full member for CHAPS participants (or associates)	

2.3.3.4.1.5 Identifiers Profile

The CHAPS Identifiers profile is used to set up and view the party identifiers and settlement account information for the MOP.

These are the specific attributes that need to be defined in the Identifiers profile for CHAPS.

Field	Value for CHAPS	Comment
MOP	CHAPS	
Identifier	Bank BIC	
Settlement account	Office, Account number, Currency	In a multi office setup the identifier is defined only for the direct participant office

2.3.3.4.1.6 User Codes

User codes for liquidity priority codes should be defined for CHAPS payments tag 113 (for example, 50, 35).

Field	Value for CHAPS	Comment
Type	LIQ_PRTY	
Code	Example: UP	
Description	Example: CHAPS – Banking priority urgent	

2.3.3.4.2 Rules

These are examples of user defined rules.

2.3.3.4.2.1 MOP Selection

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
CHAPS_1	N/A	CHAPS MOP selection rule	Local office		[Sttl m Ccy]	=	GBP	SET MOP Profile CHAPS
				AND	[Msg tp]	IN	SWIFT_103, 'SWIFT_202'	
				AND	[Cdtr Agt ctry]	=	GB	

Clearing Cut Off

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
CHAPS_Cut	N/A	CHAPS cut off selection rule for MT103	Local office		[Cdt MOP]	=	CHAPS	SET CHAPS cut off (16:00)
				AND	[Msg tp]	=	SWIFT_103	
CHAPS_B2B	N/A	CHAPS cut off selection rule for MT202	Local office		[Cdt MOP]	=	CHAPS	SET CHAPS cut off B2B cut off (16:20)
				AND	[Msg tp]	=	SWIFT_202	

2.3.3.4.2.2 Liquidity Priority Selection Rules

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
CHAPS_PRIORITY_35	N/A	Set RR35 priority for all CHAPS payments above 10M	Local office		[Cdt MOP]	=	CHAPS	RR35

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
				AND	[Orgnl sttlm amt]	>=	10,000,000	

2.4 Single Payment APAC Clearing

2.4.1 Australia - RITS PDS

2.4.1.1 Overview

Reserve Bank Information and Transfer System (RITS) is Australia's interbank settlement system. Settlement takes place across RITS on a real-time gross settlement (RTGS) and batch basis.

The Australian dollar leg of foreign exchange transactions, either AUD flows arising from CLS or correspondent bank settlements and other large-value SWIFT transactions. These are made through the HVCS (High Value Clearing System). The HVCS is also termed the SWIFT Payment Delivery System (PDS).

Additional information related to RITS.

	Value
FINCopy service identifier code	PDS
Service Type	Y-Copy
Currency code	AUD (Australian dollars)
Operating hours	09:15 until 17:15 Monday to Friday
Cut-off time	SWIFT payments are cut-off 25 minutes prior to the end of the Evening Settlement Session

2.4.1.1.1 RITS Business Hours

RITS is available to Members for settlement across Exchange Settlement Accounts on days when banks generally are open for business in Sydney or Melbourne. RITS is closed on weekends and public holidays.

Core Business Hours are 9:15 to 17:15, Monday to Friday for those Participating Members that are not participating in the Evening Settlement Session, and 9:15 to 17:20/18:30/20:30 for those Participating Members that are participating in the Evening Settlement Session.

2.4.1.1.2 Supported Message Types

GPP supports the following SWIFT message types for RITS PDS:

- MT103
- MT103+
- MT202
- MT202COV
- MT012
- MT019

2.4.1.2 Inward/Outward Processing

- Incoming RITS payments are received from RBA and processed in GPP.
- Outgoing payments are received in GPP from Teller and Internet Banking interfaces, processed and sent to RBA. Outgoing payments that missed RITS cut-off time are moved to the Wait Release queue and processed on the next business day.

2.4.1.2.1 Confirmation/Rejection Messages

Confirmation/rejection messages (MT012/MT019) are expected to be received for outgoing messages. The payment waits for the message before proceeding to completion.

2.4.1.2.2 Reject/Return Messages

For an incoming payment which falls into one of the manual queues, GPP allows a user to select to reject/return the payment. GPP automatically generates an outward R-message linked to the original payment, and performs the following actions:

- Replace sender and receiver in block 1 and block 2
- Field 21 is mapped from field 20 of the original message
- Fields 50, 52, 53, 54, 56, 57, 59 and 70 remains the same as those of the original message
- Field 72 is indicated as /REJT or /RETN

The original message is sent to the Rejected or Returned queue.

2.4.1.2.3 Cancellation Messages

Cancellation messages (n92, n96) for PDS RTGS payments are sent via SWIFT MOP and follow the standard Cancellation Flow.

2.4.1.2.4 Incoming Payments

Each Payment Delivery System (PDS) member has an RTGS BIC (PDS BIC). The PDS BIC is the Bank published BIC, where the eighth letter is replaced with R.

For incoming payments where the sender is a RITS member with a PDS BIC:

1. GPP identifies the original MOP as RITS, based on FIN copy service.
2. GPP looks for the sender's party. GPP tries to find a party where the BIC equals the sender BIC (as PDS BICs are set as separate entities in the Parties profile, the search should be successful).
3. If field 52 is empty, the sender party BIC (if published), or name and address (if the BIC is not published) is added to field 52 to identify the sender in onwards messages, based on the first party profile found. This is achieved using Mapping out selection and mapping out rules.

2.4.1.2.5 Outgoing Payments

- If MOP is PDS, the PDS BIC (set in the Membership profile) of the first in credit chain is mapped to the message head of an outward payment message as message receiving bank.
- The published BIC and corresponding BSB (Bank State Branch) remains in the outward message as first in chain.
- PDS BIC is not used in block 4 of the payment message.

- When an incoming payment from PDS, has RTGS BIC as original sender and requires generation of an outgoing transaction (for example, request for charges) to be sent to SWIFT, the outgoing transaction is sent to the SWIFT BIC and not the RTGS BIC.
- SWIFT Payments (MT103 and MT202) sent by banks, with any combination of alphanumeric characters, provided to SWIFT standards field 20, should be unique for the bank within a 14 day period; and should not start with RITS, AXCS or ACLR.

2.4.1.2.6 BSB Processing

BSB (Bank State Branch) codes are defined in the NCC (National Clearing Codes) profile. The BSB number is a six digit numerical code used to identify an individual branch of a financial institution in Australia. It consists of three parts in the format of XXY-ZZZ:

- The First two digits (XX) specify the parent financial institution
- Third digit (Y) specifies the state where the branch is located
- Fourth, fifth and sixth digits (ZZZ) specify the branch location

In order to increase STP and ensure that every Australian RTGS payment is sent with a valid BSB, the following process is applied to incoming and outgoing messages.

- GPP searches for a BSB within the payment message.
 - If the BSB is found, GPP validates the BSB. When a valid BSB is found GPP enriches the message with the BSB from less structured formats (for example, F72) to first in Credit chain and then continues to process the payment.
 - If the BSB is not found or it is invalid, GPP sends the payment to Manual Repair.
- When repairing a BSB, for Australian RTGS payments a valid BSB code needs to be inserted in the Party Identifier field of the first in credit chain proceeded by AU (AUNNNNNN). This is to allow the receiving bank to identify the branch where the customer's account is conducted.

For MT202 messages:

- When a valid BSB code, cannot be identified on a PDS MT202 message the bank can send the payment to the receiving bank's default BSB.
- If the payment is identified as a Treasury payment and there is a second default BSB for MT202 transactions, the Treasury BSB must be used.

For more information on NCC validations, see GPP Business Guide Parties Identification.

2.4.1.2.7 Membership Validation Using Metro/Country BIC level

PDS members are members at Bic-6 level. Therefore, the membership check can be defined either on Metro (BIC-8) or country (BIC-6) level.

On the MOP profile when Check Main BIC in Membership is selected, the Membership check level is available, with the default set to Metro. The user can change it to country, allowing the membership check to be based on first 6 characters of the BIC.

The membership check is then performed using 8 or 6 characters of the BIC provided in the first in credit chain based on the set up in the MOP profile.

2.4.1.3 Flow

The flow process for all Y-Copy RTGS is the same and supported by GPP. As RITS is a Y-Copy service type, see [Y-Copy RTGS Flow Processes](#) for a description of the process.

2.4.1.4 Business Setup

	Setup	Additional Information
System Parameters	N/A	
Profiles	MOP, Cut Off Times, Membership, Identifiers, National Clearing Codes, Parties	Profiles
Rules	MOP selection, Clearing Cut-off, Missed Clearing Cut-off, Party Details Enrichment	Rules
Permissions	As per customer's requirement	
Tasks	N/A	
Queues	N/A	

2.4.1.4.1 Profiles

These are the details of the required setup in GPP profiles for the Clearing Certification.

Note: For a detailed description of all the fields in the profiles, see GPP Online Help.

2.4.1.4.1.1 Method of Payment Profile

In order to successfully identify the local office and the debit MOP, when received an incoming payment from PDS, local office PDS BIC (provided in block 1 of the incoming payment) should be set as a valid identifier for this MOP.

These are the specific attributes that need to be defined in the Method of Payment profile for RITS Clearing.

Field	Value for AU RITS	Comment
Name	PDS	
Description	AU PDS Clearing MOP (RITS)	
Calendar	PDS_AU	If no calendar is assigned, the default calendar for the office is used.
MOP Business Date	Current business day for the MOP	
Value date extension	7	Payments with value dates between the latest value date and the value date extension is validated for the particular MOP and then sent to the Schedule queue.
Currency	AUD	
Settlement accounting	PDS settlement account	

Field	Value for AU RITS	Comment
Membership Required	Must be selected	
Membership type	MOP	
Send outgoing message	Must be selected	
Settlement account exists	Must be selected	
Processing Tab		
FIN copy service	PDS	
Communication preferences	Wait for confirmation	

2.4.1.4.1.2 Cut-off Times Profile

The Cut-off Times profile defines the latest time for transactions to be processed for PDS MOP.

If cut-off dates are subject to change each year, there are two additional options to implement the different cut-off times:

- Define one cut-off profile and change manually the final cut-off in the profile based on the RBA notification.
- For a single cut-off profile, define each year a cut-off exception for the period of the summer/winter cut-off schedule.

The following settings is defined for the PDS Cut-off Times Profiles.

2.4.1.4.1.3 PDS Winter Cut-off

Field	Value for AU RITS	Comment
Department	TBD	
Office	AU1	
Cut-off name	PDS_WINT	
Cut-off type	Clearing	
Time zone	AEST	Australia Eastern Standard Time (GMT+10)
Description	PDS AU Winter Clearing Cut-off	
Interim cut-off time	16:30	From this time until the final cut-off, only MT202 is accepted
Final cut-off time	18:05	

2.4.1.4.1.3.1 PDS Summer Cut-off

Label in Profile	Value for AU RITS	Comment
Department	TBD	
Office	AU1	
Cut-off name	PDS_SUMM	

Label in Profile	Value for AU RITS	Comment
Cut-off type	Clearing	
Time zone	AEST	Australia Eastern Standard Time (GMT+10)
Description	PDS AU Summer Clearing Cut-off	
Interim cut-off time	16:30	From this time until the final cut-off, only MT202 is accepted
Final cut-off time	20:05	

2.4.1.4.1.4 Memberships

The PDS Membership profile defines whether the payment receiver and sender parties are members of the clearing house.

Each PDS member has a RTGS BIC (PDS BIC). The PDS BIC is the Bank published BIC, where the eighth letter is replaced with R.

These are the specific attributes that need to be defined in the Membership profile for AU RITS Clearing.

Field	Value for AU RITS	Comment
MOP	PDS	
Type of Membership	Full member for AU RITS participants (or associates)	PDS BICs are set as full members of RITS.

2.4.1.4.1.5 Identifiers

PDS Identifier is used to set up and view the party identifiers and settlement account information for the MOP.

These are the specific attributes that need to be defined in the Identifiers profile for AU RITS Clearing.

Label in Profile	Value for AU RITS	Comment
MOP	PDS	
Identifier	<PDS BIC>	
Settlement Account: Office	AU1	

2.4.1.4.1.6 National Clearing Codes (NCC)

The National Clearing Codes (NCC) profile is used to manage the list of BSB Codes used by banks in AU. The NCC profile supports two indicators for the BSB:

- Default NCC
- Treasury NCC

These are the specific attributes that need to be defined in the NCC profile for AU RITS Clearing.

Label in Profile	Value for AU RITS	Comment
Clearing system ID	AUBSB	Australia – AUBSB
Member ID		BSB Code

2.4.1.4.1.7 Parties Profile

The Parties profile maintains customer data.

For AU RITS Clearing, a new party needs to be defined with the PDS BIC.

Label in Profile	Value for AU RITS	Comment
Unpublished BIC	Checkbox Selected	For PDS BICs that are separate entities

2.4.1.4.2 Rules

2.4.1.4.2.1 MOP Selection

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
PDS_MOP	N/A	PDS MOP Selection Rule	AU1		[Sttlm Ccy]	=	AUD	SET MOP Profile AU1^PDS
				AND	[Msg tp]	IN	SWIFT_103, 'SWIFT_202'	
				AND	[Cdtr ctry]	=	AU	

2.4.1.4.2.2 Clearing Cut-off

In the following example, winter time is set to 5.10.2014-4.4.2015, any create date in this period returns TRUE.

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	
WINTER_SCHEDULED	N/A	Base condition for winter cut-off period	AU1		(DATE_EXTRACT(YEAR,[P_CREATE_DT])	=	2014	
				and	(DATE_EXTRACT(DAY,[P_CREATE_DT])	>=	5)
				and	DATE_EXTRACT(MONTH,[P_CREATE_DT])	=	10)

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	
				or	(DATE_EXTRACT(MONTH,[P_CREATE_DT])	>	10)
				or	DATE_EXTRACT(YEAR,[P_CREATE_DT]	=	2015	
				and	(DATE_EXTRACT(DAY,[P_CREATE_DT]	<=	4	
				and	DATE_EXTRACT(MONTH,[P_CREATE_DT]	=	4	
				or	DATE_EXTRACT(MONTH,[P_CREATE_DT]	<	4)
WINT_CUTOFF	N/A	PDS Clearing cut-off - winter	AU1		[Cdt MOP]	=	PDS	
				AND	BASE_CONDITION(WINTER_SCHEDULE)	=	TRUE	
SUMM_CUTOFF	N/A	PDS Clearing cut-off - summer	AU1		[Cdt MOP]	=	PDS	
				AND	BASE_CONDITION(WINTER_SCHEDULE)	=	FALSE	

2.4.1.4.2.3 Missed Clearing Cut-off

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
PDS_202_CUTOFF		Allow treasury payments during interim cut-off	AU1		[Cdt MOP]	=	PDS	
				AND	[Msg tp]	=	SWIFT_202	

2.4.1.4.2.4 Party Details Enrichment

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
ENRICHDEFAULTNCC	Party details enrich	Enrich default NCC if BIC exist	AU1, AU2		[Msg tp]	in	SWIFT_103, SWIFT_202	SET party type

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
	hment	and NCC doesn't exist		AND	[First in cdt chain BIC]	Is not	Empty	FIRSTI NCR ... usage
				AND	[First in cdt chain NCC]	is	Empty	DEFAULT_NCC
				AND	[Cdt MOP]	=	PDS	
ENRICHTR EASURYNC C	Party details enrichment	Enrich Treasury NCC if BIC exist and NCC doesn't exist and BIC6 of F57&F58 or F56&F58 are equal	AU1, AU2		[Msg tp]	=	SWIFT_202	SET party type
				AND	[First in cdt chain BIC]	Is not	Empty	FIRSTI NCR ... usage
				AND	[First in cdt chain NCC]	Is	Empty	TREASURY_NCC
				AND	(SUBSTRING([Cdt tr BIC],0,6)	=	SUBSTRING([Cdt tr agt BIC],0,6)	
				OR	SUBSTRING([Cdt tr BIC],0,6)	=	SUBSTRING([Intrm y agt BIC],0,6))
				AND	[Cdt MOP]	=	PDS	

2.4.2 Australia - RITS Austraclear

2.4.2.1 Overview

Austraclear is an electronic depository and settlement system for transferring ownership of financial securities (such as commonwealth government and semi-government securities, and private sector securities) between banks and financial institutions.

Austraclear Reserve Bank Information and Transfer (RITS) is Australia's high-value payments system, which is used to settle payment obligations on a real-time gross settlement (RTGS) basis.

Exchange Settlement Accounts (ESA) are accounts held with Australia's central bank, the RBA (Reserve Bank of Australia), for the settlement of payment obligations to each other.

After GPP matches a transaction, an interbank settlement request is sent to RITS for settlement. Once the payment is settled across ESAs, RITS notifies Austraclear, which then settles the transaction.

Additional information related to RITS:

	Value
FINCopy service identifier code	SWIFT FIN Copy service
Service Type	Y-Copy
Currency code	AUD (Australian dollars)
Operating hours	09:15 until 17:15 Monday to Friday

2.4.2.1.1 RITS Business Hours

Hours	Description
07:30-08:45	Morning Settlement Session
08:45 to 9:15	Morning Processing
09:15 to 16:30	Daily Settlement Session
16:30 to 17:15	Settlement Close Session
17:15 to 17:20	Interim Session
17:20 to 22:00	Evening Settlement Session
22:00 to 22:30	Reports Session
22:30 to 07:30	Overnight Enquiry Session (the following RITS business day)

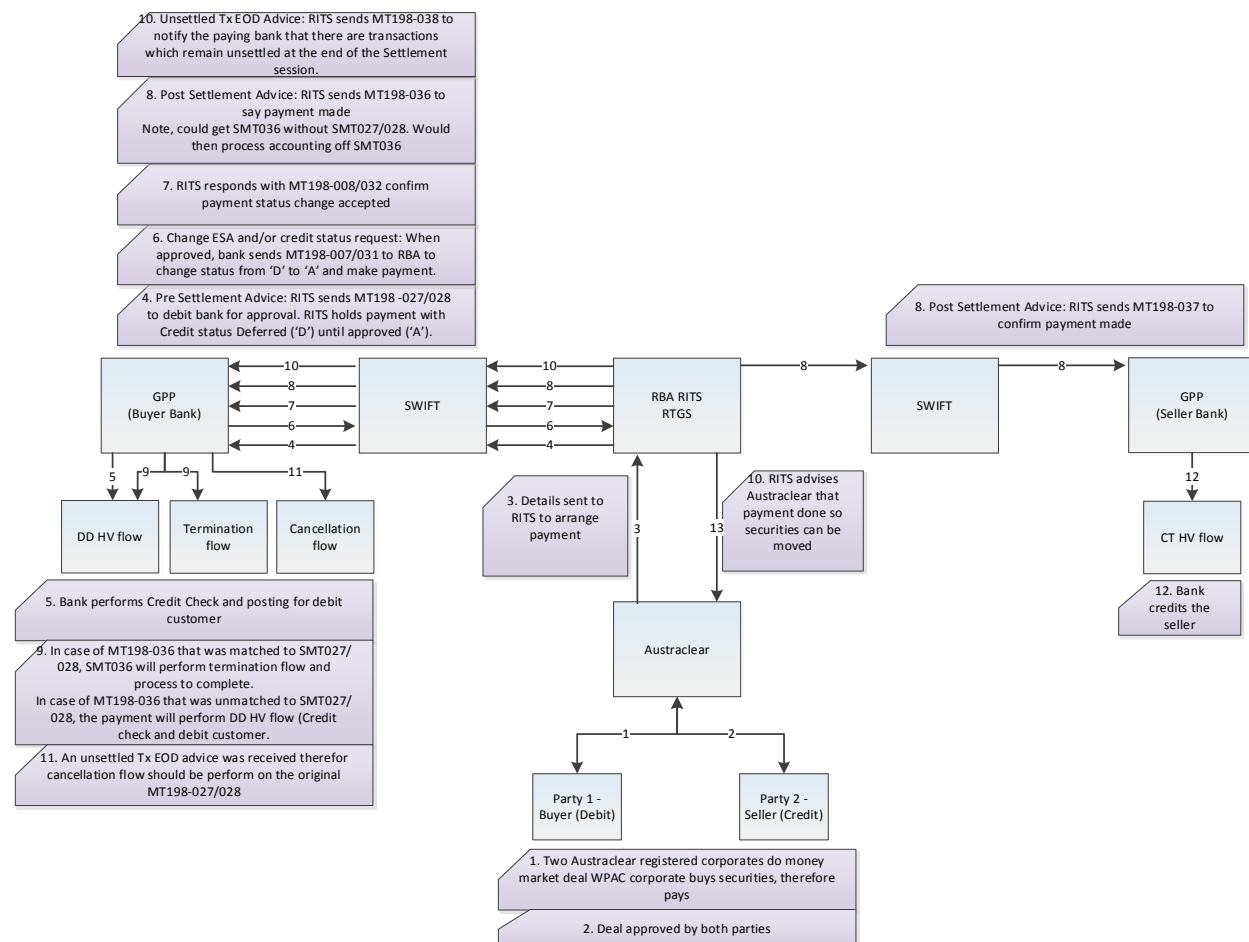
2.4.2.1.2 Supported Message Types

GPP supports SWIFT message type Proprietary Message (MT198) for Austraclear RITS, with the following message sub types:

- SMT027 – Inward direct debit single payment
- SMT028 – Inward direct debit single payment
- SMT036 – Inward direct debit single payment

- SMT037 – Inward credit transfer single payment
- SMT038 – Inward direct debit single payment

2.4.2.1.3 RITS Payment Flow



2.4.2.2 Inward Processing

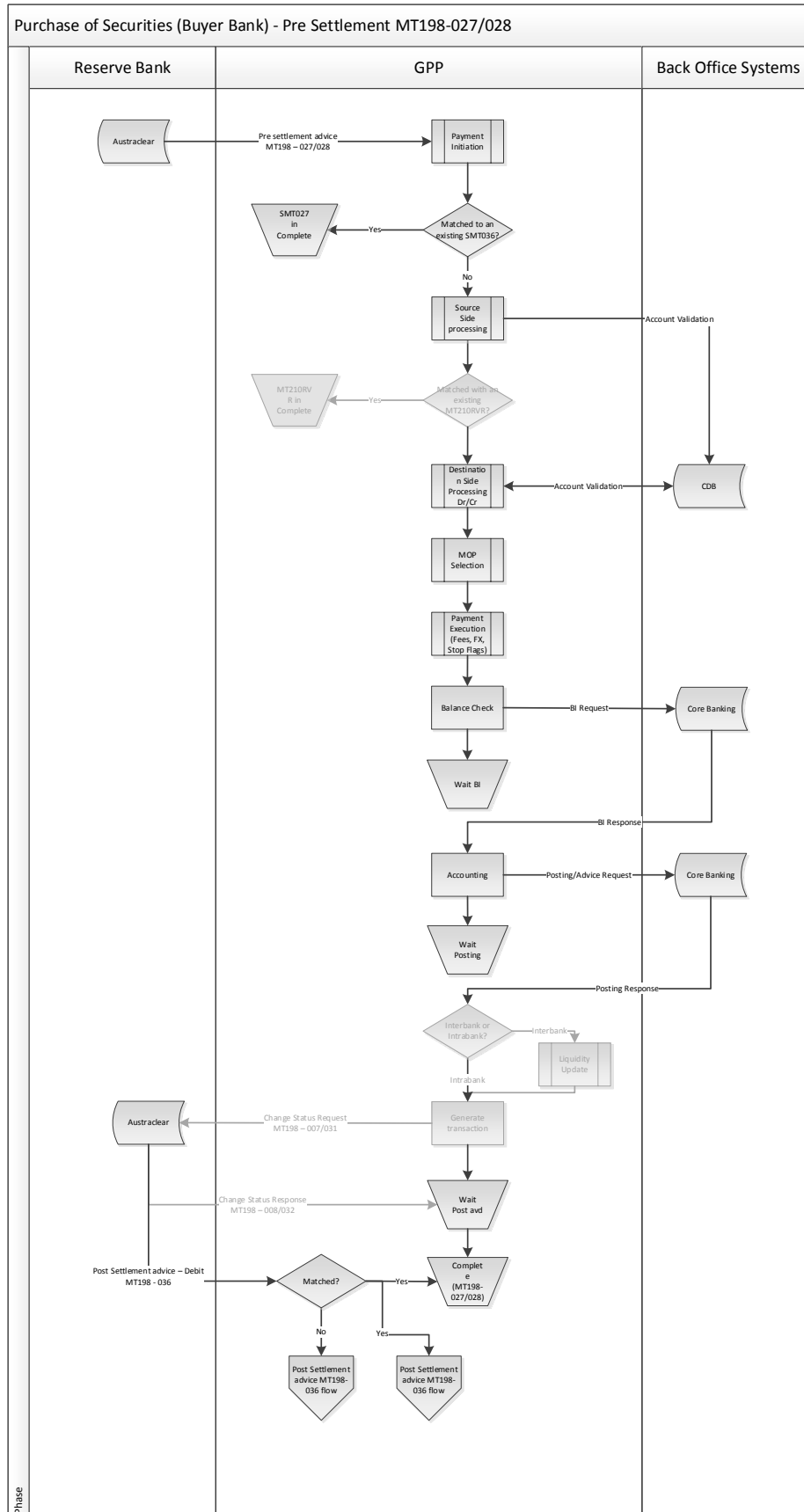
2.4.2.2.1 Purchase of Securities (Buyer Bank)

2.4.2.2.1.1 Pre-Settlement Debit (MT198-027/028)

When a bank customer (or a bank) buys a security in Austraclear, the paying bank's ESA account is debited to settle the Austraclear transaction.

A bank's ESA can be debited directly by the Reserve Bank, or, the Reserve Bank can request the bank to update the credit status and thereby authorize the Reserve bank to debit the bank's ESA.

The Reserve Bank requires bank's approval to debit their ESA; this approval is agreed upon in advance and is usually pre-determined. Immediately debiting the ESA involves a credit risk on behalf of the bank, therefore if the underlying Austraclear transaction was initiated by a bank's customer (instead of the bank itself), then bank approval is required prior to debiting the ESA.



Details of the flow:

When the bank receives a Pre-Settlement Advice MT198-027 or MT198-028, GPP invokes the single payment processing flow to perform funds availability for the debit customer.

1. Payment Initiation:

- GPP parses the message (MT198-027/028) and attempts to match the message to a previously received MT198-036.

2. Duplicate Message: GPP checks for duplicated Pre-Settlement Advice MT198-027 or MT198-028 messages. These are messages with the same message type and values displayed in Field 20 and Field 21.

- If a duplicate message is found:
 - ❖ And a matching (to MT198-036) message is found, the MT198-027/028 routes to Rejected queue.
 - ❖ And a matching (to MT198-036) is not found, the original MT MT198-027/028 routes to DUPEX.

3. Party Processing: The customer's account to be debited is in Field 25 of the MT198-027/028. GPP performs debit account derivation and Account Lookup validation based on the account sent in Field 25 of the received message.

Note: If an account is not found in the GPP repository, GPP interacts with other bank systems via the Account Lookup interface, which provides the relevant credit customer details.

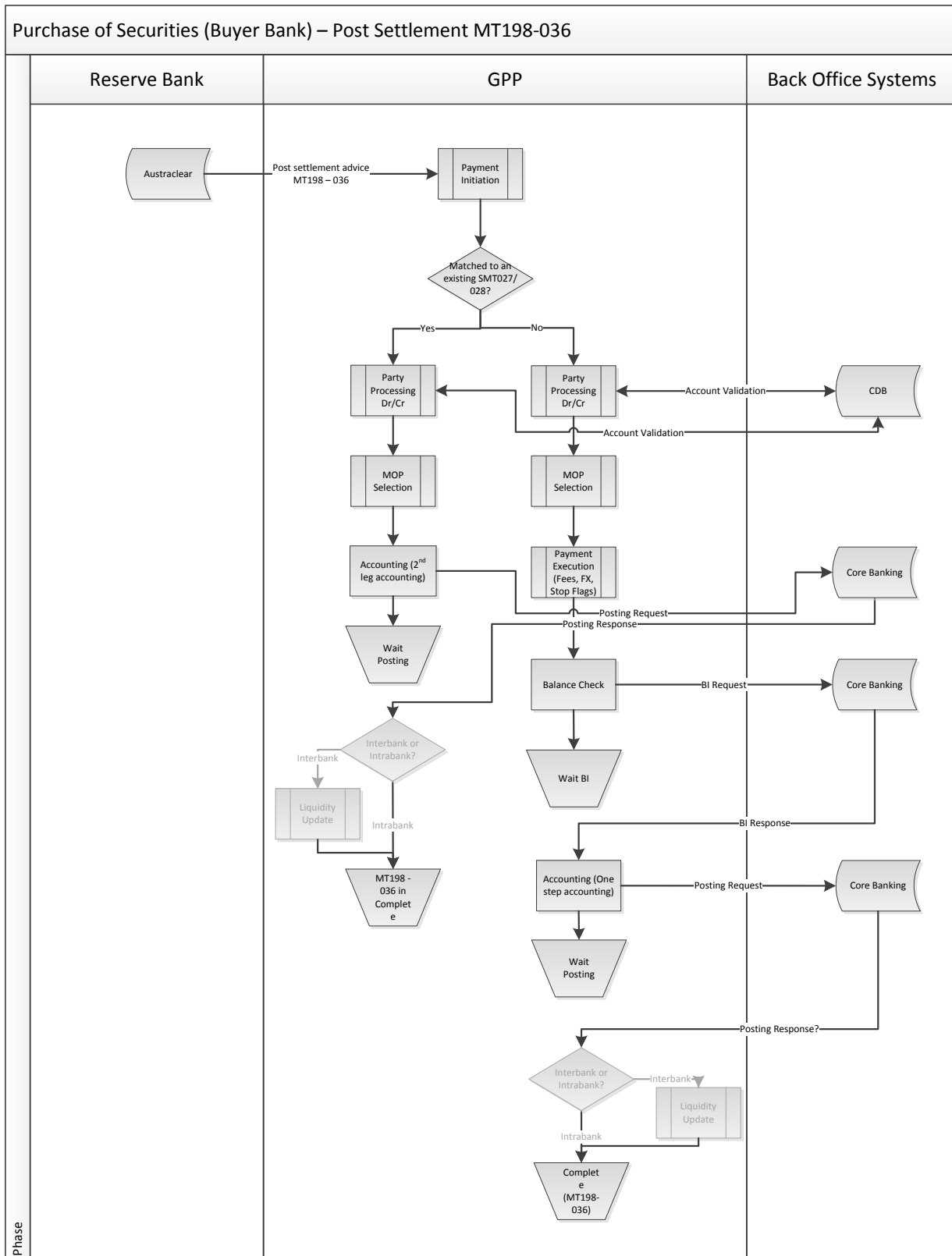
- If an account exists in GPP, GPP loads and validates the account.
 - If an account does not exist in GPP, GPP tries Account Lookup.
 - ❖ If an account is found, GPP continues to process the message.
 - ❖ If an account is not found, the message routes to Repair queue.
- 4. Balance Check:** GPP performs Balance Inquiry on the customer's account derived from Field 25 of the received message.
- 5. Accounting (First Leg):** GPP initiates an account posting request for the customer's account derived from Field 25 of the received message, and routes the message to MP Wait queue, while it waits for a posting response. The Second Leg (MT198-036) uses the Post Settlement Accounting flow.
- 6. After receiving a positive accounting Response,** the message waits for the Post Settlement Advice in the Wait Post Settlement Advice queue.
- 7. Post Settlement Advice (Debit) Completion:**
- When a Post Settlement is received, and matched to the original Pre-Settlement Advice (MT198-027/028), the original message routes to Complete status.
 - When the Pre-Advice is parked in a Wait queue and post-advice is received and matched before the pre-advice reaches final status (MT198-036 is received before the MT198-027/028, which may already be in a (non-Wait Post advice) Wait queue):
 - ❖ If the pre-advice completes successfully (on completion of pre-advice), it routes automatically to Complete status. GPP checks whether the pre-advice is matched to a post-advice:
 - If it is matched successfully, GPP routes the pre-advice to Complete status.
 - If it is not matched, GPP routes the pre-advice to Wait Confirmation status.
 - ❖ If the pre-advice fails processing, its status indicates a failure regardless of whether the pre-advice is matched or not to a post-settlement advice. The user can either repair the failure and re-submit the pre-advice, or fix it outside of GPP.

2.4.2.2.1.2 Post Settlement Debit (MT198-036)

If the Paying Bank has chosen to be notified upon settlement for debit transactions, a Post-Settlement Advice message is forwarded to the Paying Bank's PPS (Proprietary Payments System).

The message also contains the Paying Client bank account number details that were passed in the Settlement Request from Austraclear.

This advice is sent to the Paying Bank to advise the settlement of the debit transaction.



Details of the flow:

When the bank's ESA is debited, the Reserve Bank sends MT198-036 to confirm that the debit has been posted to the account, for cases when the Post-Settlement Advice SMT036 received prior to the pre-settlement advice.

1. Payment Initiation:
 - GPP parses the message (MT198-036).
2. Duplicate Message: GPP checks for duplicated Post-Settlement Advice MT198-036 messages. These are messages with the same message type and values displayed in Field 20 or Field 21.
 - If a duplicate message is found:
 - ❖ And a matching (to MT198-027/028) message is found, the MT198-036 routes to Rejected queue.
 - ❖ And a matching (to MT198-027/028) is not found, the original MT198-036 routes to DUPEX.
3. Party Processing: The customer's account to be debited is in Field 25 of the MT198-036. GPP performs debit account derivation and Account Lookup validation based on the account sent in Field 25 of the received message.

Note: If an account is not found in the GPP repository, GPP interacts with other bank systems via the Account Lookup interface, which provides the relevant credit customer details.

- If an account is found in GPP, GPP loads and validates the account.
- If an account is not found in GPP, then GPP performs Account Lookup.
 - ❖ If an account is found, GPP continues to process the message.
 - ❖ If an account is not found in Account Lookup, the message routes to the Repair queue.
- 4. Balance Check: GPP performs Balance Inquiry on the customer's account derived from Field 25 of the received message (following the standard Balance inquiry process/Interface).
- 5. Accounting (One step accounting): GPP initiates an account posting request for the customer's account derived from Field 25 of the received message.
 - GPP credits the settlement account (ESA).
 - The transaction waits in MP Wait queue for the posting response (following the standard HV posting interface process).
- 6. Completion: After receiving the posting response, the message routes to Complete status.

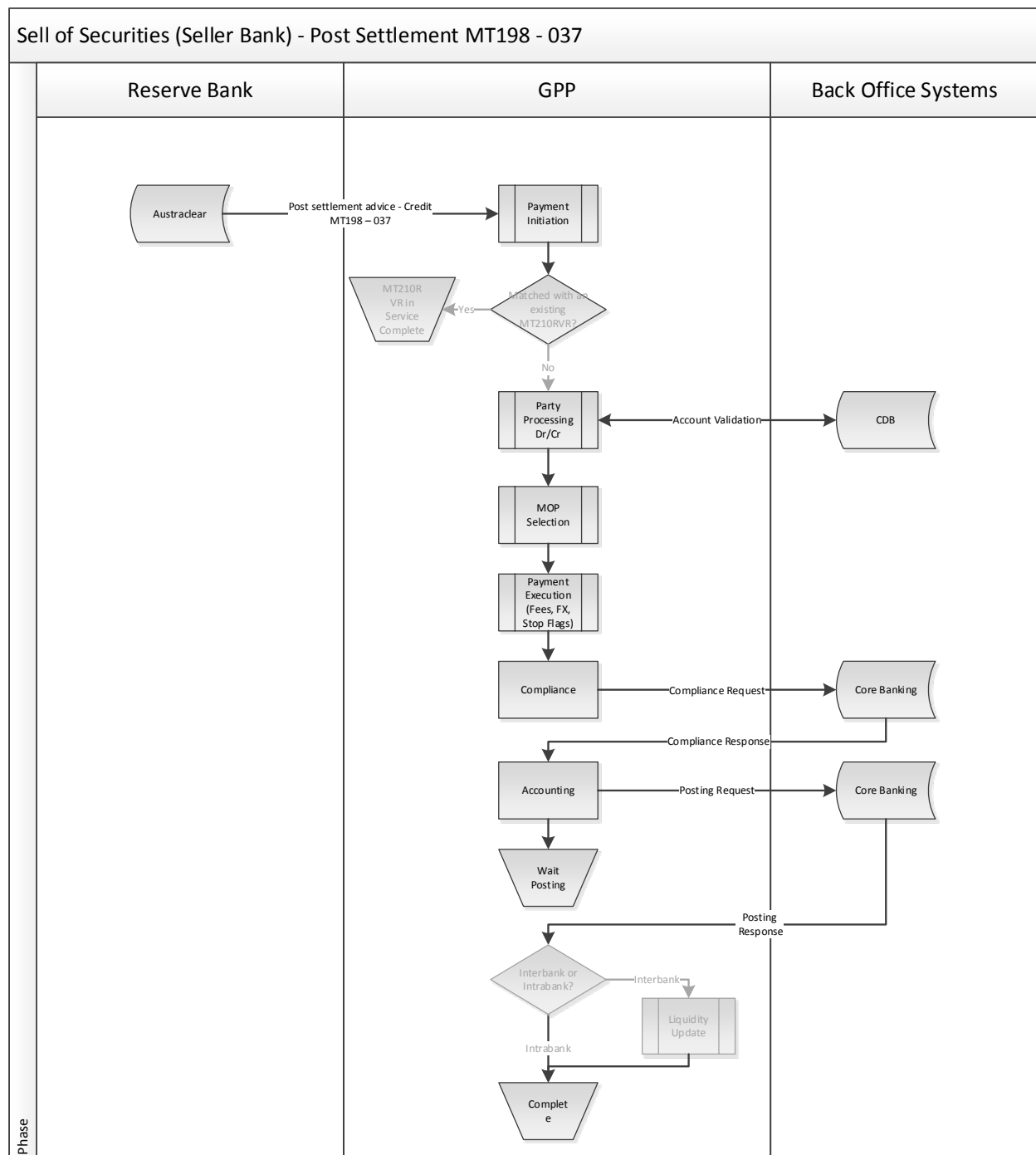
2.4.2.2.2 Sale of Securities (Seller Bank)**2.4.2.2.2.1 Post Settlement Credit (MT198-037)**

When a customer of the bank (or the bank itself) enters a trade to sell a security in Austraclear, the bank's ESA account is credited to settle the Austraclear transaction.

The bank receives a post settlement credit (MT198-037):

- GPP debits the ESA account.
- GPP credits the account in Field 25.
- GPP performs Account Lookup, and then performs account posting.

Note: If an account is not found in the GPP repository, GPP interacts with other bank systems via the Account Lookup interface, which provides the relevant credit customer details.



Details of the flow:

When the bank's ESA is credited, the Reserve Bank sends a post settlement credit (MT198-037) to the Receiving Bank to advise the settlement of the credit transaction. GPP invokes the HV processing flow to credit the receiving client RITS (Reserve Bank Information and Transfer) cash account.

1. Payment initiation:

- GPP identifies that the payment was received from Austraclear.

- GPP identifies the settlement (ESA) account to debit.
- 2. Duplicated messages are regarded as messages with the same message type and values displayed in Field 20 or Field 21. As a message already received previously in the system, such messages will go to DUPEX.
- 3. Party Processing: The customer's account to be credited displays in Field 25 of the MT198-027/029. GPP performs credit account derivation and Account Lookup validation based on the account sent in Field 25 of the received message.

Note: If an account is not found in the GPP repository, GPP interacts with other bank systems via the Account Lookup interface, which provides the relevant credit customer details.

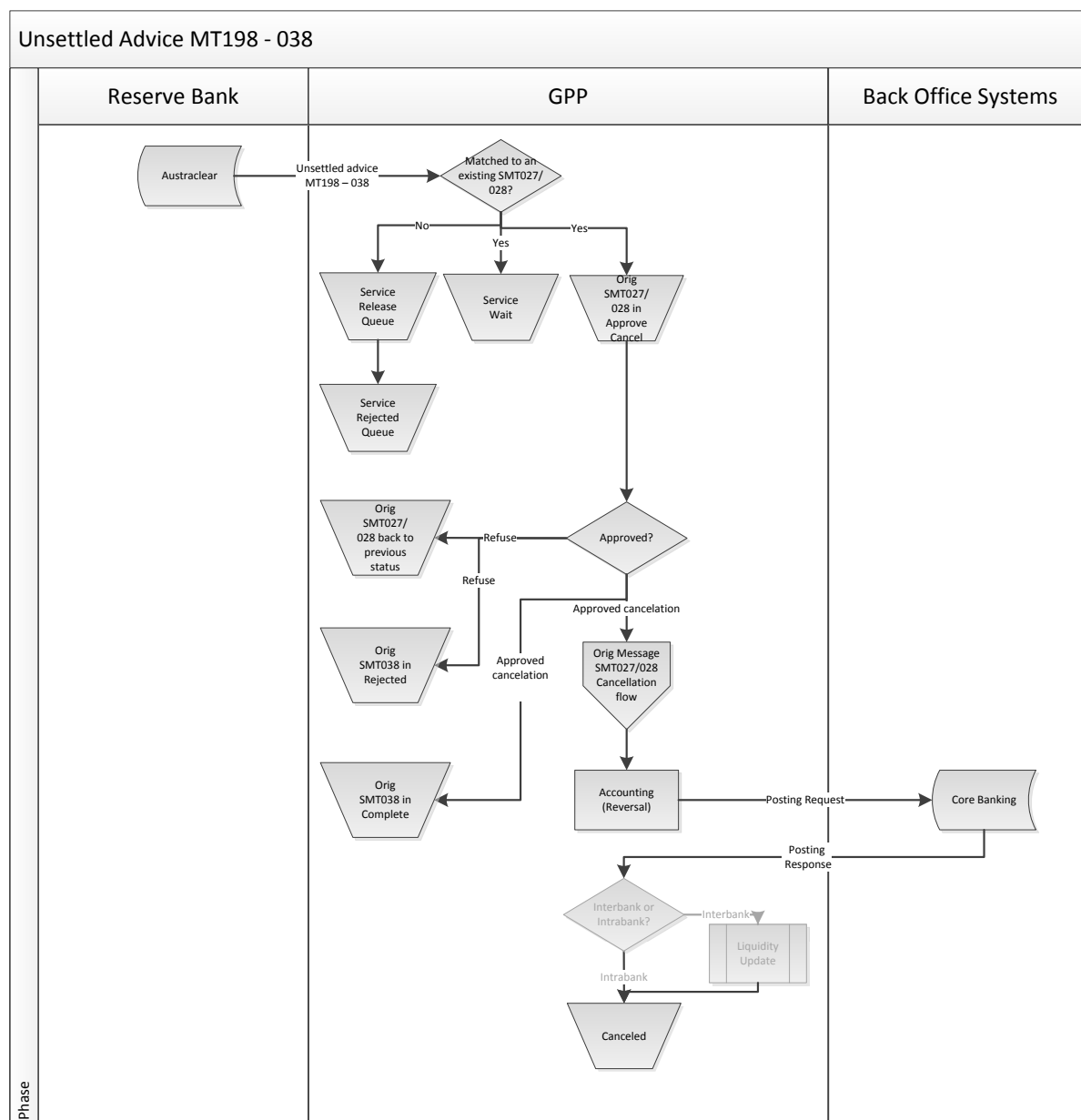
- If an account is found in GPP, GPP loads and validates the account.
- If an account is not found in GPP, then GPP attempts Account Lookup.
 - ❖ If an account is found in Account Lookup, the flow continues.
 - ❖ If an account is not found in Account Lookup, the payment routes to Repair status (following the standard HV Account Lookup process).
- 4. Accounting (One-step accounting):
 - GPP initiates an account posting request to debit the ESA account and credit the customer's account derived from Field 25 of the received message.
 - The transaction waits in MP Wait queue for a posting response.
- 5. Completion: After receiving the posting response, the message routes to Complete status.

2.4.2.2.3 Exception Handling

2.4.2.2.3.1 Unsettled End of Day Advice (MT198-038)

At the end of the day, if a payment is not settled (for example, post settlement debit (MT198-036) was not sent), RITS sends an Unsettled End-of-Day Advice (MT198-038) message.

The original payment (MT198-027/028) is in Pending status in GPP. The bank waits for a response from the RBA. When received, the transaction is rejected.



Details of the flow:

1. Unsettled Advice:

- GPP attempts to match the MT198-038 to MT198-027/028.
 - If a match was not found, the message routes to Service Release queue for investigation.
 - If a match was found:
 - GPP creates a link between these messages.
 - GPP routes the unsettled message to Service Wait.
 - GPP routes the message (SMT027/028) to Approve Cancel queue, where an authorized user approves the cancellation of the original MT198-027/028 payment.

2. Cancellation: An authorized user can refuse or approve the cancellation of the original MT198-027/028 payment.
 - ❖ If the user refuses the cancellation:
 - MT198-027 or MT198-028 routes back to previous status.
 - MT198-038 processes to the Rejected status.
 - ❖ If the user approves the cancellation:
 - MT198-038 processes to the Complete status.
 - Cancellation flow is triggered on the original transaction (MT198-027/028).
3. Accounting: GPP initiates an Account Posting Request to reverse the entries performed as part of the pre-settlement advice flow.
 - The original SMT027/028 performs reverse accounting.
 - The transaction waits in the MP Wait queue for the posting response (following the standard HV posting interface process).
4. Completion: After receiving the posting response, the original SMT027/028 message routes to the Cancel status.
 - From the Service Release queue, the user can click Release to release the advice, which indicates that the message was reviewed.

2.4.2.2.4 Accounting

This table shows the related accounting information for each flow and message sub type:

Flow	Message Sub Type	Accounting Model	Posting Debit account	Posting Credit account	Debit Account	Credit Account	Exception Handling
Pre-Settlement Advice – Debit	SMT027/028	Two Step Accounting – Pre-settlement	Customer Account	Suspense Account	Customer Account	ESA Account	Reverse Posting in case of Cancellation flow
Post Settlement Advice – Debit (Matched to SMT027/028)	SMT036	Two Step Accounting – Post settlement	Suspense Account	ESA Account	Customer Account	ESA Account	N/A
Post Settlement Advice – Debit arriving before Pre-Settlement advice	SMT036	One Step Accounting – Post settlement	Customer Account	ESA Account	Customer Account	ESA Account	N/A

Flow	Message Sub Type	Accounting Model	Posting Debit account	Posting Credit account	Debit Account	Credit Account	Exception Handling
Post Settlement Advice - Credit	SMT037	One Step Accounting – Post settlement	ESA Account	Customer Account	ESA Account	Customer Account	N/A
Cancellation Flow	SMT027/028	One Step Accounting – Cancellation flow	Suspense Account	Customer Account	Customer Account	ESA Account	N/A
	SMT038	N/A	N/A	N/A	N/A	N/A	N/A

2.4.2.3 Business Setup

	Setup	Additional Information
System Parameters	N/A	
Profiles	Method of Payments, Identifier	Profiles
Rules	Posting Suspense Account Selection, Suspense Account as Posting Credit Account, Suspense Account as Posting Debit Account, Compliance Validation	Rules
Permissions	N/A	
Tasks	N/A	
Queues	Wait ACK, Wait Post Settlement Advice, Wait Confirmation, Wait MP, Service Release, Approve Cancel	

2.4.2.3.1 Profiles

2.4.2.3.1.1 Method of Payments Profile

For MT198 messages received from RITS RTGS, GPP uses the RITS MOP (Method of Payment).

These attributes must be defined in the MOP profile for RITS:

Field	Value for RITS	Comment
Name	RITS	
Description	HV Australian RITS RTGS	
Calendar	RTGS	MOP calendar name
Currency	AUD	Three-character ISO currency code for the MOP
Earliest value date	0	Number of days that the transaction can be sent in advance to the clearing for the settlement date.
Latest value date	5	Number of days that the transaction must be sent in advance to the clearing to meet the settlement date.

Field	Value for RITS	Comment
Send outgoing message	Not selected	If selected, an outgoing payment message is required for the MOP.
Multiple cycles	No	Select if MOP has multiple settlement cycles during the day.
Settlement account exists	Yes	If selected, a settlement account has been defined for the MOP.
Processing		
FIN Copy Service	SWIFT FIN service	
Communication preferences	None	No wait for ACK or Confirmation is required to continue processing.

2.4.2.3.1.2 Identifier Profile

The Identifiers profile is used to set up and view the bank's identifiers in RITS, and settlement account information for the MOP.

These are the specific attributes that need to be defined in the Identifier profile for Austraclear RITS.

Field	Value for RITS
Office	The bank's office
MOP	RITS
Identifier	BIC used by RITS to identify the bank
Settlement Account	Settlement Account number of the bank's office

2.4.2.3.2 Rules

2.4.2.3.2.1 Posting Suspense Account Selection Rule – 207

The Posting Suspense Account Selection Rule must be defined to enable derivation of a suspense account.

2.4.2.3.2.2 Suspense Account as Posting Credit Account

Rule Attribute	Setup Guidelines
Rule Name	RITS_SA_MAIN_CR
Rule Sub Type	SA_MAIN_CR
Description	Credit side posting (on suspense account)
Rule conditions	D_POSTING_INVOCATION_CONTEXT = BEFORE_IN_COMPLETE_OR_OUT_SEND AND P_MSG_CLASS = DD AND P_MSG_TYPE in (198_027,198_028)
Action	Account UID

2.4.2.3.2.3 Suspense Account as Posting Debit Account

Rule Attribute	Setup Guidelines
Rule Name	RITS_SA_MAIN_DR
Rule Sub Type	SA_MAIN_DR
Description	Debit side posting (on suspense account)
Rule conditions	D_POSTING_INVOCATION_CONTEXT BEFORE_IN_COMPLETE_OR_OUT_SEND AND P_MSG_CLASS = DD AND P_MSG_TYPE = 198_036 AND MF_RITS_FLOW = S
Action	Account UID

2.4.2.3.2.4 Compliance Validation - 21

Note: The Compliance Validation rule is a bypass rule and must be defined to enable GPP to skip validation if warranted.

Rule Attribute	Setup Guidelines
Rule Name	RITS_COMP_BYPASS
Description	RITS Compliance Validation Rule Bypass
Rule conditions	P_CDT_MOP = RITS OR P_DBT_MOP = RITS
Action	BYPASS

2.4.3 New Zealand - HVCS

2.4.3.1 Overview

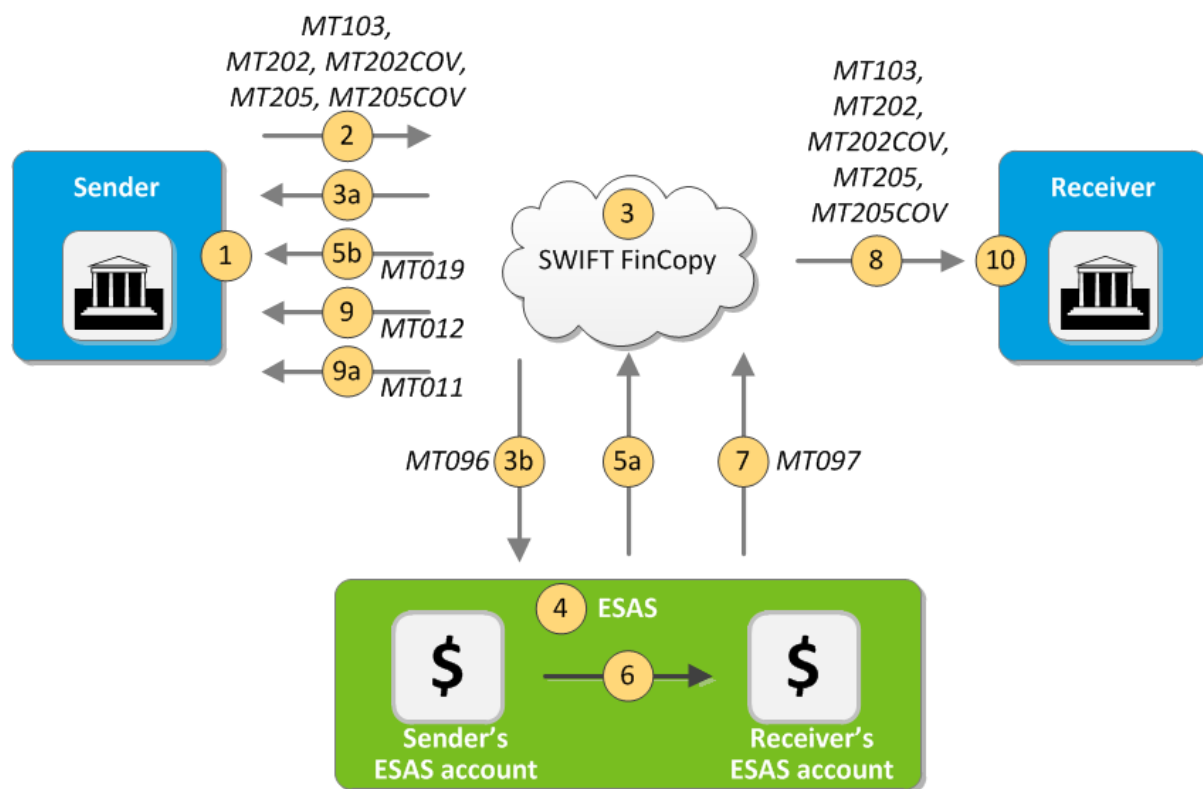
HVCS (High Value Clearing System) is an electronic payment service used for high value inter-bank transactions and for customer transactions where timeliness is important. Settlement is on a real-time, transaction by transaction basis through ESAS.

The system has been operated by the Reserve Bank since October 2001 using the ESAS/SWIFT interface, which in turn uses SWIFT FINCopy to pass settlement requests, authorizations and confirmations between HVCS Participants.

ESAS is the system that:

- Holds the settlement accounts of financial institutions
- Enables the sender of an HVCS transaction to settle the value of the transaction by transferring the value from the sender's settlement account to the receiver's settlement account.

ESAS is owned, operated, and managed by the Reserve Bank.



Additional information related to HVCS:

	Value
FIN Copy service identifier code	AVP
Service Type	FINCopy
Currency code	NZD
Bank info party code	NZ2SAWPACNZ2WXXX
Operating hours of HVCS	Monday to Friday - from 09:00
Cut-off time	Cut-off time for same day settlement: Customer payments: 16:45 Bank to Bank payments: 10:00 (winter)/08:00 (summer time)
Inward Message Types	MT103, MT202, MT205, MT205COV, MT202 COV, MT012, MT019
Outward Message Types	MT103, MT202, MT202COV, MT205, MT205

2.4.3.1.1 Same Day Cleared Payments (SCP) Operations

SCP is a product offered on the HVCS for customer payments to a domestic payee. These payments are urgent and required to be transferred in half an hour.

2.4.3.2 Flow Processes

The flow process for all Y-Copy RTGS is the same and supported by GPP. As NZ SCP is a Y-Copy service type, see [Y-Copy RTGS Flow Processes](#) for a description of the process.

2.4.3.3 Inward/Outward Processing

2.4.3.3.1 Outward RTGS Payments

Outward customer payments to HVCS are held in GPP at the start of the RTGS day (09:00) as per agreement between the NZ banks. Hold time is configured by the bank to hold these payments.

Outward CLS payments use the 'pay by time' functionality (in GPP SLA profile). The CLS time may be received in field 13C or in field 72.

Field 52A is removed by GPP for outgoing SCP RTGS payments.

Outward HVCS payments perform posting after MT012/MT019 confirmation is received.

2.4.3.3.2 Inward RTGS Payments

Incoming payments from RTGS can result as one of the following:

- BOOK payment to bank's customers
- RTGS payment (for example, agency bank)
- SWIFT payment to country correspondent.

For inward SCP payments, the debit value date is set as the processing date.

Fees are not charged for inward and return SCP transactions.

2.4.3.3.3 Method of Payment

Note: HVCS supports only same day value payments. No future dated payment is received from HVCS or sent to HVCS. Payments may be routed to Schedule queue due to missed cut off for outgoing payments to SCP.

Value date related set up on the Method of Payment profile ensures that:

- Backdated payments are not directed to HVCS
- Future dated payments are not sent to HVCS in advance. Future dated payments can be warehoused in GPP.

2.4.3.3.4 Confirmation/Rejection Messages

Confirmation/rejection messages (MT012/MT019) are expected to be received for outgoing messages. Payments wait for the message before proceeding to completion.

2.4.3.3.5 Reject/Return Messages

For an incoming payment, which falls into one of the manual queues, GPP allows a user to reject/return the payment. GPP automatically generates an outward R-message linked to the original payment, and performs the following actions:

- Replace sender and receiver in block 1 and block 2
- Field 21 is mapped from field 20 of the original message
- Fields 50, 52, 53, 54, 56, 57, 59 and 70 remain the same as those of the original message
- Field 72 is indicated as /RETN/
- Original message is sent to the Rejected or Returned queue
- Accounting is reversed

Outgoing return payments should be formatted as per HVCS guidelines. Line 4 of field 72 contains the ESAS reference of the original payment Information from Service Administrator for Receiver bank (received in block 3, tag 115).

2.4.3.3.6 Cancellation Messages

Cancellation Messages (n92, n96) for NZ SCP are sent via SWIFT MOP and follow the standard Cancellation Flow.

2.4.3.4 Business Setup

	Setup	Additional Information
System Parameters	N/A	
Profiles	MOP, Cut Off Times, Membership, Identifiers, SLA	Profiles
Rules	MOP Selection, Clearing Cut-off	Rules
Permissions	N/A	
Tasks	N/A	
Queues	N/A	

2.4.3.4.1 Profiles

These are the details of the required setup in GPP profiles for the Clearing Certification.

Note: For a detailed description of all the fields in the profiles, see GPP Online Help.

2.4.3.4.1.1 Method of Payment Profile

To successfully identify the local office and the debit MOP, when an incoming message is received from NZ SCP, local office's BIC (provided in Block 1 of the incoming payment) should be set as a valid identifier for this MOP In the MOP profile.

These are the specific attributes that need to be defined in the Method of Payment profile for SCP Clearing for the New Zealand office.

Field	Value for HVCS	Comment
Name	HVCS	
Calendar	Relevant calendar or no value	

Field	Value for HVCS	Comment
MOP Business Date	Current business day for the MOP	The business date can be changed manually or by an end-of-day task that advances the MOP business date to the next valid business date for the MOP.
Value date extension	0 days	Determines the limit for the future dated transactions that are acceptable for the MOP. Payments with value dates between the Max days and the value date extension are validated for the MOP and sent to the Schedule queue.
Currency	NZD or no value	If there is no value, all currencies are valid for the MOP.
Settlement accounting	Settlement account with ESAS	
Membership Required	Must be selected	
Membership Type	MOP	
Send Outgoing message	Must be selected	
Settlement account exists	Must be selected	
Cross office	Must be selected	
Processing Tab		
FIN copy service	AVP	
Communication preferences	Wait for confirmation	

2.4.3.4.1.2 Cut-off Times Profile

The Cut-off Times profile defines the latest time for transactions to be processed for HVCS MOP.

The HVCS calendar is required for the HVCS Clearing. The calendar sets the holidays and weekends which are non-working days.

The HVCS Calendar profile for the office is defined under System Setup > Geographic Settings > Calendars.

This is the suggested setup with specific attributes that need to be defined in the Cut-off profile for HVCS.

Field	HVCS for Customer Payment	HVCS for Bank to Bank Payments	Comment
Cut-off name	HVCS_cust	HVCS_B2B	
Cut-off type	Clearing	Clearing	
Time zone	NZ	NZ	Time zone for aligning cut-off times

Field	HVCS for Customer Payment	HVCS for Bank to Bank Payments	Comment
Description	HVCS Clearing Cut-off for customer payments	HVCS Clearing Cut-off for bank to bank payments	
Cut-off time	16:45	10:00	

2.4.3.4.1.3 Membership Profile

The HVCS Membership profile defines whether the payment receiver and sender parties are members of the clearing house. These are the specific attributes that need to be defined in the Membership profile for HVCS.

Field	Value for HVCS
MOP	HVCS
Type of Membership	Full member for HVCS participants (or associates)

2.4.3.4.1.4 Identifier Profile

The HVCS Identifiers profile is used to set up and view the party identifiers and settlement account information for the MOP.

These are the specific attributes that need to be defined in the Identifiers profile for HVCS Clearing for the Singapore office.

Field	Value for HVCS	Comment
MOP	HVCS	

2.4.3.4.1.5 Service Level Agreement Profile

Service Level Agreement (SLA) defines specific payment processing commitments the bank is subjected to. The SLA is one of the retail products the bank sells to provide added value to the payment processing.

The Service Level Agreement (SLA) profile is a rules-based mechanism for enrolling customers with SLAs.

The SLA product as defined in the SLA profile is associated to the payment. This may be used as a condition in calculating Fees.

Group	Field Name	Value for HVCS
General	Name	HVCS_SLA
	Description	Outward CLS payments
	Product	Select product
Process	Process Immediately	Not selected
	Hold x minutes before pay-by- time	Select to define number of minutes (delta) from pay-by-time (CLS as accepted in Field 13 or 72) to process the payment

2.4.3.4.2 Rules

2.4.3.4.2.1 MOP Selection

Rule Name	Description	Attached to	AND / OR	Field/Field	Operator	Value/Field/Function	Action
HVCS	HVCS MOP selection rule	Local office		[Sttlm ccy]	=	NZD	Set MOP to HVCS

2.4.3.4.2.2 Clearing Cut Off

In the following example, winter time is set to 5.10.2014-4.4.2015, any create date in this period returns TRUE.

Rule Name	Description	Attached to	AND / OR	Field/Field	Operator	Value/Field/Function	Action
WINTER_SCHED	Base condition for winter cut-off period	NZ2		(DATE_EXTRACT(YEAR,[P_CREATE_DT])	=	2014	
			and	(DATE_EXTRACT(DAY,[P_CREATE_DT])	>=	5)
			and	DATE_EXTRACT(MONTH,[P_CREATE_DT])	=	10)
			or	(DATE_EXTRACT(MONTH,[P_CREATE_DT])	>	10)
			or	DATE_EXTRACT(YEAR,[P_CREATE_DT])	=	2015	
			and	(DATE_EXTRACT(DAY,[P_CREATE_DT])	<=	4	
			and	DATE_EXTRACT(MONTH,[P_CREATE_DT])	=	4	
			or	DATE_EXTRACT(MONTH,[P_CREATE_DT])	<	4)
HVCS_CLS	Clearing cut off selection for HVCS	NZ2		[Cdt MOP]	=	HVCS	HVCS
			OR	BASE_CONDITION (WINTER_SCHED)	=	TRUE	CLS_

Rule Name	Description	Attached to	AND/OR	Field/Field	Operator	Value/Field/Function	Action
_WINTER	MOP- CLS winter payments		AND	Msg type	Contains	SWIFT_2	WINTER
HVCS_CLS_SUMMER	Clearing cut off selection for HVCS MOP- CLS summer payments	NZ2		[Cdt MOP]	=	HVCS	HVCS _CLS_ SUMMER
			or	BASE_CONDITION (WINTER_SCHED)	=	FALSE	
			AND	[Orgnl stlm CLS Time]	Is not	Empty	
			AND	Msg type	Contains	SWIFT_2	
HVCS_CUST	Clearing cut off selection for HVCS MOP- customer payments	NZ2		[Cdt MOP]	=	HVCS	HVCS _CUST
			and	Msg type	=	SWIFT_103	

2.4.3.4.2.3 Office SLA

Office SLA Rule (182) allows for a SLA profile to be assigned to the payment.

Rule Name	Description	Attached to	AND/OR	Field/Field	Operator	Value/Field/Function	Action
HVCS	Sending CLS payments on time	NZ2		Stlm CLS Time	Is not	Empty	HVCS_SLA

2.4.4 Hong Kong - CHATS

2.4.4.1 Overview

Hong Kong's payment systems allow interbank transfers in the Hong Kong dollar (HKD), US dollar (USD), and Renminbi (RMB). Hong Kong Interbank Clearing Limited (HKICL) is the operator of these payment systems, providing banks with various interbank clearing and settlement services.

Clearing House Automated Transfer System (CHATS) is the local clearing system of Hong Kong Monetary Authority.

- HK Dollar CHATS is Hong Kong's national real-time gross settlement (RTGS) system.
- US Dollar CHATS provides settlement for USD transactions. It operates as an RTGS for USD payments; the USD settlement institution is HSBC.
- Renminbi CHATS provides settlement for RMB transactions. It operates as an RTGS for RMB payments. The RMB settlement institution is Bank of China (HK).

Additional information related to CHATS.

	Value
FIN Copy service identifier code	HKL (all CHATS share the same FIN Copy Service)
Service Type	Y-Copy
Currency code	HKD, USD or RMB
Operating hours of HK CHATS	08:30 hours and 23:30 hours on all weekdays except 1 January
Cut-off time	CHATS USD and HKD MOPs: <ul style="list-style-type: none"> • Customer payments cut-off 18:00 • Bank payments cut-off 18:30 CHATS RMB MOPs: <ul style="list-style-type: none"> • Customer payments cut-off 23:00 • Bank payments cut-off 23:30

2.4.4.1.1 Calendars

CHATS HKD clearing operates in accordance with Hong Kong calendar.

CHATS RMB and USD clearings do not operate on Saturdays and Sundays, and on January 1, and operates on Hong Kong's public holidays.

2.4.4.1.2 Supported Message Types

The following message types is available for CHATS RMB, USD and HKD MOPs:

- MT103
- MT202
- MT202COV
- MT012: Sender Notification. Clearing to Participant
- MT019: Abort Notification. Clearing to Participant
- MT900
- MT910

Free Format messages (MT199, MT299) are initiated by a user by clicking on the Free Format button from an existing payment and be sent via SWIFT.

The cancellation process in GPP is used for CHATS MOPs, using a cancellation request (MT192/292) sent via SWIFT to the sender of the original payment. There are no changes to the GPP Cancellation process for CHATS.

2.4.4.2 Inward/Outward Processing

CHATS is defined in GPP as a Method of Payment for RMB, USD and HKD. Respective MOP Selection and validation rules need to be created to define the conditions in which CHATS MOP is selected and used.

- CHATS membership information can be uploaded and maintained in GPP.
- MOP cut-off time and calendars is defined and maintained via business rules.

- Additional mapping requirements for CHATS MOP need to be configured.

Backdated payments should not be sent to the clearing. This is defined by setting the Earliest value date to 0.

For Confirmation levels, CHATS MOPs should be defined with the Communication preferences field set as Wait for confirmation. This makes payments with credit MOP CHATS to move to the Wait Confirmation queue.

For more information, see [Business Setup](#).

2.4.4.2.1 FIN Copy Service in Incoming and Outgoing CHATS Payments

All CHATS MOPs share the same FIN Copy Service (HKL).

In order to identify the correct debit MOP of the incoming payment, the system rule 'Adjust basic properties' needs to be configured to determine the Debit MOP based on the FIN Copy Service code and the payment currency.

For outgoing CHATS payments, GPP maps the FIN Copy Service into Field 103 in Block 3 with the respective FIN Copy Service indicated in the MOP profile.

2.4.4.2.2 Method of Payment

These Method of payment profiles are required for CHATS:

- CHATSHKD – Inbound and outbound HKD CHATS payments
- CHATSUSD – Inbound and outbound USD CHATS payments
- CHATSRMB – Inbound and outbound RMB CHATS payments

2.4.4.2.3 Future Dated Payments

CHATS allows future dated payments up to 12 calendar days. This can be achieved by setting the Latest value date attribute to 12 in the MOP profile.

2.4.4.2.4 Return Message

A user can generate a return message from payment in a manual queue.

Once the user clicks Return, GPP triggers the Transaction generation mechanism to generate the outgoing return payment. A new message page opens, which is linked to the original payment. The user enters the Reject/Return reason code and submits it.

2.4.4.3 Flow

The flow process for all Y-Copy RTGS is the same and supported by GPP. As RITS is a Y-Copy service type, see [Y-Copy RTGS Flow Processes](#) for a description of the process.

2.4.4.4 Business Setup

	Setup	Additional Information
System Parameters	N/A	

	Setup	Additional Information
Profiles	MOP, Calendar, Clearing Cut-off, Membership, Identifiers Profile	Profiles
Rules	MOP selection, Clearing Cut-off, calendar, Mapping out	Rules
Permissions	As per customer's requirement	
Tasks	N/A	
Queues	N/A	

2.4.4.4.1 Profiles

These are the details of the required setup in GPP profiles for the Clearing Certification.

Note: For a detailed description of all the fields in the profiles, see GPP Online Help.

2.4.4.4.1.1 Method of Payment Profile

The CHATSHKD, CHATSUSD and CHATSRMB profiles should be setup with these preferences:

- Prevent sending backdated payments to the clearing, by setting the Earliest value date attributes to 0.
- CHATS MOPs should be setup with Communication preferences field as Wait for confirmation.

These are the specific attributes that need to be defined in the Method of Payment profile for HK CHATS Clearing.

Field	Value for HK CHATS	Comment
Name	CHATSHKD/ CHATSUSD/ CHATSRMB	Different MOP profiles are required for HKD CHATS, USD CHATS and RMB CHATS payments
Description	CHATS HKD Clearing	
Calendar	HKD	If no calendar is assigned, the default calendar for the office is used.
MOP Business Date	Current business day for the MOP	
Value date extension	0	Payments with value dates between the latest value date and the value date extension is validated for the MOP and then sent to the Schedule queue.
Currency	HKD	
Settlement accounting	HKL settlement account	
Membership Required	Must be selected	
Membership type	MOP	
Membership check level	Metro	BIC-8 level (Metro)

Field	Value for HK CHATS	Comment
Send outgoing message	Must be selected	
Settlement account exists	Must be selected	
Processing Tab		
FIN copy service	HKL	
Communication preferences	Wait for confirmation	

2.4.4.4.1.2 Calendar Profile

The Cut-off Times profile defines the latest time for transactions to be processed for CHATS Clearing.

Cut-off extensions are handled manually.

These are the specific attributes that need to be defined in the Cut-off Times profile for CHATS Clearing.

2.4.4.4.1.2.1 HKD CHATS Calendar

Field	Value for CHATS	Comment
Calendar Name	HKD	
Description	Hong Kong Dollar Calendar	
Default calendar	False	
Weekend Days	Saturday Sunday	Indicates the days which are closed for business
Holiday Date	TBD	Indicates the date of public holidays which are closed for business
Description	TBD	Description of the public holiday

2.4.4.4.1.2.2 USD CHATS Calendar

Field	Value for CHATS	Comment
Calendar Name	CHATSUSD	
Description	CHATSUSD Calendar	
Default calendar	False	
Weekend Days	Saturday Sunday	Indicates the days which are closed for business
Holiday Date	January 1	Indicates the date of public holidays which are closed for business

Field	Value for CHATS	Comment
Description	New Year	Description of the public holiday

2.4.4.4.1.2.3 RMB CHATS Calendar

Field	Value for CHATS	Comment
Calendar Name	CHATS RMB	
Description	CHATS RMB calendar	
Default calendar	False	
Weekend Days	Saturday Sunday	Indicates the days which are closed for business
Holiday Date	January 1	Indicates the date of public holidays which are closed for business
Description	New Year	Description of the public holiday

2.4.4.4.1.3 Cut-off Times Profile

The Cut-off Times profile defines the latest time for transactions to be processed for CHATS Clearing.

Cut-off extensions are handled manually.

These are the specific attributes that need to be defined in the Cut-off Times profile for CHATS Clearing.

2.4.4.4.1.3.1 HKD and USD CHATS

Field	Value for HK & US CHATS	Comment
Department	HKB	
Office	HK1	
Cut-off name	CHATSHKD or CHATSUSD	
Cut-off type	Clearing	
Time zone	HKT	UTC/GMT +8 hours
Description	CHATSHKD or CHATSUSD cut-off	
Interim cut-off time	18:00	Customer payments cut-off
Final cut-off time	18:30	Bank payments cut-off

2.4.4.4.1.3.2 RMB CHATS

Field	Value for RMB CHATS	Comment
Department	HKB	

Field	Value for RMB CHATS	Comment
Office	HK1	
Cut-off name	CHATS RMB	
Cut-off type	Clearing	
Time zone	HKT	UTC/GMT +8 hours
Description	CHATS RMB cut-off	
Interim cut-off time	23:00	Customer payments cut-off
Final cut-off time	23:30	Bank payments cut-off

2.4.4.4.1.4 Membership Profile

The Membership profile defines whether the payment receiver and sender parties are members of the clearing house.

The membership records are uploaded into GPP using the Profile Multi Action service.

These are the specific attributes that need to be defined in the Membership profile for HK CHATS Clearing.

Field	Value for CHATS	Comment
MOP	CHATSHKD/ CHATSUSD/ CHATS RMB	Different MOP profiles are required for HKD CHATS, USD CHATS and RMB CHATS payments
Type of Membership	Full member	Full member for HK CHATS participants (or associates)

2.4.4.4.1.5 Identifiers Profile

Identifiers profile is used to set up and view the party identifiers and settlement account information for the MOP.

These are the specific attributes that need to be defined in the Identifiers profile for HK CHATS Clearing.

Label in Profile	Value for CHATS	Comment
Department	HKB	
Office	HK1	
MOP	CHATSHKD/ CHATSUSD/ CHATS RMB	Different MOP profiles are required for HKD CHATS, USD CHATS and RMB CHATS payments
Identifier		Select the relevant identifier for the local bank in the MOP
Account		Select the settlement account that the local bank uses at the MOP for payments exchanged with this MOP

2.4.4.4.2 Rules

GPP needs be configured to support the mapping out requirements of CHATS MOP regulations. Mapping out rules are used to populate Transaction Types for the messages in F72, for example, MT103 and MT202.

Each customer needs to define the values it requires.

2.4.4.4.2.1 MOP Selection Rule

- CHATSHKD needs to be setup for HKD payments in Hong Kong.
- CHATSUSD needs to be setup for USD payments in Hong Kong.
- CHATSRMB needs to be setup for RMB payments in Hong Kong.

CHATS MOPs selection rules should be attached at a higher hierarchy than SWIFT MOP.

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field/Field	Operator	Value/Field/Function	Action
CHATSRMB		MOP Selection for CHATSRMB	HK1		[Sttlm Ccy]	=	RMB	Set CHATS RMB
				AND	[Cdtr Agt ctry]	=	HK	
CHATSUSD		MOP Selection for CHATSRMB	HK1		[Sttlm Ccy]	=	USD	Set CHATS USD
				AND	[Cdtr Agt ctry]	=	HK	
CHATSHKD		MOP Selection for CHATSRMB	HK1		[Sttlm Ccy]	=	HKD	Set CHATS HKD
				AND	[Cdtr Agt ctry]	=	HK	

2.4.4.4.2.2 Clearing Cut off Rule

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field/Field	Operator	Value/Field/Function	Action
CHATSUSDCUTOFF		Clearing cut off selection for CHATSUSD MOP	HK1		[Cdt MOP]	In	CHATSUSD	Set CHATS USD
CHATSHKDCUTOFF		Clearing cut off selection for CHATSHKD MOP	HK1		[Cdt MOP]	In	CHATSHKD	Set CHATS HKD

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field/Field	Operator	Value/Field/Function	Action
CHATSR MBCUTO FF		Clearing cut off selection for CHATSRM B MOP	HK1		[Cdt MOP]	In	CHATSH KD	Set CHATS RMB

2.4.4.4.2.3 Missed Clearing Cut-off Rule

Missed clearing cut-off rule is invoked when the payment has missed an interim clearing cut-off but not the final clearing cut-off. For CHATS clearing cut-off, a Missed clearing cut-off rule can be set to allow bank payments to be processed in the interim time period.

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field/Field	Operator	Value/Field/Function	Action
MISSED CHATSU SDCLEA R		Missed clearing cut-off for CHATSUSD bank payments	HK1		[Cdt MOP]	=	CHATS USD	MAN_CLEARING
					[Msg tp]	In	SWIFT_202,SWIFT_202 COV	
MISSED CHATSH KDCLEAR		Missed clearing cut-off for CHATSHKD bank payments	HK1		[Cdt MOP]	=	CHATSH HKD	MAN_CLEARING
					[Msg tp]	In	SWIFT_202,SWIFT_202 COV	
MISSED CHATSR MBCLEAR		Missed clearing cut-off for CHATSRM B bank payments	HK1		[Cdt MOP]	=	CHATS RMB	MAN_CLEARING
					[Msg tp]	In	SWIFT_202,SWIFT_202 COV	

2.4.5 Singapore - MEPS

2.4.5.1 Overview

The Monetary Authority of Singapore (MAS) Electronic Payment System (MEPS+) is a real-time gross settlement (RTGS) system developed for large-value Singapore dollar interbank funds transfers and the settlement of Singapore Government Securities (SGS).

All banks in Singapore are eligible to participate directly in MEPS+. However, banks with a small volume of Singapore Dollar (SGD) payments may choose not to participate in the system. Instead, such non-participating banks may appoint participating banks as their agents to make SGD interbank payments on their behalf.

In December 2006 MEPS+ was replaced with MEPS+, which included these improved features:

- use of SWIFT message formats and network
- advanced queue management capabilities
- automated collateralized intra-day liquidity facilities
- automated gridlock detection and resolution

Additional information related to MEPS+.

	Value
FIN Copy service identifier code	MEP
Service Type	Y-Copy
Currency code	SGD
Operating hours of MEPS-IFT	Monday to Friday - 9:00 to 20:00
Cut-off time	19:00 - cut-off time for same-day settlement

2.4.5.1.1 Management

MEPS+ is owned and operated by MAS. All participating banks are contractually bound to operate in compliance with the MEPS+ operating rules and regulations as stipulated by MAS.

Participating banks are charged on a cost recovery basis. A flat fee is charged for each message, payable by the bank initiating the MEPS+ message. There is no annual subscription fee or joining fee to participate in MEPS+, and no additional charge for real-time current account balance enquiries.

2.4.5.1.2 MEPS+ Operations

The MEPS+ system consists of two subsystems:

- MEPS+ Interbank Funds Transfer (MEPS-IFT).
- MEPS+ Singapore Government Securities (MEPS-SGS) – not supported by GPP.

Under the MEPS-IFT sub-system, interbank funds transfers are made using MEPS+ messages, derived from SWIFT standards. As long as the paying bank has sufficient funds in its RTGS account, its same day payment instructions are settled instantaneously and irrevocably. MEPS-IFT sub-system only processes same day value transactions. However, the system also accepts forward-dated transactions which are stored in the host database and processed on the actual value date.

2.4.5.2 Message Types

As MEPS+ is a SWIFT based clearing, GPP supports the following SWIFT message types:

- MT103
- MT103+
- MT202
- MT202COV

2.4.5.3 Flow Process

The flow process for all Y-Copy RTGS is the same and supported by GPP. As MEPS+ is a Y-Copy service type, see [Y-Copy RTGS Flow Processes](#) for a description of the process.

2.4.5.4 Inward/Outward Processing

2.4.5.4.1 Method of Payment

MEPS+ can be setup in GPP as an SGD Method of Payment. A respective MOP selection rule needs to be created to define the scenarios in which MEPS+ is selected.

SWIFT standard validations are applied on outgoing payments to MEPS+.

Outgoing payments that missed MEPS+ cut-off time and no other relevant MOPs are available, are stored in the Scheduled queue and processed on the next business day.

Value date related set up on the Method of payment profile ensure that:

- Backdated payments are not directed to MEPS+.
- Future dated payments can be sent to MEPS+ up to 14 business days in advance, unless the bank requires warehousing the payments in GPP.

2.4.5.4.2 Confirmation/Rejection Messages

Confirmation/rejection messages (MT012/MT019) are expected to be received for outgoing messages. Payments wait for the message before proceeding to completion.

2.4.5.4.3 Reject/Return Messages

For an incoming payment which falls into one of the manual queues GPP allows a user to reject/return the payment. GPP automatically generates an outward R-message linked to the original payment, and perform the following actions:

- Replace sender and receiver in block 1 and block 2
- Field 21 is mapped from Field 20 of the original message
- Fields 50, 52, 53, 54, 56, 57, 59 and 70 remain the same as those of the original message
- Field 72 is indicated as /REJT or /RETN
- Original message is sent to the Rejected or Returned queue
- Accounting is reversed

2.4.5.4.4 Cancellation Messages

Cancellation Messages (n92, n96) for MEPS+ are sent via SWIFT MOP and follow the standard Cancellation Flow.

2.4.5.5 Business Setup

	Setup	Additional Information
System Parameters	N/A	
Profiles	MOP, Cut Off Times, Membership, Identifiers.	Profiles
Rules	MOP selection, Clearing Cut-off, Office Hold Until Time	Rules
Permissions	N/A	
Tasks	N/A	
Queues	N/A	

2.4.5.5.1 Profiles

These are the details of the required setup in GPP profiles for the Clearing Certification.

Note: For a detailed description of all the fields in the profiles, see GPP Online Help.

2.4.5.5.1.1 Method of Payment Profile

To successfully identify the local office and the debit MOP, when an incoming message is received from MEPS+, local office's BIC (provided in Block 1 of the incoming payment) should be set as a valid identifier for this MOP in the MOP profile.

These are the specific attributes that need to be defined in the Method of Payment profile for MEPS+ Clearing for the Singapore office.

Field	Value for MEPS+	Comment
Name	MEPSPLUS	
Calendar	Relevant calendar or no value	
MOP Business Date	Current business day for the MOP	The business date can be changed manually or by an end-of-day task that advances the MOP business date to the next valid business date for the MOP.
Value date extension	14 days	Determines the limit for the future dated transactions that are acceptable for the MOP. Payments with value dates between the Max days and the value date extension are validated for the particular MOP and sent to the Schedule queue.
Currency	SGD or no value	If there is no value, all currencies are valid for the MOP.
Settlement accounting	Settlement account with MEPS+	

2.4.5.5.1.2 Cut-off Times Profile

The Cut-off Times profile defines the latest time for transactions to be processed for MEPS+ MOP.

The MEPSPLUS calendar is required for the Singapore MEPS+ Clearing. The calendar sets the holidays and weekends which are non-working days in Singapore.

The MEPS+ Calendar profile for Singapore office is defined under System Setup > Geographic Settings > Calendars.

These are the specific attributes that need to be defined in the Cut-off profile for MEPS+ Clearing for the Singapore office.

Field	Value for MEPS+	Comment
Cut-off name	MEPS	
Cut-off type	Clearing	
Time zone	SGT	Time zone for aligning cut-off times
Description	MEPSPLUS Clearing Cut-off	

Membership Profile

The MEPS+ Membership profile defines whether the payment receiver and sender parties are members of the clearing house.

These are the specific attributes that need to be defined in the Membership profile for MEPS+ Clearing for the Singapore office.

Field	Value for MEPS+	Comment
MOP	MEPS	
Type of Membership	Full member for MEPS+ participants (or associates)	

2.4.5.5.1.3 Identifiers Profile

The MEPS+ Identifiers profile is used to set up and view the party identifiers and settlement account information for the MOP.

These are the specific attributes that need to be defined in the Identifiers profile for MEPS+ Clearing for the Singapore office.

Field	Value for MEPS+	Comment
MOP	MEPS	

2.4.5.5.2 Rules

These are examples of user defined rules.

2.4.5.5.2.1 MOP Selection

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
MEPS PLUS	N/A	MEPSPLUS MOP selection rule	Local office		[Sttl m Ccy]	=	SGD	SET MOP Profile MEPSPLUS
				AND	[Msg tp]	IN	SWIFT_103, SWIFT_202	
				AND	[Cdtr Agt ctry]	=	SG	

2.4.5.5.2.2 Clearing Cut Off

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
MEPS PLUS	N/A	MEPSPLUS cut off selection rule	Local office		[Cdt MOP]	=	MEPSPLUS	SET MEPSPLUS cut off (19:00)

2.4.5.5.2.3 Office Hold until Time

This rule is used to hold payments in GPP until MEPSPLUS opening time is reached.

Rule Name	Rule Sub Type	Description	Attached to	AND/OR	Field	Operator	Value/Field/Function	Action
MEPS PLUS OPEN TIME	N/A	MEPSPLUS opening time	Local office		[Cdt MOP]	=	MEPSPLUS	SET Hold until time to 06:00 AM

2.4.6 Malaysia - RENTAS

2.4.6.1 Overview

RENTAS is a multi-currency real time gross settlement system in Malaysia. RENTAS multi-currency enables payment instructions between RENTAS members to be processed and settled individually and continuously throughout the working day. RENTAS is operated by the Bank's wholly-owned payment subsidiary, Malaysian Electronic Clearing Corporation Sdn. Bhd. (MyClear).

The participating banks in RENTAS comprises of Commercial Banks, Islamic Banks, Investment Banks and Development Financial Institutions.

RENTAS was initially implemented in proprietary format in July 1999. In March 2014, SWIFT was being adopted as access channel to connect to the new RENTAS system.

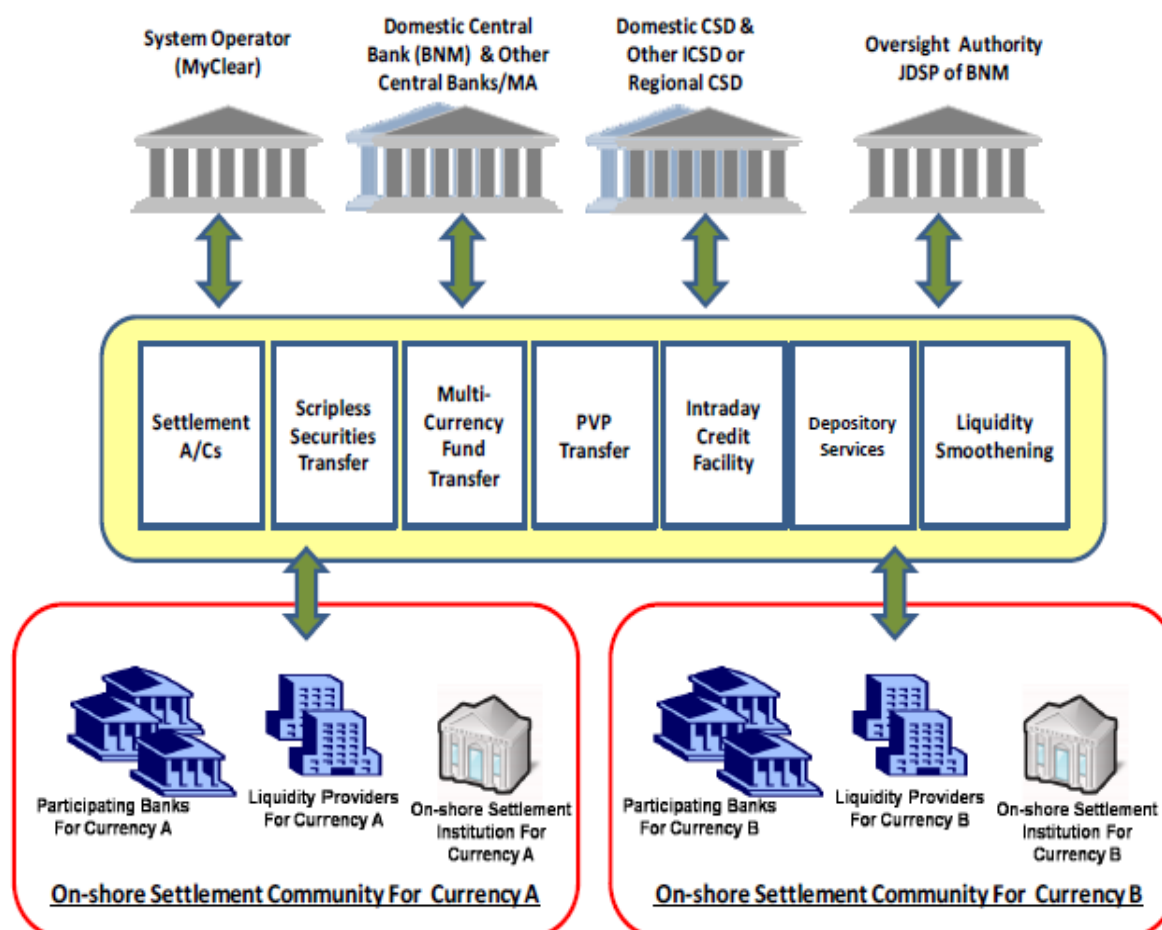
Additional information related to RENTAS:

Data	Description
SWIFT service identifier code	RENTAS/IFTS
Service Type	SWIFT V-Topology Messaging Scheme
Currency code	MYR, CNY, USD
Operating hours of RENTAS	Monday to Friday - 9:00 to 17:00
Cut-off time	Cut-off time for same-day settlement For MT103: Final Cut off is 4:00 PM For MT202: Final Cut off is 6:00 PM

2.4.6.1.1 RENTAS Currencies

RENTAS supports settlement in these currencies:

- Malaysian Ringgit (MYR): Fully owned by the Domestic Central Bank, Bank Negara Malaysia (BNM).
- Chinese Yuan Renminbi (CNY): In 2011, Bank Negara Malaysia (BNM) appointed Bank of China (Malaysia) Berhad (BOCM) as the Onshore Settlement Institution for Renminbi in RENTAS.
- US Dollar (USD): OSI is CIMB Bank Malaysia.



2.4.6.2 Message Types

RENTAS SWIFT adopted ISO 15022 messages. GPP supports the following SWIFT message types.

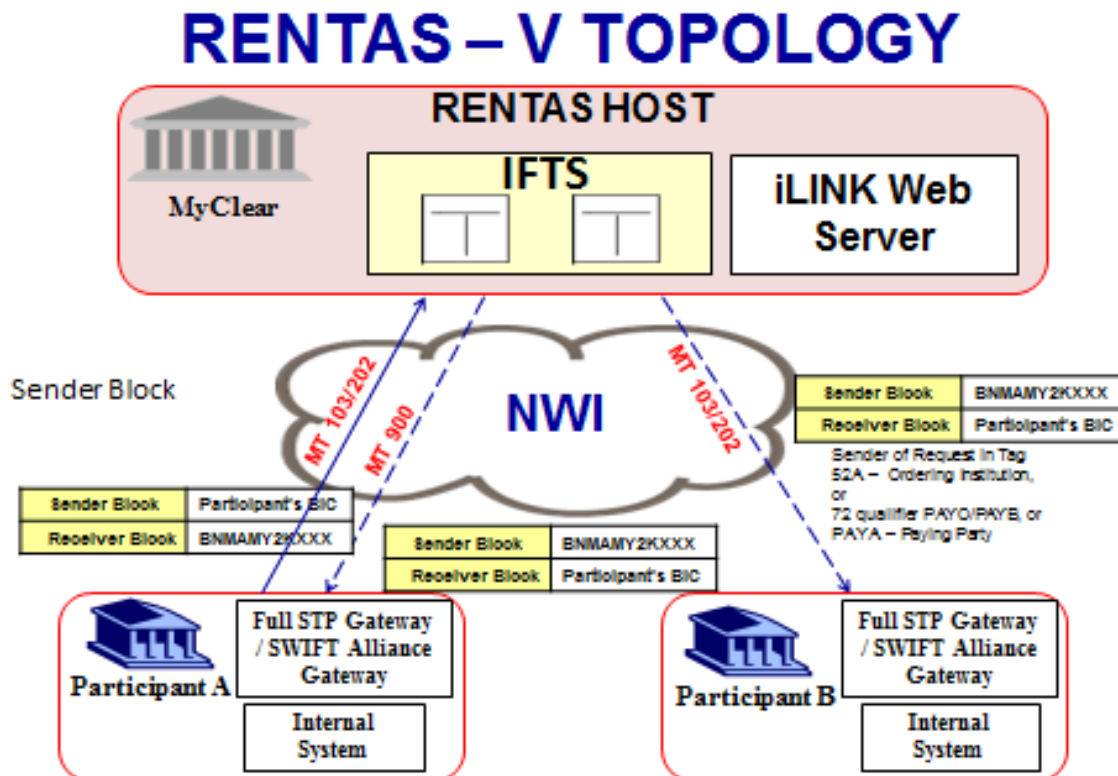
	Message Type	Description	Inward/ Outward
1.	MT103	Single Customer Transfer message	I/O
2.	MT202	General Financial Institution Transfer	I/O
3.	MT102	Multiple Customer Credit Transfer	I
4.	MT203	Multiple General Financial Institution Transfer (Roadmap release for Q1 2016)	I
5.	MT900	Confirmation of Debit	I
6.	MT198/ MT298	Tag 12 Credit Notification 110 – Advice of Charges, Interest and Other Adjustments. These messages are non-accounting messages.	I/O
7.	MT198	120 – Customer Transfer Tracking	I/O
8.	MT192	Request of Cancellation of MT103	O
9.	MT292	Request of Cancellation of MT202	O
10.	MT198/298/998	Tag 12 200 - Transaction Processing Status Update Response to MT1xx, 2xx and 9xx Messages 500 - Settlement Status (Pending Advice) Note: The MTn98 message is listed along with its value in tag 12 which is used for a different business purpose.	I
11.	MT199/299/999	Free Format Message	I/O

2.4.6.3 Flow Process

RENTAS uses the SWIFT V-topology messaging scheme (instead of the FIN Y-copy messaging scheme) in order to allow participant(s) who may not be a SWIFT member to still participate in the system.

The member bank uses BIC1 (non-connected BIC) and its principal member bank BIC in the header, to exchange message via SWIFT to RENTAS.

This image shows the exchange of application messages of a successful credit transfer:



2.4.6.4 Inward/Outward Processing

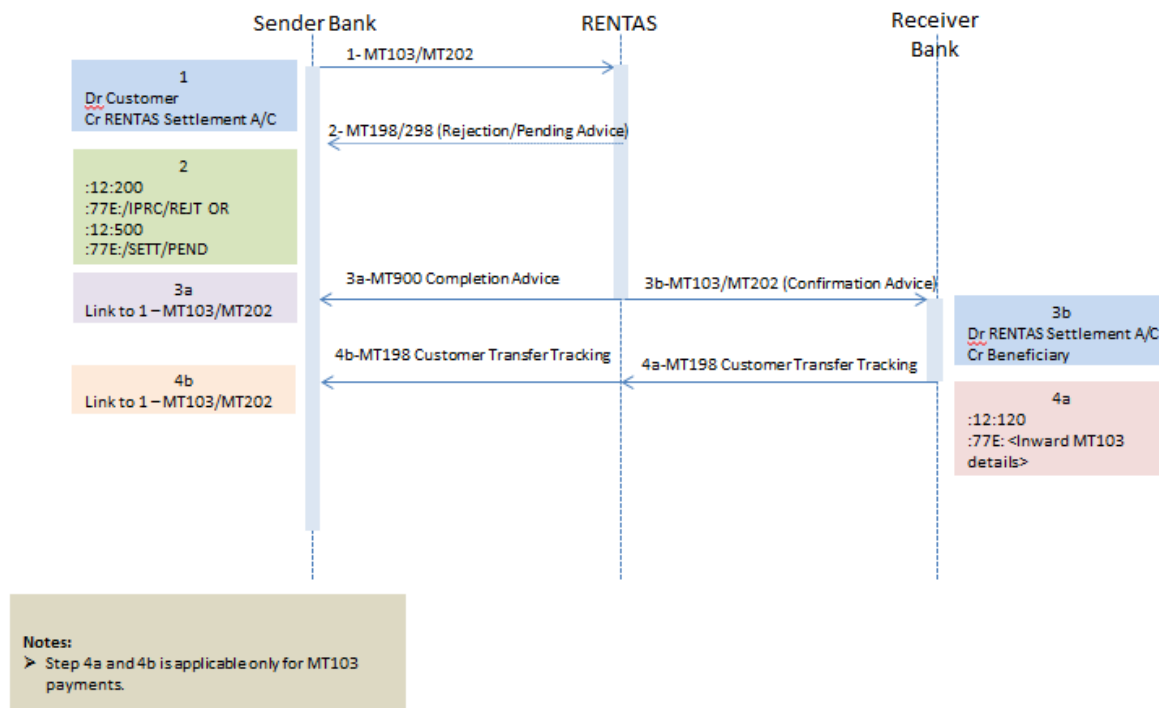
GPP supports:

- Single Payments:
 - Single Customer Credit Transfer Message Flow (MT103): This message is sent by or on behalf of the financial institution of the ordering customer, directly or through (a) correspondent(s), to the financial institution of the beneficiary customer. It is used to convey a funds transfer instruction in which the ordering customer or the beneficiary customer, or both, are non-financial institutions.
 - General Financial Institution Transfer Message Flow (MT202): This message is sent by or on behalf of the ordering institution directly, or through correspondent(s), to the financial institution of the beneficiary institution. It is used to order the movement of funds to the beneficiary institution.
- Multiple Customer Credit Transfer Message Flow (MT102)
- Multiple General Financial Institution Transfer Message Flow (MT203)
- Credit Notification Message Flow (MT198/MT298, sub type 110)
- Credit Transfer Cancellation Message Flow (MT192/MT292)
- Free Format Message Flow (MT199/MT299/MT999)
- Adhoc Cash Statement Request Message Flow

GPP handles specific validations required by RENTAS to support the process. In addition, GPP supports inward MT198 payments which represent Rejection/Pending Advices, as well as for incoming MT900 payments which represent Completion advices.

2.4.6.4.1 Outward MT103 & MT202 from Sender Bank

Single Payment – MT103/MT202



Description of Single Payment workflow for MT103 or MT202:

1. RENTAS receives an MT103 or MT202.
2. RENTAS provides the MT198-200 Rejection/Pending Advice to the sending bank, followed by the MT900 Debit confirmation advice (post settlement of the funds).
3. RENTAS then forwards the same message (MT103 or MT202 by changing the header) as Confirmation Advice to the receiving bank for further credit to the beneficiary's account.
4. The receiving bank must generate a MT198-120 Customer Transfer Tracking to the sending bank via RENTAS for an inward MT103 payment.

For RENTAS CNY payments identified with a specific TRN code, MyClear performs special validations as follows:

- CNY02 - Transfer to Mainland by Individual (only for outward MT103 from GPP).
- CNY03 - Transfer to Mainland by Company as trade payment (for both outward MT103 and outward MT202 from GPP).
- CNY04 - Transfer to Mainland for Investment (for both outward MT103 and outward MT202 from GPP).
- CNY05 - Transfer to All Offshore Destination Other Than Mainland (for both MT103 and MT202 from GPP).

- CNY06 - Transfer from Offshore to Local PB (both inward MT103 and MT202 to GPP).

GPP performs validations on CNY02 to CNY05 outward RENTAS CNY payment. CNY06 is considered as a normal inward RENTAS CNY payment and no special processing is performed by GPP. It is expected that MyClear performs the necessary validations.

2.4.6.4.2 Outward Cancellation request from Sender Bank

Outward requests for cancellations are supported by GPP. However, as per RENTAS requirements, a request for cancellation can only be generated when specific conditions are met. The Cancel Request button is available only when the appropriate conditions apply:

- A Cancellation Request Status Update was not received yet
- Payment status is Wait Confirmation

In addition, GPP supports inward MT198 payments which stand for Status update of Cancellation Request. These payments are handled by GPP as technical ACK/NAK that mark the status of cancellation requests.

GPP also supports inward MT198 payments which report when the transaction has been cancelled; GPP sets the original payment status to be cancelled.

2.4.6.4.3 Customer Transfer Tracking Message

As part of RENTAS implementation, GPP supports receiving and sending of MT198^120 message. GPP sends MT198^120 message to RENTAS on successful completion of message.

For incoming MT198^120 message from RENTAS, GPP matches the original MT103 message.

2.4.6.4.4 Processing of MT199/MT299

GPP supports generation of MT199 and MT299 from the original message. For RENTAS, GPP performs additional mapping in the MT199/MT299 message, in order to comply with RENTAS specification.

As part of RENTAS implementation, GPP receives MT198^200 message for the MT199/MT299 messages rejected by RENTAS.

2.4.6.4.5 Return Messages for RENTAS

For RENTAS, GPP processes an incoming and outgoing return message. Specific mapping is required for a RENTAS outward return message.

An incoming return message is processed as a normal return message. GPP retrieves the incoming return message from RENTAS by (CREDIT RETURN) string in Field 70 (for MT103 return) or in Field 72 (for MT202 return).

3 Mass Payment Clearings

3.1 Mass Payment EU Clearing

3.1.1 Austria - CS.A

3.1.1.1 Overview

The Austrian National Bank (OeNB) introduced the Clearing Service Austria (CS.A) domestic payment transaction service in order to improve Austria domestic payment processing and increase accessibility of the national and international payment systems in accordance with the ECB policy statement. The GSA (Geldservice Austria) has operated CS.A since 2011.

The CS.A clearing system offers Austrian financial market an infrastructure for processing and settling all domestic payment orders (credit transfers and debits) in Euro. CS.A minimizes costs and risks by processing noncash interbank retail payments and domestic payment transaction messages.

The core function of the system is to accept national interbank retail payments in defined formats, to process them, and to prepare and proceed with settlements. Processing involves accepting payment orders from Austrian sending banks, and directly transferring them to Austrian receiving banks via CS.A. This method reduces both the number of transactions and the amount of liquidity required for settlement.

Additional information related to CS.A:

	Value
Currency code	EUR
Operating hours	Daylight Settlement: 07:15 until 17:35 Monday to Friday Night Settlement: 19:00 until 07:05
Cut-off time	For details, see Cutoffs (Determination of Final Balances)

3.1.1.1.1 Transmission of Payment Orders

Data, i.e. payment orders, are received and sent through CS.A in the form of files with defined formats. Each file consists of one or more bulks containing one or more individual payment orders.

3.1.1.1.2 Validation of Incoming Payment Orders

Immediately after a payment order has been received, the files are validated by the CS.A system (for example, checked for syntax errors). After validation, the system sends a confirmation message in which the participant is informed whether the batch, file, or transaction delivered can be processed or whether errors have occurred, and if so, which ones.

3.1.1.1.3 Cutoffs (Determination of Final Balances)

3.1.1.1.3.1 Cutoffs for Payment Orders with Value Date D

At the cutoff times each participant's short or long position is calculated by netting. This final balance is the basis for settlement, which is debited or credited to the participant's TARGET2 account in the next settlement cycle. Moreover, the system automatically checks whether the participant has sufficient liquidity for settlement.

The breakdown into several cutoff times serves to distribute the clearing load and takes participants' liquidity management needs into account. Payment orders that are to be settled on the same day must be delivered by cycle 'X0X16' ending at 16:00 at the latest. Any payment messages that are delivered later than that are processed on the next business day and the value date is automatically adjusted accordingly.

3.1.1.1.3.2 Pre-valued Payment Orders

Payment orders may also be delivered with a future value date. Payments can be sent up to one day in advance.

3.1.1.1.3.3 Settlement

The net positions are sent to the settlement agent for settlement. Once the settlement system has successfully given the CS.A confirmation of the transfer of the net positions, the payment orders which have been received are considered final (irrevocable under the Finality Act).

The TARGET2 system is used as the platform for the execution of settlement. In TARGET2, every direct participant uses a main account and a subaccount.

Settlement in TARGET2 is performed by using the Ancillary System Interface (ASI). Various procedures may be used within the ASI. CS.A allows settlement on dedicated accounts without being influenced by other payment procedures. To use this procedure, a TARGET2 subaccount must first be established for every direct participant.

3.1.1.1.4 Message Types

	Message Type	Description
SEPA Credit Transfer (SCT)	pacs.002	Status Notification
	pacs.004	Payment Return Refund
	pacs.008	Customer Credit Transfer
	camt.056	Payment Cancellation Request
	camt.029	Resolution of Investigation; used to inform of the resolution of a recall.

3.1.1.2 Use Cases

CS.A is based on SEPA, so inward and outward flows and process are the same. For information about SEPA use cases, see the GPP Business Guide SEPA.

3.1.1.2.1 SEPA Credit Transfer (SCT) Use Cases

Basic SEPA Use Case	Alternate SEPA Use Case
Outward SCT via STEP2	Outward SCT is Warehoused
	Outward SCT Fails Processing
	Outward SCT with Incoming Validation file

3.1.1.2.2 Outward SEPA Credit Transfer - Mass Payment with CS.A

Use Case Name	Mass Payment with CS.A
Actors	Channels, Initiating party, User, Banks core systems, clearing gateway.
Description	This use case defines the End To End outward flow to CS.A clearing.
Trigger	Initiating party (such as an FI's customer) sends a file containing multiple credit payment transactions Message is routed to MP flow (MP MOP is selected) from a different flow.
Pre-conditions	Payment initiation is well-formatted and has mandatory information as defined by pain message (pain.008, pain.001) rules.
Post-conditions	Payment is completed successfully.
Definition of Done	MP file is sent to Clearing.
Positive flow	GPP receives a file containing multiple credit payment transactions and can process it successfully to complete using MP Clearing method of payment.
Negative flows	File or batch has been rejected by the Clearing GPP cannot process the whole file successfully and payments are routed to manual intervention queue with an error, or rejected back to the customer (as per setup).

The flows are included in the GPP Business Guide SEPA, based on to the SEPA rule book and guidelines. For a description of the process, see [Outward Mass Payment with CS.A](#).

3.1.1.2.3 Outward SEPA Credit Transfer - Validation Files from Clearing (file, bulk, and transaction level)

Use Case Name	Support Rejects from Clearing
Actors	Debtor bank for CT, Creditor bank for DD
Description	Erroneous information within the outgoing file can lead to rejects in CS.A. The reason for the rejection can appear on the following levels: file, bulk and transaction. (same as SEPA processing)
Trigger	CS.A in response to outgoing file.
Definition of Done	This use case is done once GPP receives the reject and updates the outgoing transactions status accordingly
Positive flow	GPP can process all three levels of rejection status by pacs.002 meaning set to reject all relevant transactions.
Negative flows	The system cannot process the rejection file.

3.1.1.2.4 Outward SEPA Credit Transfer - R-Messages

The process for R-message requests (Recall, Return, Refund) is the same as SEPA processing.

Use Case Name	Outward SEPA Credit Transfer - R-Messages
Actors	camt.056, pacs.004, camt.029

Use Case Name	Outward SEPA Credit Transfer - R-Messages
Description	GPP handles through CS.A a Recall request initiated by the bank or customer and a return request sent from the receiving financial institution.
Trigger	Recall, return, refund requests by the customers or bank users
Pre-conditions	Original payment was processed in GPP
Positive flow	GPP handles the Recall, return, refund successfully

3.1.1.2.5 Outward SEPA Credit Transfer - Legal Holiday Good Friday

The Austrian national government recognizes Good Friday as a legal holiday. In Austria, this holiday is typically observed on the Friday preceding Easter Sunday.

In Austrian bank-to-bank payment transactions, Good Friday is treated as a payment transactions holiday, which requires special handling.

Since Good Friday is a TARGET-holiday, the Euro-System does not accept bookings in central bank money. Consequently, the booking of settlement positions is performed with the value date of the Tuesday after Easter Sunday.

Use Case Name	Legal Holiday Good Friday
Actors	Customer files (outgoing)
Description	CS.A performs all cut-offs. Incoming messages are validated and forwarded in case of a necessary as well as successful assurance.
Pre-conditions	Setup of Austrian calendar, Setup of Euro calendar
Positive flow	GPP advance the transactions to Tuesday after Easter.

3.1.1.3 Inward/Outward Processing

3.1.1.3.1 Outward Mass Payment with CS.A

GPP processes the payment based on the SEPA outward Mass Payment processing with the following adjustments for CS.A clearing.

- CS.A accepts only transaction in Euro
- CS.A has no file size restrictions for incoming files. Bulking Profile setup is defined by the customer.
- Pure cut-off without immediate following settlement (D and D-1):
 - 08.30 a.m. (X0C08)
 - 10.30 a.m. (X0C10)
 - 2.00 p.m. (A1C14)
 - 4.00 p.m. (A1C16)
- Sub group: Night cut-offs (D and D-1):
 - 10.00 p.m. (A1N22)
 - 03.00 a.m. (A0N03)

- Cut-offs with immediate settlement (only D):
 - 12.45 p.m. (X0X12)
 - 3.00 p.m. (X0X15)
 - Pure Settlement (only D):
 - 08.00 a.m. (A0S08)
 - Forwarding of pure Cut-offs of (uncollateralized) Immediate Forward Messages (D and D-1):
 - 11.45 a.m. (A0V11)
 - 7.00 p.m. (A1V19)
 - Cycle name key:
 - First Position = Sub-system:
 - A...for CS.A
 - X...for CS.A and CS.I (combined)
 - Second Position = value recognition:
 - 0...same-day
 - 1...pre-validated
 - Third position = Type/characteristic:
 - N...for Night cut-offs
 - C...for pure cut-off (= without settlement)
 - S...for pure settlement
 - X...for cut-offs with settlement
 - V...for pure message sending (e.g. exclusive forwarding of immediate forwards)
 - Z...for contingency cut-offs (with or without settlement)
 - Fourth position=time component:
 - Regularly planned time of cut-off/settlement; 2-digits, therefore display of hour only, e.g. 08 (= Cut-off at 08.30), 12 (= cut-off with settlement at 12.45) etc.
- For more information, see [Method of Payment Profile](#).

3.1.1.3.2 Cut-off Time

This table describes the last possible cut-off time based on the settlement date D for each transaction type.

- **Credit Transfers**

SCT	Credit Transfer	D, 3.00 p.m.
	Request for Cancellation/Recall	D+10B, 3.00 p.m.
	Resolution of Investigation	D+20B, 3.00 p.m.

In case of SCT Returns/Refunds, CS.A does not validate the cut-off times, consequently they are not mentioned in the table.

- **Channels:**

Files must be presented through an authorized communication channel: SWIFTNet FileAct or connection via a dedicated line. For files in SEPA or EDIFACT format, CS.A participants can use these channels interchangeably between participating banks for delivery to the clearing service, as long as the necessary connectivity tests have been successfully completed.

SWIFTNet FileAct: Files in EDIFACT or XML format can be exchanged via this channel. The data presentation by SWIFTNet FileAct can only be performed in 'push mode', whereby both partners must be online in the SWIFT-network in order to transfer the file.

Connect directly via a dedicated line. This is an alternative option for the delivery of files in EDIFACT and XML format.

- **Value Date:** The presenting times are defined as follows:

- **Pre-value Date:** All payments can be send to the Clearing Service 14 calendar days before the stated Interbank Settlement Date. An exception applies for special value transactions, which can be presented up to 60 calendar days before the stated Interbank Settlement Date. Payment orders which do not comply with these pre-value date presenting times – after a possible new value date is set – will be rejected by the system (with pacs.002 RJCT).
- **Back Valuation:** Payments generally do not have back valuation; when the last cut-off for processing is missed or there is a (several days) back valuation due to technical malfunction, CS.A performs an automatic set of a new value date to the next possible CS.A business day with a possible reject due to deadline violation.

The value date cannot be more than 14 calendar days in the past; otherwise, the whole bulk (even after set of a new value date) is rejected. This re-valuation due to technical malfunction to the next possible CS.A business day is send to the presenter with a pacs.002 ACWC message.

In general, as part of the value date calculation in GPP if it is a back value payment GPP will advance to the next BD if it is allowed according to the setup (role value date)

- **Calendar:** CS.A requires setup of Austrian calendar and Euro calendar – use combined calendars. For more information, see [Outward SEPA Credit Transfer - Legal Holiday Good Friday](#) and [Calendar Selection Rule](#).
- **Data formats and types of business:** The following formats and message types are processed on the entry side by CS.A:
 - SEPA Credit Transfer (SCT): pacs.002 (only status messages), pacs.004, pacs.008, camt.056, camt.029

- **File Re-send and Storage**

GPP supports storing outgoing files at least one day after settlement, for cases of contingency. A GPP user can select one or more files and click Re-send to simply send out one or more physical files.

The file(s) is placed in the relevant connection point to be picked up by GPP for outgoing messaging. Upon resending the file(s), a notification bar displays above the grid and reports how many items failed and how many items succeeded in the group action.

Note: This action is bound to dual control policy, if configured by the bank. No accounting is completed or tracked with this function.

3.1.1.3.3 Validation Files from Clearing

Each file sent to the Clearing Service must pass a two-level validation process:

- File level: Provides a thorough technical validation on the file
- Bulk level: Provides validations about the file's entitlement for the presentation of transactions in a certain format, as well as the name of the other transaction participant.

The presenter of the file must be an entitled member of CS.A, otherwise GPP rejects the file and processing does not proceed. After receiving an incoming file and performing the basic validations, CS.A provides a pacs.002 format (multi bulk) to the presenter to acknowledge file receipt and validation or, to initiate an alert that indicates possible errors with the bulk of a file.

Process Statuses

Status	Description
ACTC	Accepted Technical Validation. This value is initiated as a reply to a positive validation of the received bulk. However, rejects of individual transactions or a complete reject are still possible.
ACWC	Accepted with Change. This value is used in if a revaluation occurs, due to system problems on the side of the Clearing Service. It can also be used when setting a new value date due to technical malfunction on the participant's side or for revaluated bulks. Rejects of included single transactions or a complete reject are still possible (bulk level).
RJCT	Rejected. The complete bulk is rejected.
PART	Partial. Partial transaction rejection.

Examples:

- Example 1: Successful bulk validation is immediately confirmed via pacs.002 ACTC. After successful processing (collateralization/blocking), CS.A delivers the bulk message.
- Example 2: If a file does not pass the technical validation, for example, if there is a technical malfunction, or, if the file is sent on a weekend, the bulk delivery is delayed.

When the bulk delivery is delayed, pacs.002 ACTC immediately confirms a successful bulk validation. CS.A sends a pacs.002 ACWC to indicate that the value date has changed.

After successful processing (collateralization/blocking), CS.A delivers the bulk to the receiving participant on the (new) value date. The outgoing bulk contains the new value date.

- Example 3: A transfer bulk in SEPA format is rejected in case of a same-day illiquidity, with a timely bulk delivery.

Successful bulk validation is immediately confirmed via pacs.002 ACTC, but processing fails due to illiquidity. Single transactions of the bulk are rejected via pacs.002 PART.

- Example 4: A re-valuation (due to system problems) and subsequent illiquidity, which leads to reject of the SEPA transfer bulk:

A successful bulk validation is immediately confirmed via pacs.002 ACTC. CS.A performs a re-valuation due to system problems and immediately reports it via pacs.002 ACWC.

Further processing fails due to illiquidity. Single transactions of the bulk are rejected via pacs.002 PART.

3.1.1.4 Business Setup

3.1.1.4.1 Profiles

3.1.1.4.1.1 Method of Payment Profile for SCT

These are the specific attributes that need to be defined in the MOP profile for CS.A Clearing.

Field Name	Value
Name	CSA_SCT
Description	MP CT MOP for CSA clearing
Calendar	EURO calendar
Advance to day after holiday	Selected
Roll forward at start of day	Selected
Earliest value date	0
Latest value date	1
Value date extension	365
Settlement account exists	Selected
Currency	EUR
Min. amount	0.01
Max. amount	999.999.999,99
Validations	
Membership required	Selected
Membership check level	Metro
Type	MOP
MOP can be selected by user	Selected
Send outgoing message	Selected
Allow force from scheduled queue	Selected

3.1.1.4.1.2 Cut-off Times Profile

The Cut-off Times profile for each MOP is defined in the Default Cut-off Name field in the Method of Payment profile.

Field Name	Value
Cut-off Name	CSA_SCT MOP

Field Name	Value
Default Time	Selected
Cut-off Type	Clearing
Time Zone	CET
From Date	N/A
To Date	N/A
Interim Cut-off Time	16:00
Final Cut-off Time	16:00

3.1.1.4.2 Rules

GPP uses the Calendar Selection rule to dynamically select the relevant calendars for each payment. Calendar Rules define the relevant calendars that are considered on business day assessment.

The Calendar Selection rule uses a calendar combination to ensure that the payment value date is a business day for the concatenated calendar. If the payment value date is a non-business day, the payment value date is advanced to the next business day.

The appropriate rule type is triggered by the MOP assessment process, and defines these calendars:

- The Office calendar uses the local Austrian calendar
- The MOP calendar uses the Euro calendar. The Calendar Selection Rule defines the combined calendar set that is used in MOP value date calculations.

3.1.1.4.2.1 Calendar Selection Rule

Rule Attribute	Set Up Guidelines
Rule Name	CSA_MP_COM_CAL
Description	The MOP value date calculations can be based on the following calendars: Local Office (Austrian calendar) Euro Calendar
Attachment	Local Office
Rule conditions	If Debit currency = EUR add Euro calendar Or If Credit currency = EUR add Euro calendar
Action	Add calendar – the specified calendar is added to the combined set. If no matching rule is determined, then all calendars are used

3.2 Mass Payment Africa Clearing

3.2.1 South Africa - AC

3.2.1.1 Overview

Authenticated Collection (AC) is a direct debit clearing system introduced by the South African Reserve Bank (SARB). This clearing system was introduced in order to protect both sides of direct debit transaction from abuse of the debit order by performing the following:

- Providing consumers upfront knowledge about their debits through an electronic authentication process
- Ensuring that debits are authorized legally and rule out any cash flow management strategies from abusive consumers

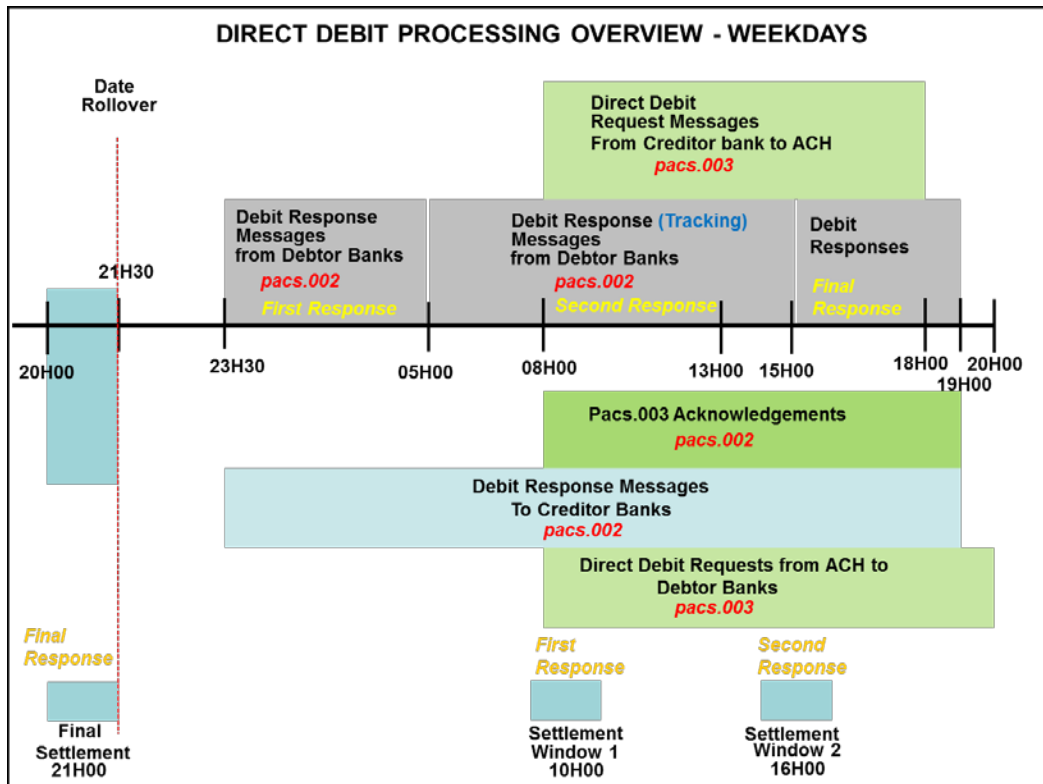
Additional information related to AC.

	Value
Currency codes	ZAR
Operating hours	AC clearing system operates on all week days including weekends and public holidays. Settlement of Inward Debit Responses are NOT performed by AC on Sunday and Public Holidays. On these days, AC only receives, processes and sends files. When a Debit Response is received by AC on Sunday or a Public Holiday, AC holds the request and performs the settlement on the next business date. For more information, see Operating Hours .
Clearing Model	Direct Debit Clearing

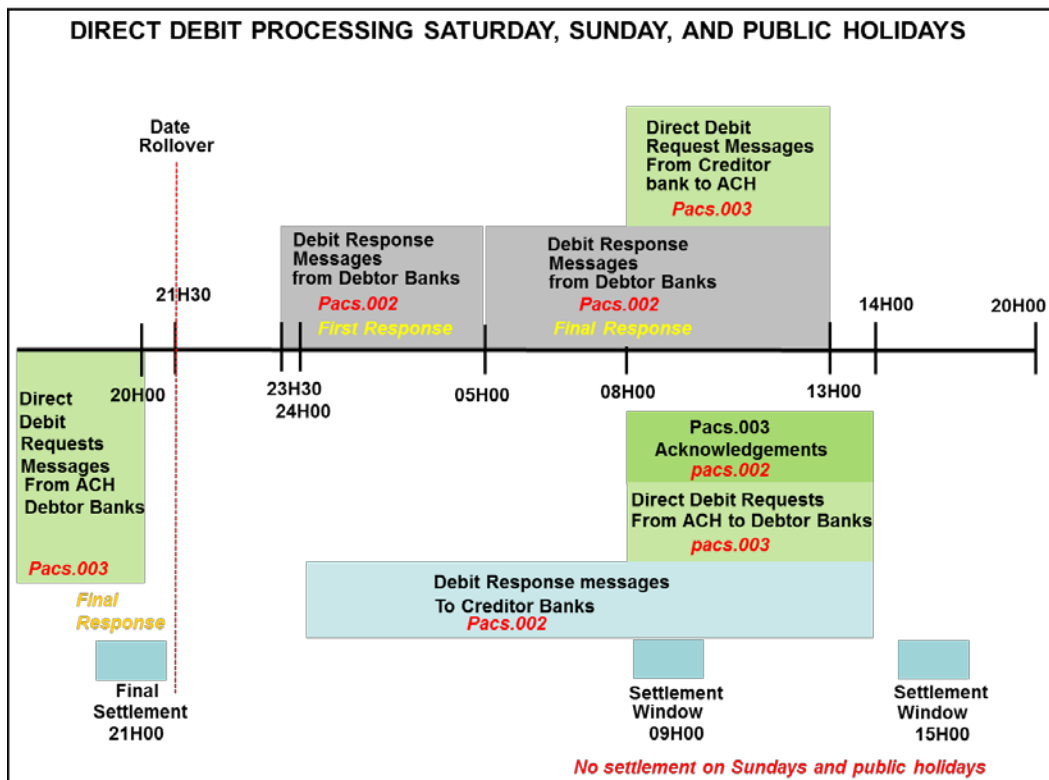
3.2.1.1.1 Operating Hours

AC clearing system's operating hours and cut-off times for receiving and sending files for direct debit requests and responses are different for weekdays (Monday to Friday) and Saturday, Sunday and Public Holidays.

Weekdays (Monday to Friday) Operating Hours



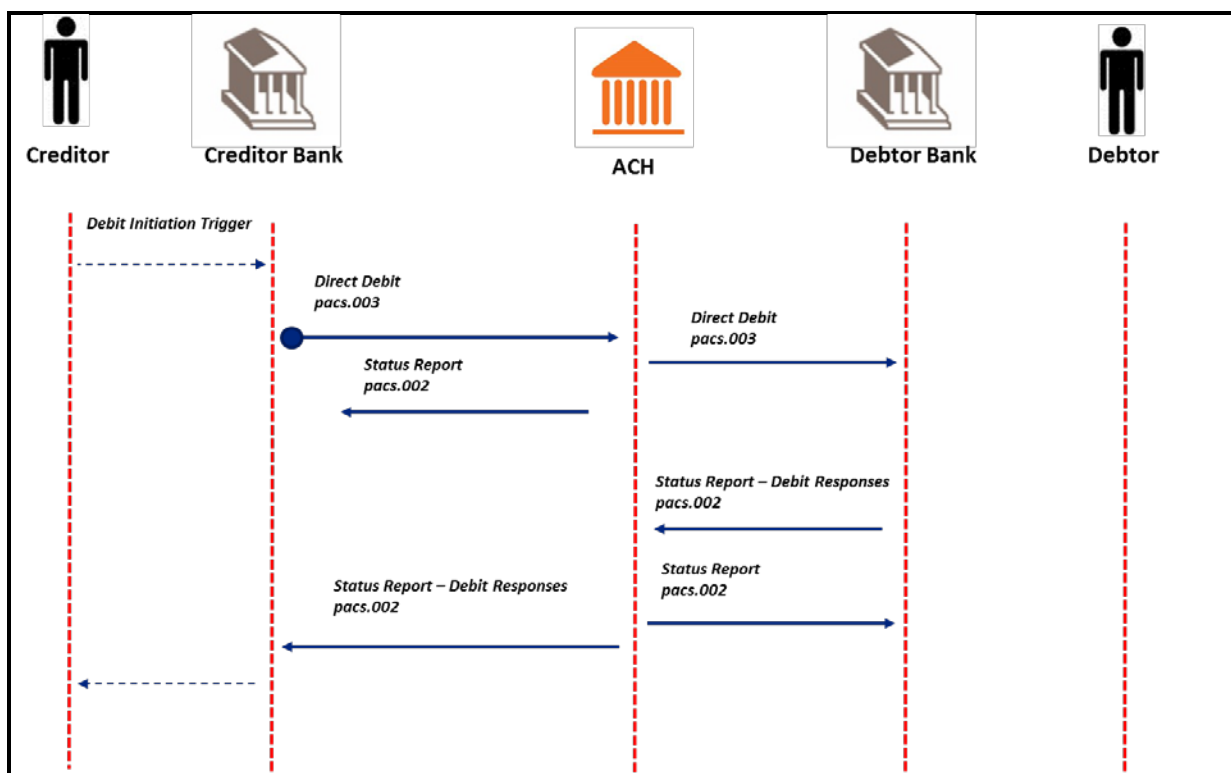
Saturday, Sunday and Public Holidays Operating Hours



3.2.1.1.2 High Level Business Flow

The flow shows the end to end business flow of direct debit requests and confirmation messages being sent between the creditor bank, AC Clearing and debtor bank.

- Direct debit requests (pacs.003) are originated from a creditor or a creditor bank. They are sent via the AC clearing (ACH) to the relevant debtor banks, and are ultimately applied to debtor's accounts.
- Responses to direct debits requests (pacs.002) are returned by the debtor bank via the AC clearing to creditor banks and/or creditors. Successful debits are applied to interbank settlements by AC clearing.
- AC clearing validates inwards direct debit requests (pacs.003) and debit responses (pacs.002) and triggers a status report to the creditor bank or the debtor bank respectively with the status of the message validation.



3.2.1.1.3 Supported Message Types

Message Type	Description
pacs.003	Direct Debit Message
pacs.002	Debit status report – positive or negative response from clearing. In addition, pacs.002 is also sent as a debit response from the debtor bank.

3.2.1.2 AC Use Cases

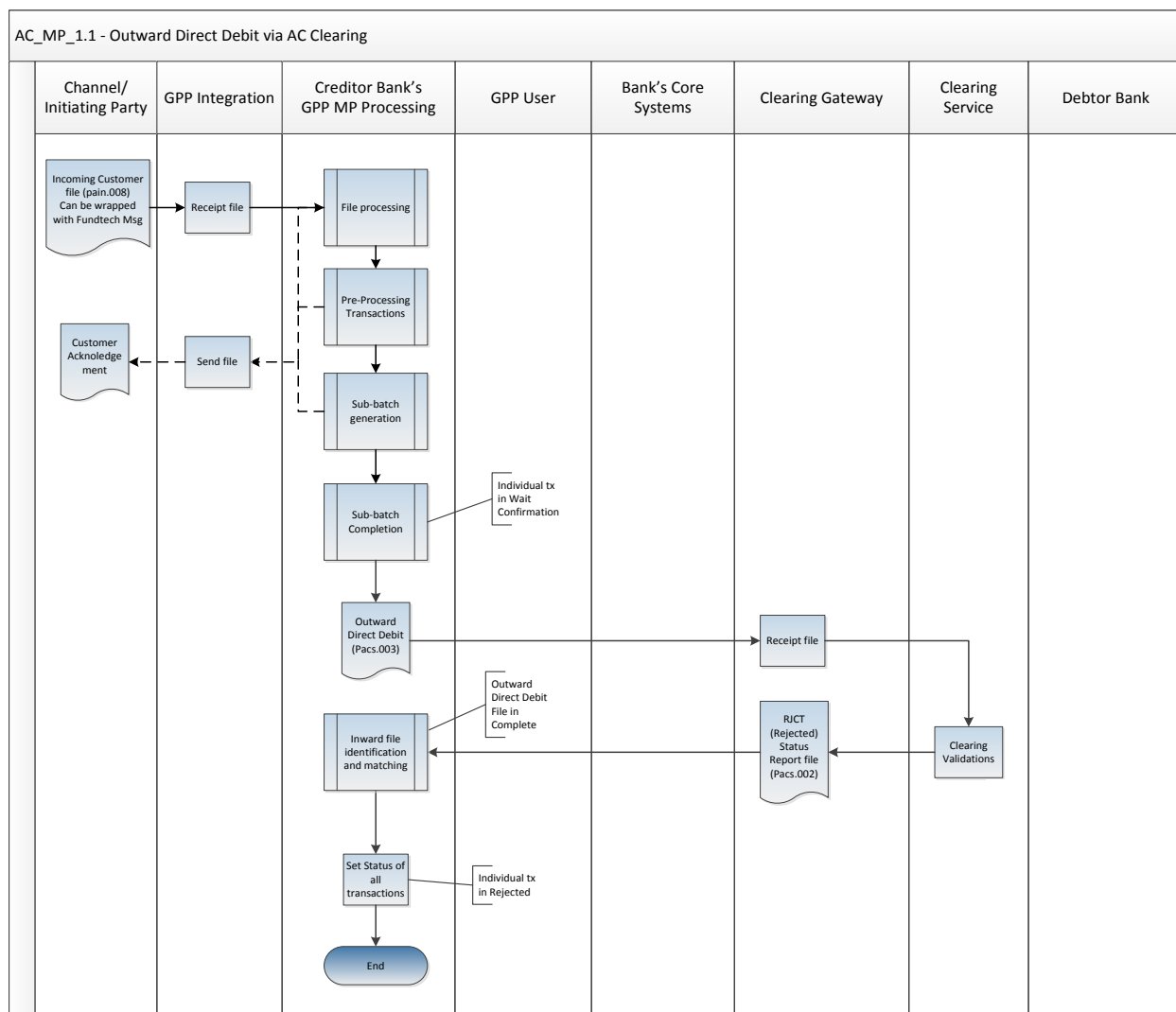
Basic Use Case	Alternate Use Case
Outward Direct Debit (Creditor) to AC	Outward DD with Reject Status Report from AC
	Outward DD with Partially Accepted Status Report from AC
	Outward DD with Success Status Report from AC and Reject Debit Response from Debtor Bank via AC
Inward Direct Debit (Debtor) from AC	Inward DD with successful Outward DD Response
	Inward DD with Reject outward Debit Response followed by a successful Inward Status Report from AC
	Inward Direct Debit Receives NSF from Accounting System

3.2.1.2.1 Outward Direct Debit (Creditor) to AC

Use Case Name	Outward Direct Debit to AC
Actors	Initiating Party, Creditor Bank, Banks core systems, AC clearing.
Description	This flow defines the outward direct debit mass payment via AC clearing
Trigger	Initiating party (such as a bank customer) sends a pain.008 file containing multiple direct debit payment transactions.
Pre-conditions	Payment initiation is well-formatted and has mandatory information as defined by ISO format specification
Post-conditions	Payment is completed successfully. A file is generated and sent to AC
Basic flow	GPP receives a file containing multiple direct debit payment transactions and able to process and send it successfully to AC clearing. GPP then receives a successful confirmation messages from AC and debtor bank which results in direct debit completion.
Alternate flows	<ul style="list-style-type: none"> • Outward DD with Reject Status Report from AC • Outward DD with Partially Accepted Status Report from AC • Outward DD with successful response from AC and Pending Debit Response from Debtor • Outward DD with successful response from AC and Reject Debit Response from Debtor

3.2.1.2.1.1 Outward DD with Reject Status Report from AC

This alternate business use case describes a positive flow in which GPP successfully triggers an outward direct debit and receives a successful Status Report followed by a successful Debit Response from AC clearing.

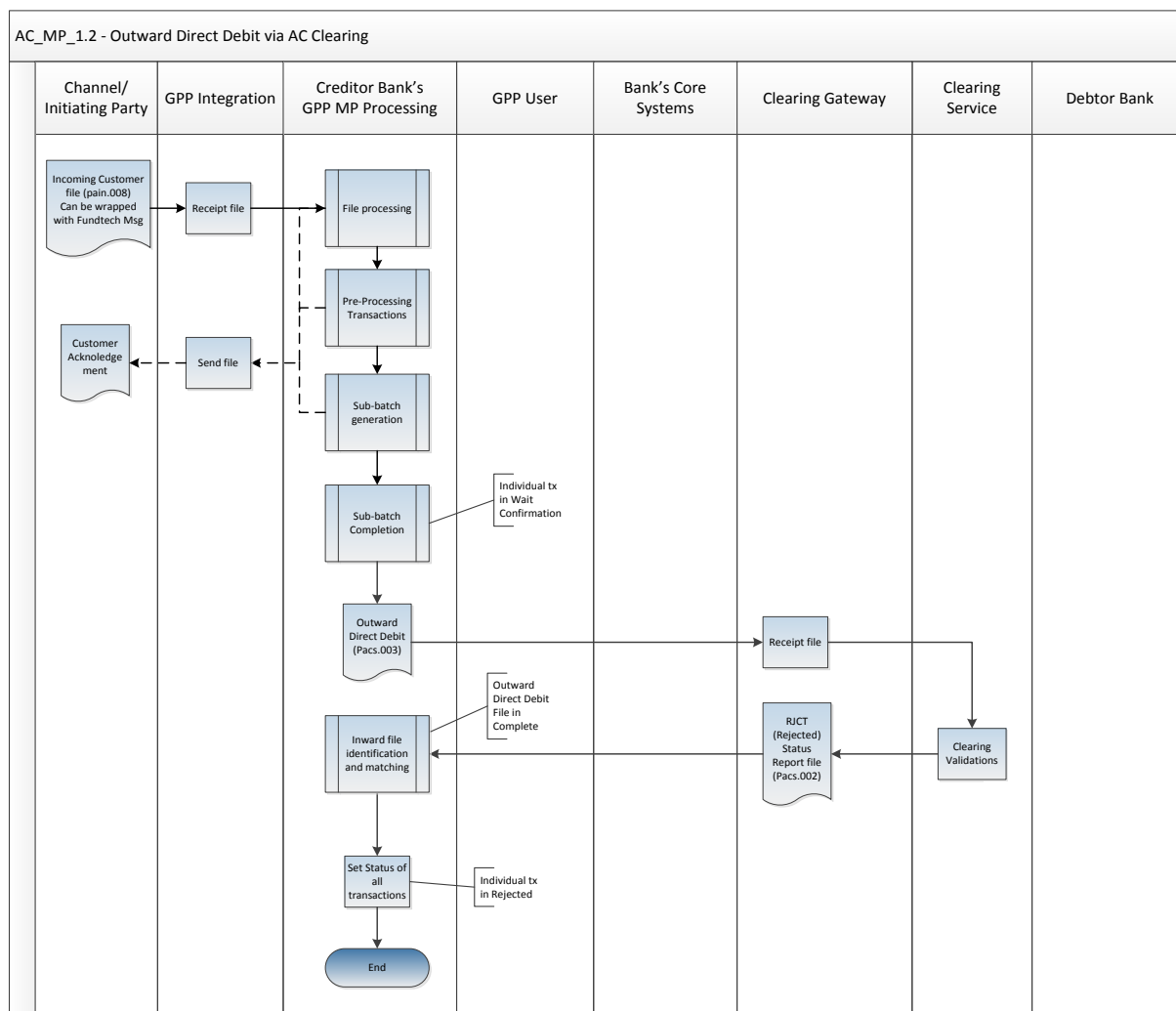


Details of the flow:

1. Creditor initiates Direct Debit request(s) in a pain.008 file through a feeder/channel (can be sent as wrapped with Fndt Message).
2. GPP (creditor bank) receives the file and successfully process it using the Mass Payments flow.
3. GPP generates and sends a file containing pacs.003 direct debit requests to the AC clearing system.
4. AC clearing system validates the direct debit request. If this validation fails (on file or transaction level), AC triggers a pacs.002 Status Report with a negative Rejected response to the creditor bank (GPP).
5. GPP receives the pacs.002 Status Report, matches it to the original direct debit file or transactions and sets the relevant transactions status to Rejected.

3.2.1.2.1.2 Outward DD with Partially Accepted Status Report from AC

This alternate business use case describes a negative flow in which GPP successfully triggers an outward direct debit payment and receives a Partially Rejected Status Report from the AC clearing.

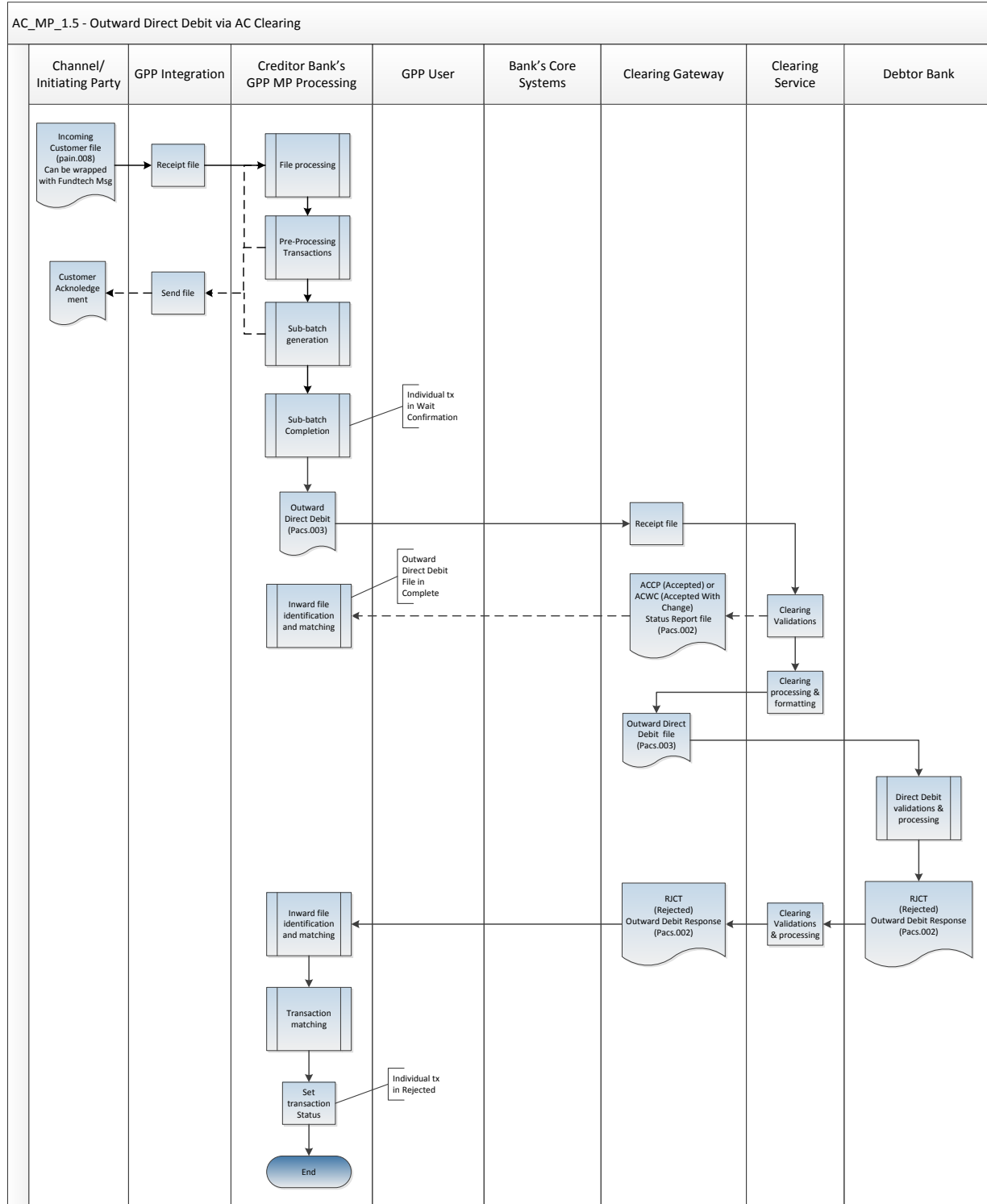


Details of the flow:

1. Creditor initiates Direct Debit request(s) in a pain.008 file through a feeder/channel (can be sent as wrapped with Fndt Message).
2. GPP (creditor bank) receives the file and successfully process it using the Mass Payments flow.
3. GPP generates and sends a file containing pacs.003 direct debit requests to the AC clearing system.
4. AC clearing system validates the direct debit request. If this validation fails for some of the transactions included in the direct debit request file, AC triggers a pacs.002 Status Report with a Partially Accepted response to the creditor bank (GPP). The remaining direct debit transactions which were validated successfully are sent by the AC clearing in a direct debit request file to the debtor bank.
5. GPP receives the pacs.002 Status Report, matches it to the original direct debit file and sets the status of the relevant transactions to Rejected.
6. For the file transactions which were successfully validated by AC clearing and transmitted to the debtor bank as a direct debit request, GPP waits for a respective Debit Response from the debtor bank.

3.2.1.2.1.3 Outward DD with Success Status Report from AC and Reject Debit Response from Debtor Bank via AC

This alternate business scenario describes a negative flow in which GPP successfully triggers an outward direct debit payment and receives a successful Status Report from the AC clearing (optional) followed by a Reject Debit Response from the debtor bank via the AC clearing.



Details of the flow:

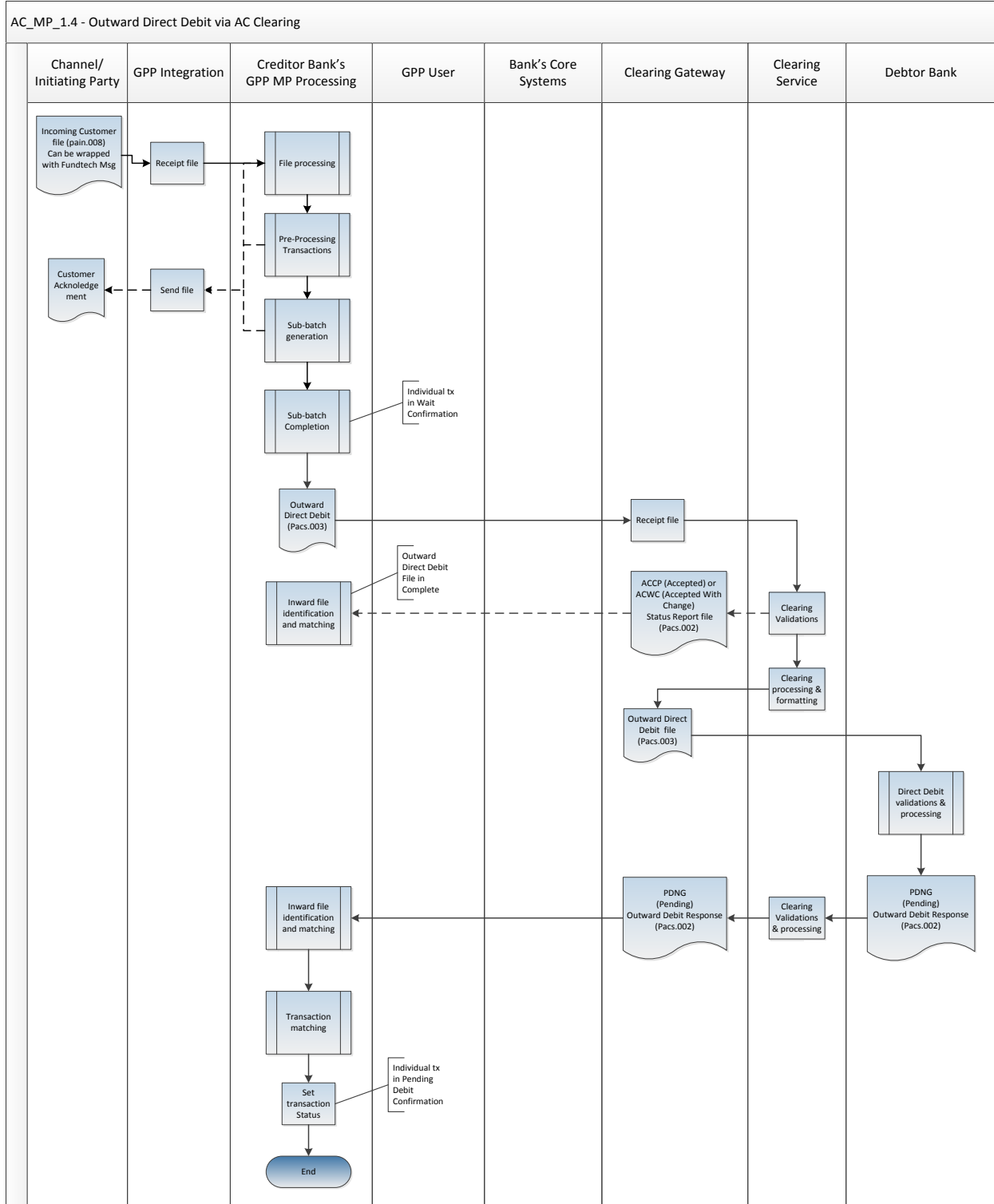
1. Creditor initiates Direct Debit request(s) in a pain.008 file through a feeder/channel (can be sent as wrapped with Fndt Message).
2. GPP (creditor bank) receives the file and successfully processes it using the Mass Payments flow.
3. GPP generates and sends a file containing pacs.003 direct debit requests to the AC clearing system.
4. AC clearing system successfully validates the direct debit transactions and may or may not trigger a pacs.002 status report with a positive response to the creditor bank (GPP).
5. AC clearing system sends direct debit pacs.003 file to the debtor bank.
6. Debtor bank validates and processes the direct debit orders.
7. For the direct debit transactions which are rejected, debtor bank triggers a pacs.002 Debit Response with Reject to the creditor bank via the AC clearing system.
8. GPP receives the pacs.002 Debit Response and sets the matching direct debit transactions status as Rejected.

3.2.1.2.2 Inward Direct Debit (Debtor) from AC

Use Case Name	Inward Direct Debit from AC
Actors	Debtor Bank, Banks core systems, AC clearing.
Description	This flow defines the inward direct debit MP received from AC clearing
Trigger	AC clearing sends the debtor bank an inward file containing multiple direct debit payment transactions
Pre-conditions	pacs.003 is sent from AC to the debtor bank
Post-conditions	Payment is completed successfully. A response is generated and sent to AC
Basic flow	GPP receives a file containing multiple direct debit payment transactions and can process it successfully to complete using MP flow. GPP then successfully triggers a debit response with a positive status to the creditor bank via AC clearing. AC clearing sends GPP a success Status Report for the inward debit response which was successfully validated.
Alternate flows	<ul style="list-style-type: none"> • Inward Direct Debit with successful outward Debit Response followed by a successful Inward Status Report from AC • Inward Direct Debit with Reject outward Debit Response followed by a successful Inward Status Report from AC

3.2.1.2.2.1 Outward DD with Success Status Report from AC and Pending Debit Response from Debtor Bank via AC

This alternate business use case describes a flow in which GPP successfully triggers an outward direct debit payment and receives a successful Status Report from AC clearing (optional) followed by a Pending Debit Response from the debtor bank via AC clearing.



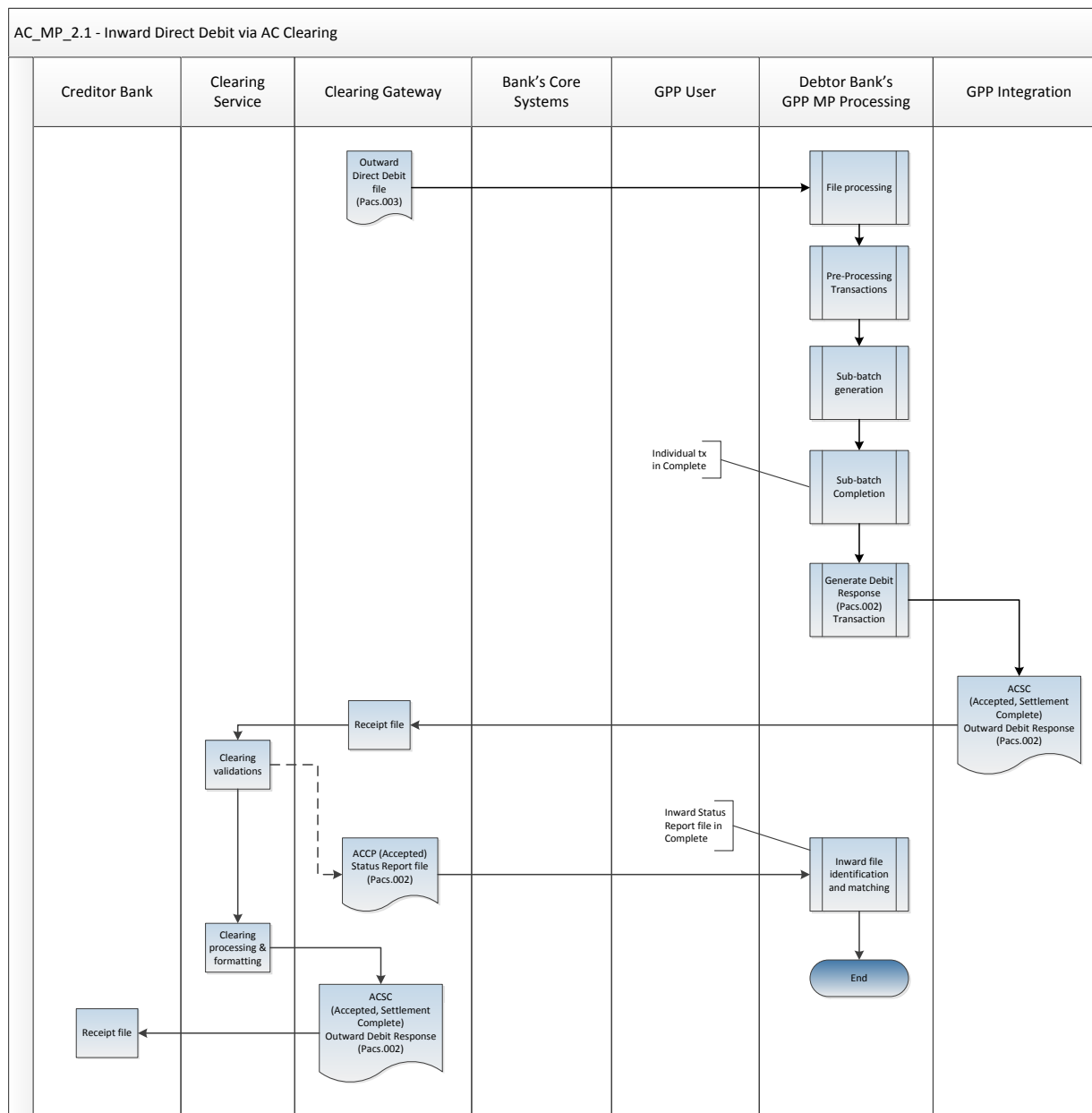
Details of the flow:

1. Creditor initiates Direct Debit request(s) in a pain.008 file through a feeder/channel (can be sent as wrapped with Fndt Message).
2. GPP (creditor bank) receives the file and successfully processes it using the Mass Payments flow.
3. GPP generates and sends a file containing pacs.003 direct debit requests to the AC clearing system.
4. AC clearing system successfully validates the direct debit transactions and may or may not trigger a pacs.002 status report with a positive response to the creditor bank (GPP).
5. AC clearing system sends a direct debit pacs.003 file to the debtor bank.
6. Debtor bank validates and processes the direct debit orders.
7. For the direct debit requests in which debit accounting fails due to insufficient funds, debtor bank triggers a pacs.002 Debit Response for Pending to the Creditor bank via AC clearing system.

GPP receives the pacs.002 Debit Response and sets the matching direct debit transactions status as Pending.

3.2.1.2.2.2 Inward DD with successful Outward DD Response

This business use case describes a positive flow in which GPP successfully processes an inward direct debit file and sends a positive Debit Response to AC clearing. GPP then receives a successful Status Report for this Debit Response from AC clearing indicating that the Debit Response was successfully validated by AC.



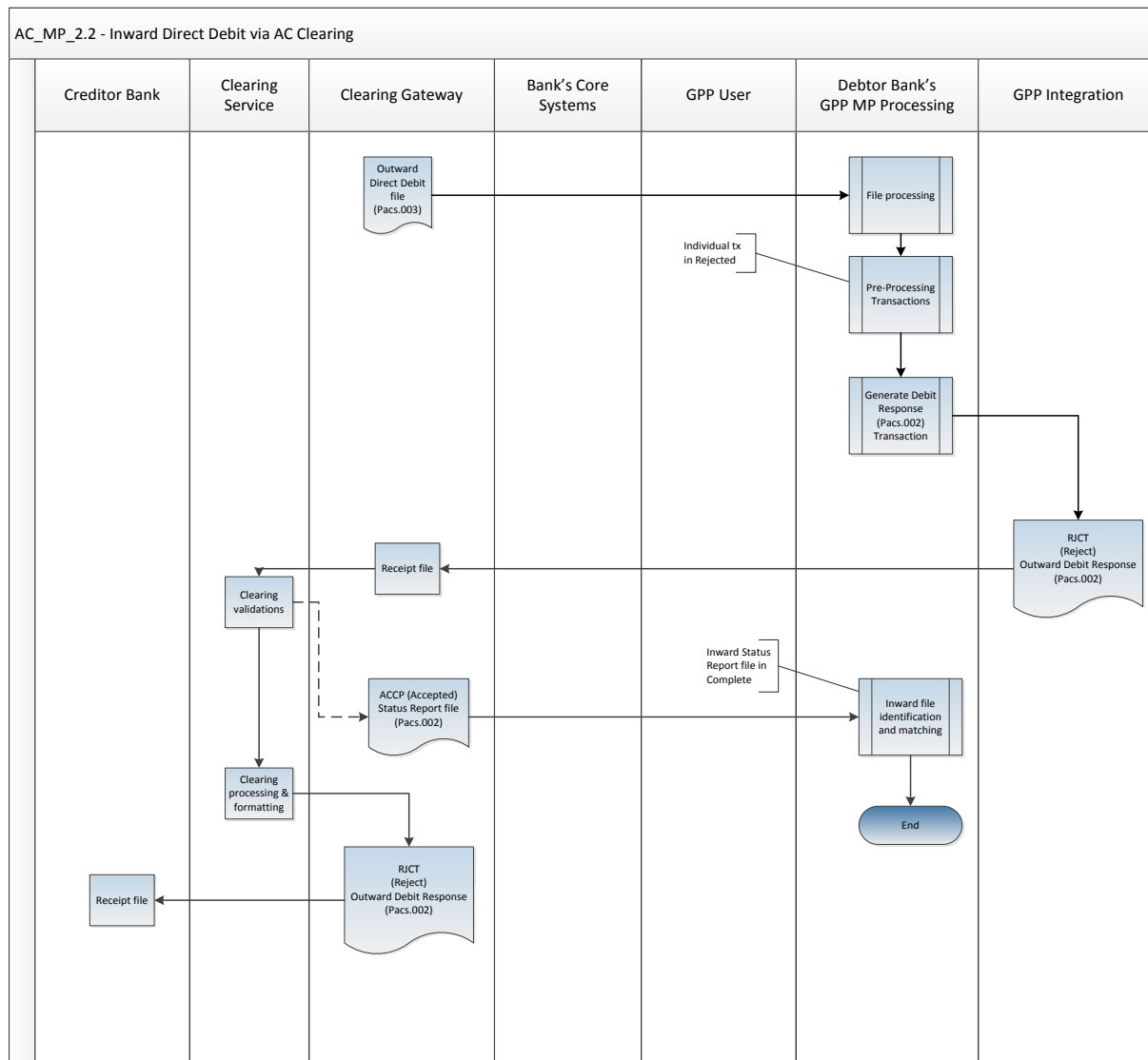
Details of the flow:

1. AC clearing triggers a Direct Debit payment instruction (pacs.003) in a file to a debtor bank.
2. GPP (debtor bank) receives the inward direct debit file and successfully processes it using the Mass Payments flow.
3. GPP generates and sends a successful Debit Response (pacs.002) file to the AC clearing system upon completion of the Mass Payments flow.

4. AC clearing system successfully validates the inward Debit Response and triggers a pacs.002 Status Report with a positive response to the debtor bank (GPP).
5. GPP receives the pacs.002 Status Report from AC Clearing and identifies it as a status response received for outward debit response. No further action is performed.

3.2.1.2.2.3 Inward DD with Reject outward Debit Response followed by a successful Inward Status Report from AC

This alternate business use case describes a negative flow in which GPP fails to successfully process an inward direct debit transaction and sends a Reject Debit Response to AC clearing accordingly. GPP then receives a successful Status Report for this Debit Response from AC clearing indicating that the Debit Response was successfully validated by AC.



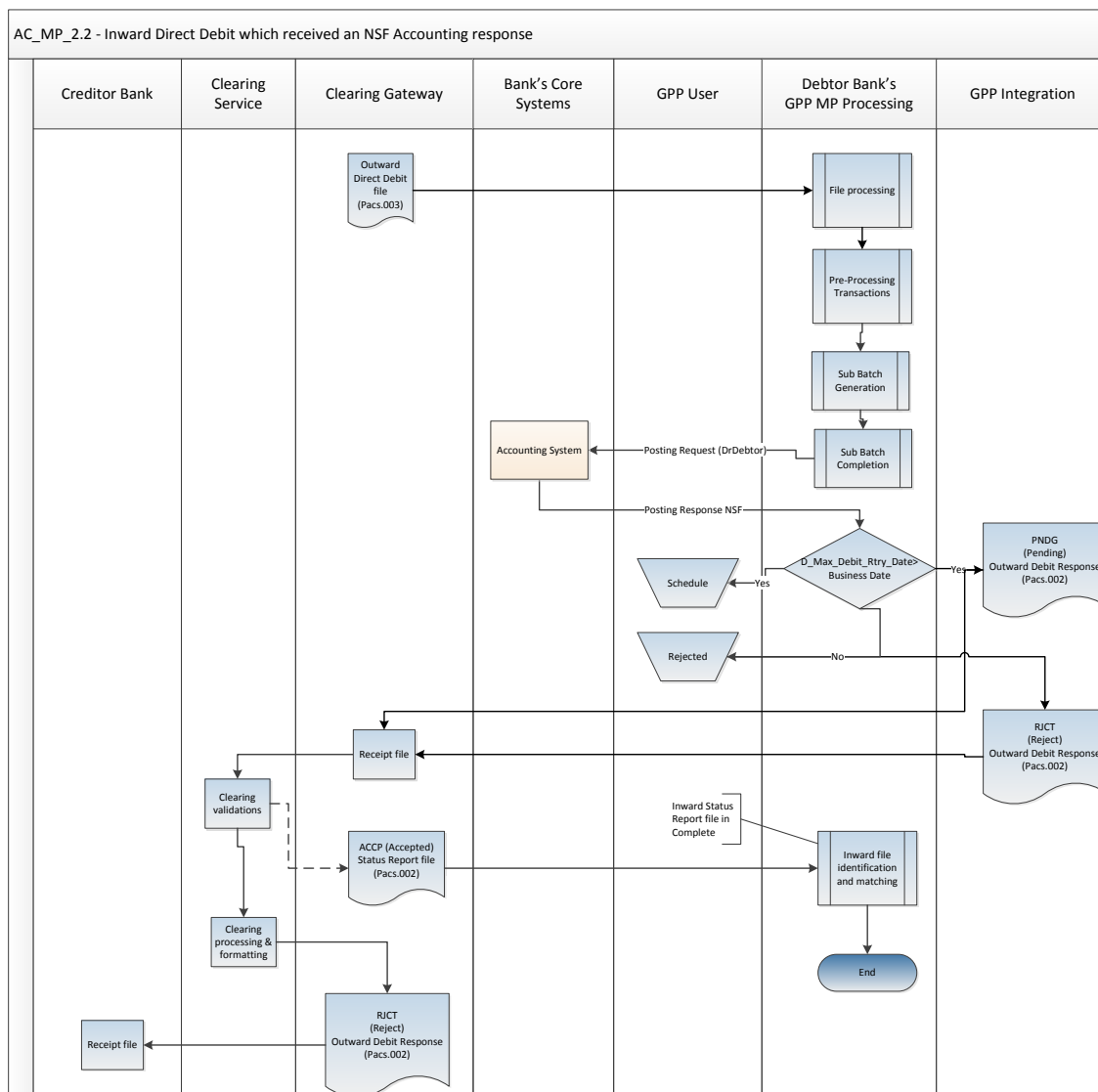
Details of the flow:

1. AC clearing triggers a Direct Debit payment instruction (pacs.003) in a file to a Debtor Bank
2. GPP (Debtor bank) receives the inward direct debit file and processes it using the Mass Payments flow. Some or all of the inward direct debit (pacs.003) transaction failed processing.

3. For the failed transactions, GPP generates a Reject Debit Response (pacs.002) to be sent to AC clearing system in a file.
4. AC clearing system successfully validates the inward Debit Response and triggers pacs.002 Status Report with a positive response to the debtor bank (GPP).
5. GPP receives the pacs.002 Status Report from AC Clearing and identifies it as a status response received for outward debit response. No further action is performed.

3.2.1.2.2.4 Inward Direct Debit Receives NSF from Accounting System

This alternate business use case describes a flow in which GPP processes an inward direct debit file and receives an NSF response from the accounting system. GPP sends a Pending Debit Response to AC clearing system. GPP receives a positive response indicating that the Debit Response was successfully validated by AC.



Details of the flow:

1. AC clearing triggers a Direct Debit payment instruction (pacs.003) in a file to a debtor bank.

2. GPP (debtor bank) receives the inward direct debit file and processes it using the Mass Payments flow.
3. GPP receives an NSF response from the accounting system.
4. For the failed transactions, GPP generates a Pending Debit Response (pacs.002) to be sent to AC clearing system in a file.
5. AC clearing system successfully validates the inward Debit Response and triggers a pacs.002 Status Report with a positive response to the debtor bank (GPP).
6. GPP receives the pacs.002 Status Report from AC Clearing and identifies it as a status response received for outward debit response. No further action is performed.

3.2.1.3 Outward/Inward Processing

3.2.1.3.1 Outward Direct Debit Processing

Once GPP processes the direct debit request and sends an outward direct debit pacs.003 file to AC clearing, GPP does not set the status of the transaction to Completed, as GPP expects two confirmation responses from AC clearing:

- Status Report – first confirmation message indicating the outcome of the direct debit request validation in AC
- Debit Response – second confirmation message indicating a positive or negative result of the debit requests process by the debtor bank

When there is a successful flow, during the completion stage of the direct debit Mass Payments process, GPP sets a Wait Confirmation status to the pacs.003 transactions.

Wait Confirmation status is in the Waiting message status group. It is enabled by setting the Communication preferences MOP attribute to Wait Confirmation.

Note: Communication preferences MOP attribute values which are supported for mass payments are None and Wait Confirmation. Other valid values should not be set for batch based MOPs.

3.2.1.3.1.1 Inward Status Report and Debit Response Initial Processing

For outward direct debit scenarios:

1. GPP receives a pacs.002 Status Report and Debit Response confirmation messages from AC clearing.
2. Upon receiving each of the messages, GPP identifies the pacs.002 type (Status Report or Debit Response) and performs a matching check to the respective direct debit file or message.
3. When the matching direct debit file or transaction is found, GPP analyzes the status received in the pacs.002 file or transaction and handles the respective direct debit status accordingly.
4. Upon receiving the pacs.002 file, as part of incoming file handling step, once the file is verified by GPP, GPP identifies the pacs.002 type as follows.

Message Usage	Service Identification Code	GPP Identification of pacs.002
Debit request Status Reports from AC clearing to creditor banks	ST002	Status Report
Direct debit responses from AC clearing to creditor banks	DROUT	Debit Response

3.2.1.3.1.2 Inward Status Report

AC sends the Status Report file (pacs.002) with an indication of the group level Message ID as exist in the original direct debit request file. When GPP receives this file, GPP performs matching checks on a group (file) level using the group Message ID parameter.

GPP uses the following field as the file (group) level matching criteria:

Original File (pacs.003)	Status Report File (pacs.002)
Group Message ID (<GrpHdr><MsgId>)	Original Message ID (<OrgnlGrpInfAndSts><OrgnlMsgId>)

- When a file match is found, GPP sets the status of the original direct debit file (pacs.003) to Completed.
- When a file match is not found, GPP sets the status of the inward confirmation file (pacs.002) to FileNotMatched.
- When a match is found, GPP checks that the original pacs.003 file was not already matched to another file. If file was matched before, GPP sets the status of the inward confirmation file (pacs.002) to FileNotMatched.

Note: Group Message ID and Original Message ID fields exist in the group header of the pacs.003 and pacs.002 files respectively. Since there is only one group header in files being sent or received from AC, the fields indicated in the group header provides data in the level of the entire file.

3.2.1.3.1.2.1 Status Report with Accepted or Accepted with Change Status

Additional handling of the Inward Status Report (pacs.002) when the status is Accepted or Accepted with Change.

- GPP checks the group level status of the inward pacs.002 file indicated in the <OrgnlGrpInfAndSts><GrpSts> tag of the file group header.
 - When the direct debit file (pacs.003) is validated successfully by AC clearing, the group level status is **Accepted Customer Profile** (GrpSts is ACCP), in the group header of the inward Status Report from AC clearing.
 - When the direct debit file (pacs.003) is validated successfully by AC clearing but the requested value date (action date) of one or all of the transactions is a non-working day for the debtor bank, the group level status (<OrgnlGrpInfAndSts><GrpSts> tag) is **Accepted with Change** (GrpSts is ACWC), in the group header of the inward Status Report. This status is sent to the creditor bank as an informational message. The creditor bank is not required to perform any amendment to the related direct debit transactions, as GPP considers the Accepted with Change status as a full file accept (Accepted Customer Profile).
- When the file status is Accepted Customer Profile or Accepted with Change, the status of the individual direct debit transactions related to this file remain as Wait Confirmation, until GPP receives the Debit Response from the debtor bank via AC clearing.

Note: The Status Report received from AC clearing only includes information of rejected transactions. Hence, in the case of full file accept, the inward pacs.002 file does not include any transaction information.

3.2.1.3.1.2.2 Status Report with Rejected Status

Additional handling of the Inward Status Report (pacs.002) when the status is Rejected by AC clearing.

- When the direct debit (pacs.003) is rejected by AC clearing, the group level status is Rejected (<OrgnlGrpInfAndSts><GrpSts> is RJCT), in the group header of the inward Status Report.
- When GPP receives this file Reject status, as part of the inward pacs.002 file processing, GPP sets the status of all direct debit transactions of the matched pacs.003 file to Rejected.

3.2.1.3.1.2.3 Status Report with Partially Accepted Status

Additional handling of Inward Status Report (pacs.002) when the status is Partially Accepted by AC clearing.

- When the transactions in the direct debit file (pacs.003) were rejected by AC clearing, the group level status is Partially Accepted (<OrgnlGrpInfAndSts><GrpSts> is PART) in the group header of the inward Status Report.
- For the transactions received in the inward pacs.002 Status Report, GPP sets the status of the matched pacs.003 transactions to Rejected.
- The status of the direct debit transactions which are not indicated in the pacs.002 file remain as Wait Confirmation.

3.2.1.3.1.3 Inward Debit Response

GPP may receive an inward Debit Response from the debtor bank, following a successful Status Report from AC clearing or when no Status Report was received from AC clearing.

The Debit Response file includes responses for all direct debit transactions which are sent in one or more files from GPP (both successful and unsuccessful debits are included in the file).

- When the inward pacs.002 is identified as a Debit Response (Service Identification Code is DROUT), GPP performs matching checks for each transaction included in the inward pacs.002 file.
- GPP de-bulks the inward Debit Response pacs.002 file and processes each of its transaction individually. This process includes a matching check for this transaction to the original direct debit transaction. This matching check is done according to the system setup of matching check rules for AC payments.

The matching index criteria for transaction level matching check uses the following parameter:

Original Message (pacs.003)	Debit Response Message (pacs.002)
Transaction ID (<DrctDbtTxInf><PmtId><TxId>)	Original Transaction ID (<TxInfAndSts><OrgnlTxId>)

- When a transaction level match is not found, the inward pacs.002 message is not kept in GPP.

3.2.1.3.1.3.1 Debit Response with Accepted Status

Additional handling of the Inward Debit Response (pacs.002) with Accepted Status.

- GPP identifies the inward confirmation message as a Debit Response (Service Identification Code is DROUT) and matches it to its original direct debit transaction, for the transactions received with Accepted Settlement Complete status (<TxInfAndSts><TxSts> is ACCP).
- GPP updates the status of the matched pacs.003 transaction from Wait Confirmation to Completed.

3.2.1.3.1.3.2 Debit Response with Pending Status

Additional handling of the Inward Debit Response (pacs.002) with Pending Status.

- GPP identifies the transaction level status as Pending (<TxInfAndSts><TxSts> is PDNG), and the matching direct debit transaction is set with a status of Pending Debit Confirmation.
- For each of the transactions received in the Debit Response file, GPP sets the status of the matched pacs.003 transaction to Pending Debit Confirmation.

3.2.1.3.1.3.3 Debit Response with Rejected Status

Additional handling of the Inward Debit Response (pacs.002) with Rejected Status.

GPP identifies the transaction level status as Rejected (<TxInfAndSts><TxSts> is RJCT), and the matching direct debit transaction is set with a status of Rejected.

For each of the transactions received in the Debit Response file, GPP triggers a pacs.002 process and sets the status of the matched pacs.003 transactions to Rejected.

3.2.1.3.2 Inward Direct Debit Processing

3.2.1.3.2.1 Generation of Debit Response Message

For any inward direct debit (pacs.003) processed by GPP, a debit response confirmation message (pacs.002) is generated and sent to the creditor bank via AC clearing. This confirmation message is used to notify the creditor bank on the status of the direct debit processing.

GPP triggers the debit response upon routing the pacs.003 message to its final status.

3.2.1.3.2.1.1 Confirmation Message Process

The Generate Response Message process first determines whether a confirmation message is required to be generated and sent to Clearing. This decision is based on the Message Type and Message Status.

- When a confirmation message is to be sent, GPP performs the following:
 - Determines the respective message format to be used.
 - Creates a relation between the processed payment (pacs.003) and the generated confirmation message (pacs.002). This relation is done in the Relation Type Original Payment^Outgoing Response which is used for outward Responses being sent from GPP regardless of the status (Accept or Reject) of the generated response.
- When a confirmation message is not required to be sent, GPP skips this process.

For inward direct debit transactions (Message Type) which were successfully completed (Message Status), GPP triggers a success Debit Response in the format of pacs.002 as required by AC clearing.

When the inward direct debit fails during the pre-processing stage of the Mass Payments flow:

- GPP sets the transaction status to RJCT (Rejected) in the <TxInfAndSts><TxSts> tag of the outward pacs.002.
- GPP populates the reason code tag which is mandatory for rejected transactions. This reason code is populated in the <TrxInfAndSts><StsRsnInf><Rsn><Cd> tag of the outward pacs.002. GPP maps AM09 ISO reason code as a default value.

3.2.1.3.2.1.2 Confirmation Message Mapping

Once GPP determines that a confirmation message is required to be sent to clearing with a specific format, GPP triggers a mapping logic for this message which complies with the field format specifications of the destination clearing.

For AC clearing, this mapping includes the following:

- Setting the attributes of the pacs.002 group header as required by AC clearing. This mapping is done according to the pacs.002 Debit Response AC format.
- Mapping specific attributes of the inward direct debit (ppacs.003) to the outward Debit Response (pacs.002). The list of attributes to be mapped is according to AC clearing specifications for the pacs.002 message type.
- Setting direct debit message status in the transaction status tag (<TxInfAndSts><TxSts>) of the outward pacs.002. When the direct debit transaction is completed successfully, GPP sets the status of the respective transaction to ACCP (Accepted).

3.2.1.3.2.2 Inward pacs.002 Type Identification

This Service Identification Code is included in the inward Status Report received from AC clearing for an outward Debit Response sent by GPP.

Message Usage	Service Identification Code	GPP Identification of pacs.002
Debit responses Status Reports from AC clearing to debtor bank	ST006	Status Report

3.2.1.4 Business Setup

These are the details of the required setup in GPP profiles for the Clearing Certification.

Note: For a detailed description of all the fields in the profiles, see GPP Online Help.

3.2.1.4.1 Profiles

3.2.1.4.1.1 Method of Payment Profile

A new method of payment (MOP) profile should be defined for direct debit payments being sent to or received from AC clearing.

These are the specific attributes that need to be defined in the MOP profile for AC Clearing.

Field	Value for AC
Name	AC
Description	MP DD MOP for AC clearing
Calendar	AC_DD_MP_ZAR
Earliest Value Date	1 Note: AC clearing only supports messages being sent one day in advance to the action date. Messages sent at any other time (including same day) are rejected.
Latest Value Date	1
Currency	ZAR
Membership Check	Checked
Send outgoing message	Must be selected

Field	Value for AC
Processing Tab	
FIN Copy Service	AC
Sender/Receiver type	ZANCC
Sender ID	Should be populated with the bank office NCC

3.2.1.4.1.2 Bulking Profile

As part of the Out File Generation phase of the Mass Payments process, GPP collects and organizes the transactions destined for AC clearing system into bulks based on pre-defined criteria. This criteria includes parameters which are defined in the Bulking profile associated with the AC MOP. Grouping of the transaction is performed on file and bulk level.

Direct debit or Debit Response transactions sent to AC clearing by GPP should be grouped in the outward file using the bulking profile.

For outward Direct Debit (pacs.003) and outward Debit Response (pacs.002), These are the specific attributes that need to be defined in the Bulking profile:

Field Name	Value
Name	AC_DD_MP_BLK
Description	Outward Direct Debit (pacs.003) and outward Debit Response (pacs.002) to AC Clearing
Test Code	Production
File Type	AC
Minimum Transactions per File	1
Maximum Transactions per Bulk	49,999
Receiver ID	210000

3.2.1.4.1.3 Cut-off Times Profile

The Cut-off Times profile defines the latest time for transactions to be processed for AC MOP. They are for outward direct debit (pacs.003) and outward debit responses (pacs.002) messages.

For outward direct debit files, AC clearing cut-off is different for files being sent to clearing during week days (Monday to Friday) or during weekends (Saturday, Sunday and public holidays). For weekday and weekends, outward Debit Responses (pacs.002) must be sent to AC clearing between 23:30 of the day in which the respective direct debit request was received and until 5:00 of the next day.

These are the specific attributes that need to be defined in the Cut-off Times profile for AC Clearing.

Weekdays Cut-off Times Profile for Outward Direct Debit (pacs.003) sent to AC Clearing

Field Name	Value
Cut-off name	AC_DD_MP_WDAY
Default time	True

Field Name	Value
Cut-off type	Clearing
Time zone	SAST - Time zone for aligning cut-off times
Description	Clearing Cut Off for Outward Direct Debit (pacs.003) sent to AC Clearing during weekdays (Monday to Friday)
Interim cut-off time	18:00 - Interim Cut-off time in the time zone
Final cut-off time	18:00 - Final Cut-off time in the time zone

Weekends Cut-off Times Profile for Outward Direct Debit (pacs.003) sent to AC Clearing

Field Name	Value
Cut-off name	AC_DD_MP_WEND
Default time	True
Cut-off type	Clearing
Time zone	SAST - Time zone for aligning cut-off times
Description	Clearing Cut Off for Outward Direct Debit (pacs.003) sent to AC Clearing during weekends (Saturday, Sunday and public holidays)
Interim cut-off time	13:00 - Interim Cut-off time in the time zone
Final cut-off time	13:00 - Final Cut-off time in the time zone

Weekdays and Weekends Cut-off Times Profile for Outward Direct Debit (pacs.003) sent to AC Clearing

Debit Responses must be sent before 5:00 AM on the next day of receiving the respective direct debit request.

Field Name	Value
Cut-off name	AC_DD_MP_COTPCS2
Default time	True
Cut-off type	Clearing
Time zone	SAST - Time zone for aligning cut-off times
Description	Clearing Cut-off for Outward Debit Response (pacs.002) sent to AC Clearing during weekdays (Monday to Friday) and weekends (Saturday, Sunday and public holidays)
Interim cut-off time	05:00 - Interim Cut-off time in the time zone
Final cut-off time	05:00 - Final Cut-off time in the time zone

3.2.1.4.1.4 Membership Profile

The AC Membership profile defines whether the participating banks are members of the clearing house. For supporting membership the Membership required indicator on the AC MOP profile must be selected.

AC identifies its member banks by their South African NCC. Hence, a membership profile should be defined for each participating bank, its NCC and AC defined as the MOP (Member Type should be populated automatically with ZANCC based on MOP Sender/Receiver attribute).

These are the specific attributes that need to be defined in the Membership profile for AC Clearing.

Field Name	Value
MOP	AC
Member type	ZANCC - Automatically added based on MOP Sender/Receiver and Additional Member Type
Member ID	Select your bank's NCC
Main BIC	No Value
Type of Membership	Full member - Indicates full membership in the MOP, and Member field is disabled

3.2.1.4.1.5 Calendars Profile

A dedicated calendar should be defined for AC clearing according to its operating days.

This AC MOP calendar name should be selected in the Calendar attribute of AC MOP profile.

These are the specific attributes that need to be defined in the Calendar profile for AC Clearing.

Field Name	Value
Calendar name	AC_DD_MP_ZAR
Description	AC clearing RAND calendar
Default calendar	Unmarked
Weekend Days	None - AC clearing operates 7 days a week

3.2.1.4.1.6 Accounts Profile

Suspense account should be defined to be used in the batch (customer/clearing) accounting.

These are the specific attributes that need to be defined in the Accounts profile for AC Clearing.

Field Name	Value
Account Number	99999
Currency	ZAR
Party code	LOCALOFFICEZA1
Account Type / Subtype	SUS

3.2.1.4.1.7 Identifiers Profile

The Identifiers profile setup should be implemented to define the banks' identifier (NCC) in AC clearing. This setup is done for a specific bank office.

Field Name	Value
Office	Should be populated with the bank's office
MOP	AC_DD
Identifier	Should be populated with the NCC used by AC to identify the bank
Settlement Account	Should be populated with the Settlement Account number of the Banks' office in AC

3.2.1.4.2 Rules

3.2.1.4.2.1 Clearing Cut Off Selection Rules (103)

The applicable AC Clearing Cut off profile should be selected by GPP based on the message type and the day of the week. This should be implemented by clearing cut off selection rules according to the following rule setup guidelines:

Rule	Rule Attribute	Setup Guidelines
1	AC Clearing cut off selection for outward pacs.003 during weekdays	
	Rule Name	AC_DD_MP_COT
	Attachment	This rule should be attached to an office
	Rule conditions	All of the following conditions should be met: <ul style="list-style-type: none"> Message type is pacs.003 The message is outward to AC (debit MOP = AC) Message is being processed on weekdays (processing day is not Saturday or Sunday)
	Action	Clearing Cut off profile to be selected: AC_DD_MP_WDAY
2	AC Clearing default cut off selection for outward pacs.003 (applicable to Saturday and Sunday)	
	Rule Name	AC_DD_MP_COT_DEF
	Attachment	This rule should be attached to an office
	Rule conditions	All of the following conditions should be met: <ul style="list-style-type: none"> Message type is pacs.003 The message is outward to AC (debit MOP = AC)
	Action	Clearing Cut off profile to be selected: AC_DD_MP_WEND
3	AC Clearing cut off selection for outward Debit Response (pacs.002)	
	Rule Name	AC_DD_MP_COTPCS2
	Attachment	This rule should be attached to an office
	Rule conditions	All of the following conditions should be met: <ul style="list-style-type: none"> Message type is pacs.002

Rule	Rule Attribute	Setup Guidelines
		<ul style="list-style-type: none"> The message is outward to AC (credit MOP = AC)
	Action	Clearing Cut off profile to be selected: AC_DD_MP_COTPCS2

Note: The default clearing cut-off rule for outward pacs.003 should be implemented in case the bank is working during weekends.

3.2.1.4.2.2 MOP Bulking Profile Selection (227)

The applicable MOP bulking profile should be selected by GPP based on the type of the message to be sent in a file to AC clearing. GPP need to select a different bulking profile for outward direct debit (pacs.003) and for outward debit response (pacs.002). This is implemented by MOP bulking profile selection rules according to the following rule setup guidelines:

Rule	Rule Attribute	Setup Guidelines
1	AC Bulking profile selection for outward pacs.003	
	Rule Name	AC_DD_MP_BLK
	Attachment	This rule should be attached to an office
	Rule conditions	All of the following conditions should be met: <ul style="list-style-type: none"> Message type is pacs.003 The message is outward to AC (debit MOP = AC)
	Action	MOP bulking profile to be selected: AC_DD_MP_BLK
2	AC Bulking profile selection for outward Debit Response (pacs.002)	
	Rule Name	AC_DD_MP_BLK_PCS2
	Attachment	This rule should be attached to an office
	Rule conditions	All of the following conditions should be met: <ul style="list-style-type: none"> Message type is pacs.002 The message is outward to AC (credit MOP = AC)
	Action	MOP bulking profile to be selected: AC_DD_MP_BLK_PCS2

3.2.1.4.2.3 Out Bulk Grouping ID Selection (138)

GPP invokes Out Bulk Grouping ID Selection rules to determine the data manipulation profile that the system uses to build an Out File Group ID (OFID) and Out Bulk Group ID (OGID).

The system generates and uses the OFID to place transactions into the appropriate outgoing file. The system generates and uses the OGID to place transactions with common attributes into appropriate groups in the outgoing file.

This should be implemented by Out Bulk Grouping ID Selection rules according to the following rule setup guidelines:

Rule	Rule Attribute	Setup Guidelines
1	Outgoing group ID for outward Direct Debit (pacs.003) sent to AC	
	Rule Name	AC_DD_MP_GRP
	Attachment	This rule should be attached to the outward direct debit (pacs.003) bulking profile (AC_DD_MP_BLK)
	Rule conditions	None
	Action	Data Manipulation profile to be selected: AC_DD_MP_GRP
2	Outgoing group ID for outward Debit Response (pacs.002) sent to AC	
	Rule Name	AC_DD_MP_GRP_PCS2
	Attachment	This rule should be attached to the outward debit response (pacs.002) bulking profile (AC_DD_MP_BLK_PCS2)
	Rule conditions	None
	Action	Data Manipulation profile to be selected: AC_DD_MP_GRP_PCS2

3.2.1.4.2.4 Bulking Sending Time (137)

GPP is obligated to send Debit Response files between 23:30 and 5:00 of the next date for all inward direct debit requests (pacs.002) received during the day. Therefore, the sending time of outward Debit Response should be set to 23:30. This is implemented by a business setup of Bulking sending time rule with the following setup guidelines:

Rule Attribute	Setup Guidelines
Rule Name	AC_DD_MP_PCS2^23:30
Attachment	This rule should be attached to the outward debit response (pacs.002) bulking profile (AC_DD_MP_PC2)
Rule conditions	None
Action	Sending Time profile to be selected: AC_DD_MP_PCS2^23:30

3.2.1.4.2.5 MOP Selection Rules (3)

For outward direct debit (pacs.003) with settlement currency of ZAR, AC clearing should be selected as a candidate to be a destination MOP. This is implemented by MOP selection rule with the following setup guidelines:

Rule Attribute	Setup Guidelines
Rule Name	AC_DD_MP_OUT
Attachment	This rule should be attached to an office
Rule conditions	All of the following conditions should be met: Message settlement currency is ZAR Original Message Type is pain.008 The message is outward from GPP (credit MOP is different to BOOK)
Action	MOP to be selected: AC

For inward direct debit (pacs.003) received from AC clearing, BOOK should be set as the destination MOP of the payment. This is implemented by MOP selection rule with the following setup guidelines:

Rule Attribute	Setup Guidelines
Rule Name	AC_DD_MP_IN
Attachment	This rule should be attached to an office
Rule conditions	All of the following conditions should be met: Message type is pacs.003 The message received from AC clearing (credit MOP is AC)
Action	MOP to be selected: BOOK

3.2.1.4.2.6 Compliance Validation Skip (21)

GPP should skip compliance validation as part of the AC payment processing. This is achieved by a business setup of Compliance Validation rule with the action of bypass. This rule should be defined with the following setup guidelines:

Rule Attribute	Setup Guidelines
Rule Name	AC_DD_MP_DEF_COMP_PASS
Attachment	This rule should be attached to an office
Rule conditions	One of the following conditions should be met: Message has a source Mop of AC (credit MOP is AC) OR Message has a destination MOP of AC (debit MOP is AC)
Action	Compliance validation should be skipped (BYPASS)

3.3 Mass Payment APAC Clearing

3.3.1 Malaysia - IBG

3.3.1.1 Overview

Malaysia IBG (Interbank GIRO) is a delayed fund (not real-time processing) clearing system introduced by MyClear (Malaysian Electronic Clearing Corporation).

This system allows electronic funds transfers between IBG-participating Financial Institutions (FIs) within Malaysia. Consumer funds can be securely transferred from an FI account (savings, checking, loan/financing or credit card) to an account at another FI by:

- Ensuring that only FIs that offer IBG send and receive funds via IBG
- Enabling consumers to perform IBG transfers through these channels:
 - FI Branch
 - Internet Banking
 - ATM

- Providing unsuccessful transfer status to the consumer via an SMS (Short Messages Service) text message that notifies the consumer of a rejected transaction via their mobile phone number

IBG also enables businesses and billing organizations (Biller), such as insurance or utility companies, to automatically withdraw recurring payments directly from a consumer's FI account (Payer) via multiple FIs (Payer FI) with a single authorization.

To perform these transactions, IBG collects batch files from the Biller FIs (for example, bills, fees, invoices) and validates and processes a payment prior to distributing it to the corresponding Payer FIs.

IBG DD (Direct Debit) offers:

- **Security and control:** To become a DD Biller, each business or organization must register as a merchant with any participating Biller Bank that provides DD services. Biller Banks verify and approve DD Biller's Merchant Registration Forms, and assign a new Biller ID to the DD Biller.
- **Direct Debit Authorization (DDA):** DDA is the authorization or mandate given by the Payer to the Biller to initiate the IBG DD or Collection transactions on a recurring basis. This is a one-time process for each mandate before the first debit transaction sent by the Biller. Businesses may determine when and how much to debit their customers once a direct debit mandate is obtained from the Payer.
- **Direct Debit Transaction (DDT):** DDT is the process of initiating and receiving payment to a debit request. It involves Biller sending debit transactions (DDI) to Biller Banks for Payer Banks to debit pre-approved accounts. It is a batch processing whereby all Participants (i.e. Biller Banks and Payer Banks) submit transactions in batch files at processing windows. Similarly, Payer Bank's responded with the debiting status to the Biller Bank using batch files.

Additional information related to IBG:

	Value
Currency code	MYR
SWIFT Service Identifier code	IBG
Service type	SWIFT V-Topology Messaging Scheme
Operating hours	Vary depending on transaction; see Operating Hours
Cut-off times	Vary depending on transaction; see Operating Hours
Maximum default (per day) IBG Transfer Amount (MYR)	Branch: 500,000 Internet/Mobile Banking: 5,000 ATM: 5,000

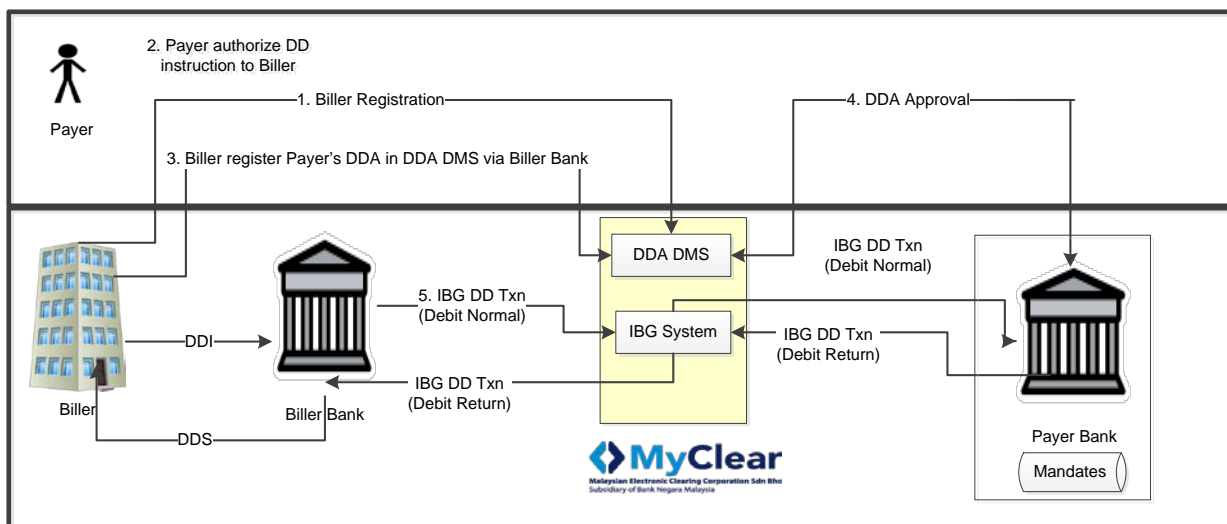
3.3.1.1.1 Operating Hours

IBG abides by these operating hours and cut-off times, which vary for weekdays (Monday to Friday) and Saturday, Sunday and Public Holidays:

Payment Initiated by Customers			*Funds Received by Beneficiaries	*Refund for Unsuccessful Transactions
Business Days (Mon-Fri)	Before 5:00am	Same Business Day	By 5:00pm	By 5:00pm
	5:01am – 8:00am		By 8:20pm	By 8:20pm
	8:01am – 11:00am		By 11:00pm	By 11:00pm
	11:01am - 2:00pm		By 11:00am (next business day)	By 11:00am (next business day)
	2:01pm – 5:00pm		By 11:00pm	
	After 5:00pm	Next Business Day	By 5:00pm	By 5:00pm
Non-Business Days (Saturday, Sunday and Federal Territory Public Holidays)		Next business day	By 11:00am	By 5:00pm

3.3.1.1.2 High Level Business Flow

The flow shows the end-to-end business flow of direct debit requests and confirmation messages being sent between the creditor bank (Biller), IBG Clearing and debtor bank (Payer).



3.3.1.1.3 Supported Message Types

IBG DD supports NACHA format, including direct debit message and its normal or return response.

Message Type	Description
pain_008	Billers send pain.008 version 2 for IBG DD collections.
NACHA_DD (Debit Normal (DN))	MyClear NACHA supports bit collection and distribution files for NACHA collections.

Message Type	Description
	Transaction Code 27
NACHA_RTN (Debit Return (DR))	MyClear NACHA supports collection and distribution files for NACHA returns. Transaction Code 26

Note: DNs and DRs are included in the same NACHA file. Separate NACHA files are not required for Collections.

Debit Normal (DN)

1. The Biller Bank sends outgoing DNs to MyClear in NACHA format (Transaction code 27 in Entry Detail Record) in the Collection file.
2. MyClear validates each DN and if valid, forwards each DN to the Payer Bank in the Distribution file.
3. The Payer Bank, upon receiving the incoming DNs, debits the Payer's account and provides a response to MyClear in the next IBG DD processing window in the Collection file.

Debit Return (DR)

1. A Debit Return transaction initiates in response to an outgoing DN's request from the Biller Bank.
2. MyClear or Payer Bank initiates a DR.

The DR contains return reason codes (provided by MyClear) that are specific for MyClear and Payer Banks.

Note: For a listing of return reason codes and their descriptions, see [Appendix A: MyClear IBG Return Reason Codes](#).

3.3.1.2 IBG Use Cases

Basic Use Case	Alternate Use Case
Inward/Outward Processing	Outward DD Receiving a Successful Response from IBG
	Outward DD Receiving a Negative Response from IBG
	Outward DD Received with Future Date from Biller
	Outgoing DD Failed Pre-processing at Biller Bank
Inward Direct Debit (Payer) from IBG	Inward DD with Successful Outgoing DR
	Inward DN Failed Mandate Validation Returns Outgoing DR (R99) response
	Incoming DN with Debit-Retry requested scheduled for next day retry
	Incoming DN with Insufficient Funds Generates Outgoing DR

3.3.1.2.1 Outward Direct Debit (Biller) to IBG

3.3.1.2.1.1 Outward DD Receiving a Successful Response from IBG

This use case describes the flow that initiates when the Biller (Creditor) submits a pain.008 Collection file. GPP generates an Outward DN, and a successful response is received in the Incoming DR within the appropriate time frame.

1. The individual direct debit transaction is sent to IBG as an Outgoing DN in the Collection file.
2. Upon receiving the successful Incoming DR for corresponding Outgoing DN in the Distribution file, the DNs processes to Complete.
3. GPP credits the Biller (lump sum or itemized) for all successful Collections upon receiving a DR with Return Reason Code R00 (received per window per original incoming pain.008 file).

Details of the flow:

1. GPP (as Biller Bank) receives a pain.008 from Biller that contains multiple Collection requests from a different Payer.

Note: The Payer's account is either held with the Biller Bank or with another bank.

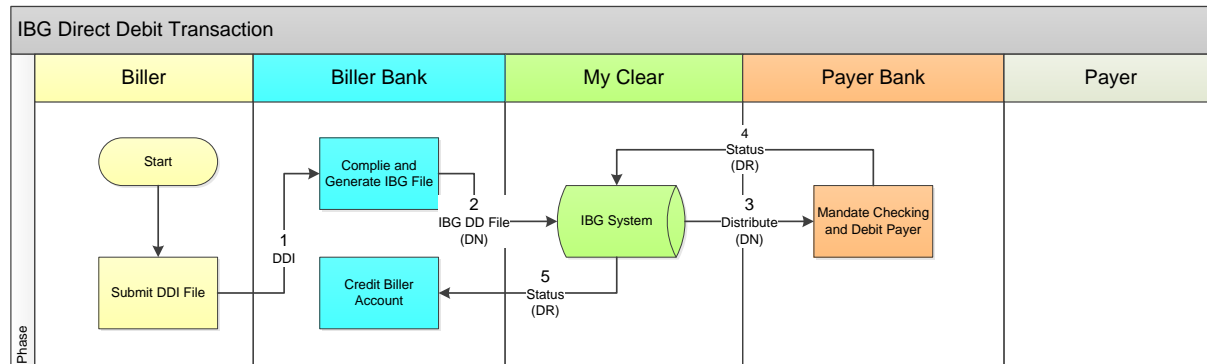
2. GPP parses the pain.008 as per the standard mass payment process.
3. GPP creates a File Summary and Batch Summary record.
4. GPP creates individual pain.008 transactions and is processed as per standard mass payment business flow – Outgoing DD transactions.
5. GPP assigns MYIBGDD MOP for individual Outgoing DD transactions.
6. The transaction converts to NACHA_DD transaction after MOP selection.
7. A bulking profile is assigned to each transaction.
8. GPP creates the Outgoing DN in NACHA format and stores it in Out_File_Buffer table. The file proceeds to the Wait Confirmation queue.
9. Upon receiving the Incoming DR in the next Distribution window, GPP attempts to match Incoming DR with the existing Outgoing DN in the Wait Confirmation queue.
10. After successful matching of Incoming DR with R00:
 - a. Outgoing DN is sent to Complete queue from the Wait Confirmation queue.
 - b. Incoming DR proceeds further in workflow.
 - c. GPP uses Incoming DR with R00 return code (X_RSN_CD = R00) to generate an S message.

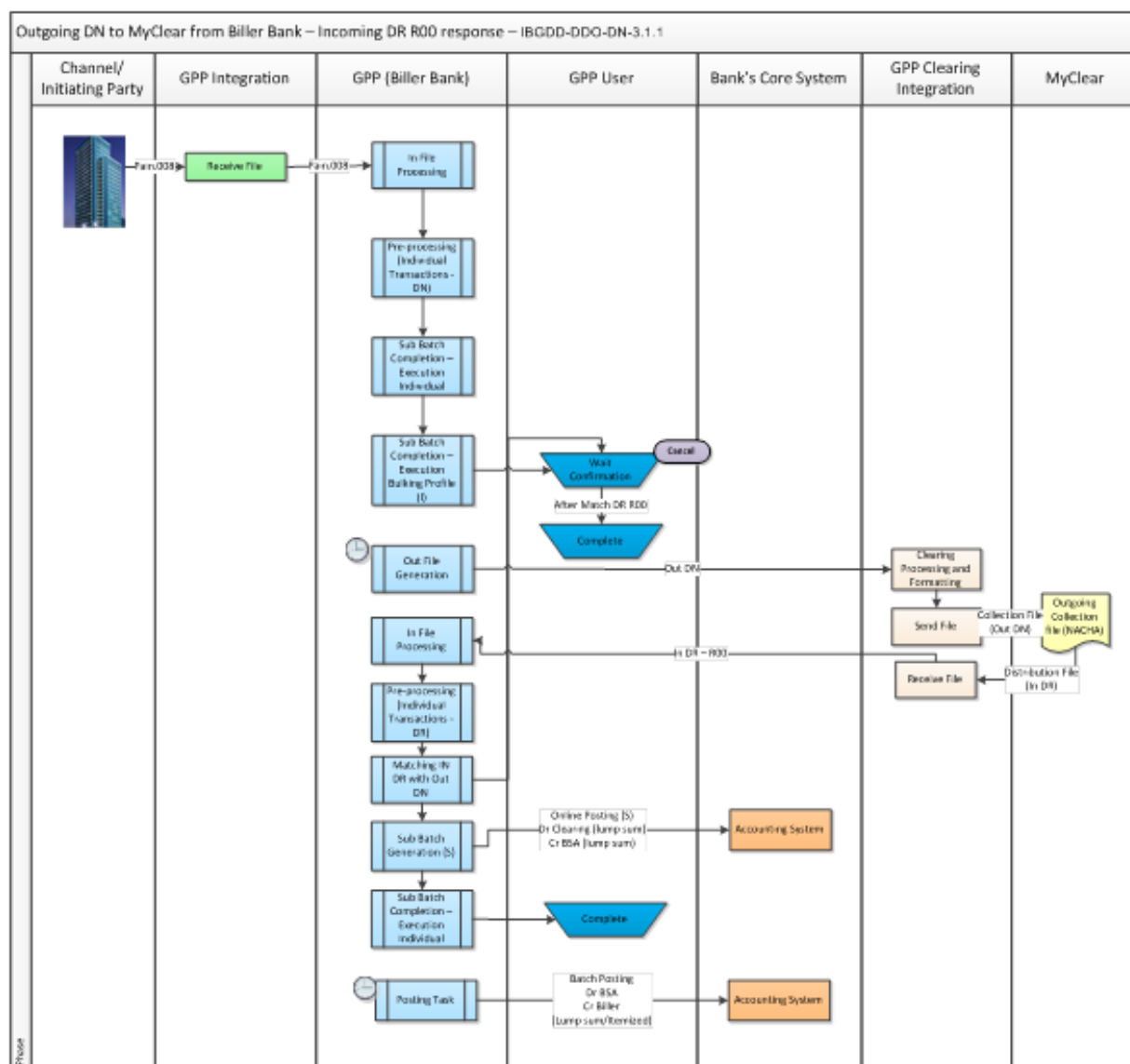
Note: An S message uses the online posting interface to perform the clearing side posting.

- d. Incoming DR is processed to the Complete queue.
11. GPP credits the Biller using a timer-based task.
 - a. The task triggers at the end of IBG window.
 - b. The task either:

- ❖ Performs lump sum
- ❖ Performs an itemized credit to Biller for all successful returns (DR R00) received per window per original pain.008 file received from Biller.

This diagram shows the end-to-end business flow of direct debit message and its response.



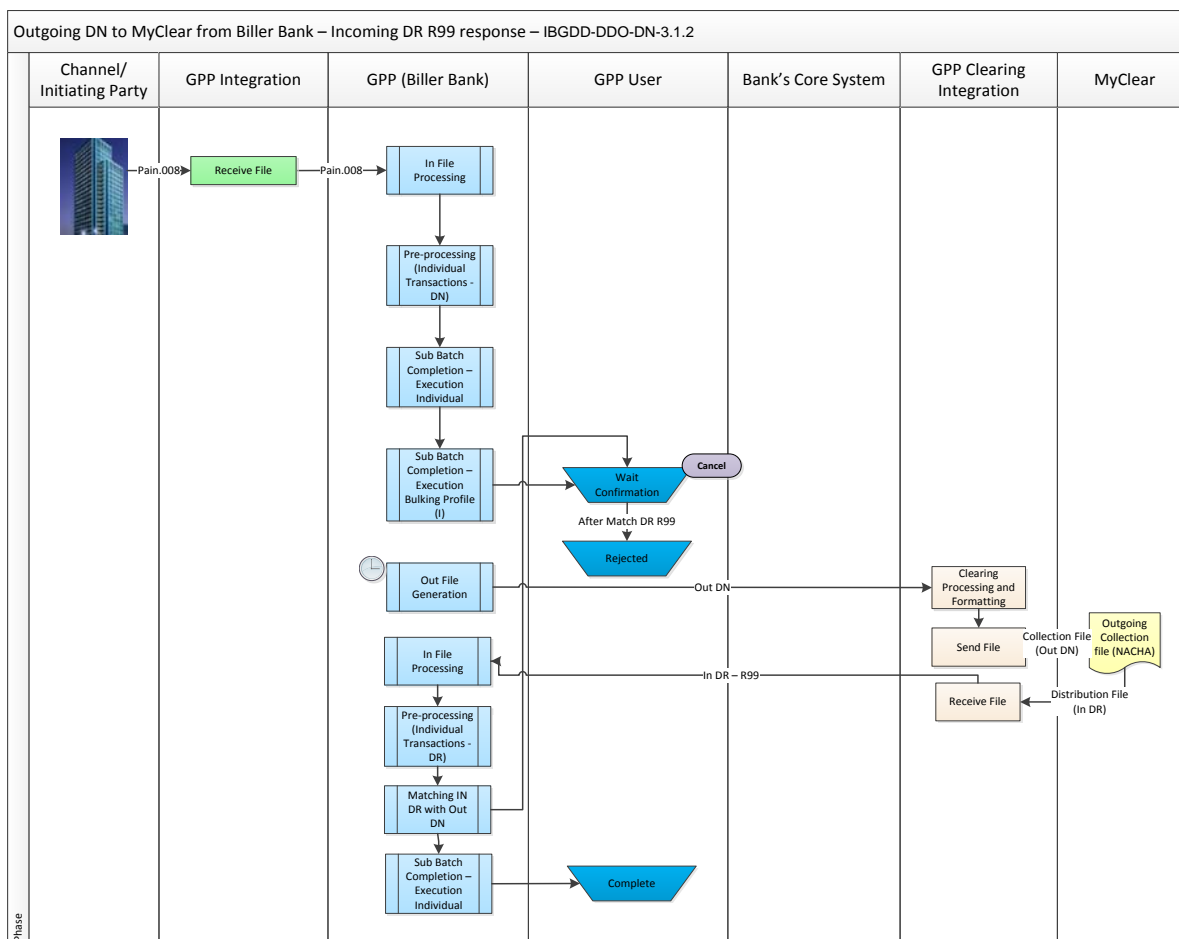


3.3.1.2.1.2 Outward DD Receiving a Negative Response from IBG

This use case invokes when IBG sends an Incoming Distribution File which contains a negative DR (Return Reason Code <> R00) for an outgoing DN (submitted in a previous Outgoing Collection Files).

GPP performs the matching process, and after making a successful match, GPP rejects the matched Outgoing DN. GPP then processes the Incoming DR to the Complete queue.

Note: An R99 return reason code (any return code other than R00) represents an error.



Details of the flow:

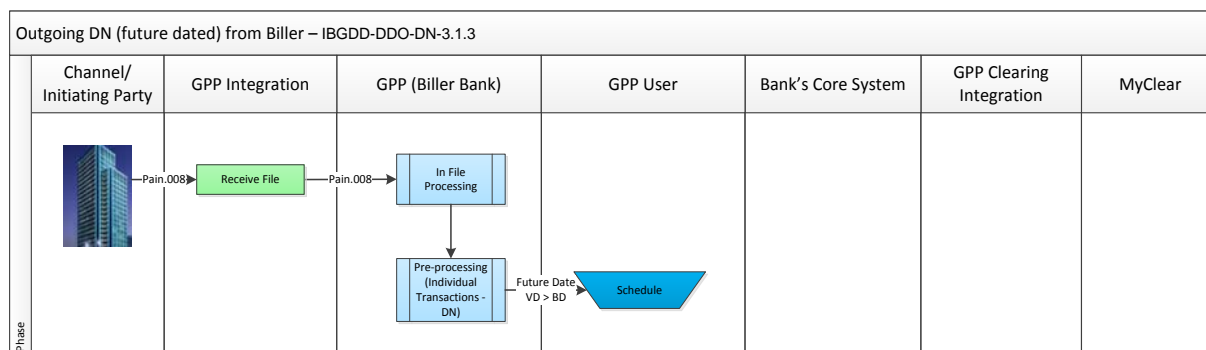
This business scenario describes the process of receiving pain.008 and generation of Outgoing DN.

1. The corresponding Incoming DR R00 response is received in next distribution file. GPP receives an Incoming Distribution File with DR R99 (Return Reason Code <> R00) response.
2. GPP performs the matching of Incoming DR with existing Outgoing DN waiting in the Wait Confirmation queue as per Incoming DR.
3. After successful matching of Incoming DR without R00:
 - a. Outgoing DN is sent to the Rejected queue from the Wait Confirmation queue.
 - b. Incoming DR is processed to the Complete queue.

3.3.1.2.1.3 Outward DD Received with Future Date from Biller

This use case invokes when the Biller (Creditor) submits the pain.008 Collection with future value date.

Note: IBG DD Collections are warehoused in GPP until next value date, and are processed only on the value date.



Details of the flow:

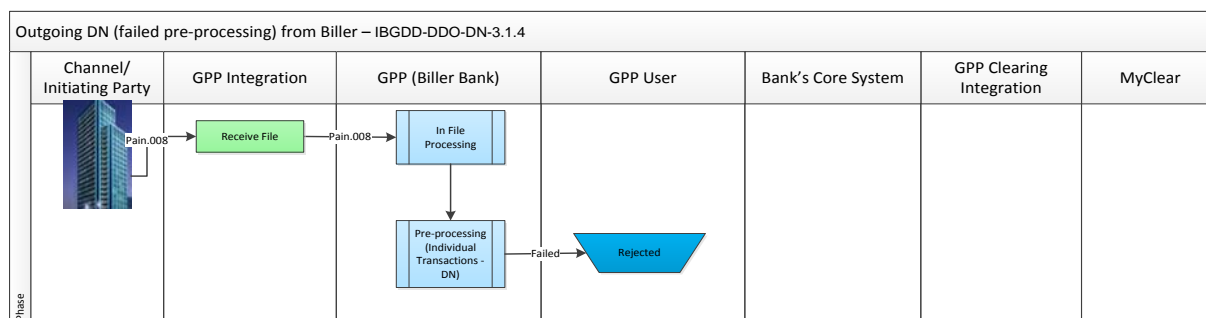
This business scenario describes the process of receiving pain.008 received with future dated Collections from Biller.

1. GPP receives pain.008 from Biller Bank.
2. GPP parses the pain.008 file as per standard mass payment flow.
3. For pain.008 with Requested Collection Date in future (VD > BD), GPP warehouses the payment in the Schedule queue with IBGDD MOP's Latest Value Date setting = 0 (with appropriate audit as per BAU (Business As Usual)).
4. Using existing Release from Schedule queue task, GPP processes the Outgoing DN on value date and sends the DN to MyClear.

3.3.1.2.1.4 Outgoing DD Failed Pre-processing at Biller Bank

This use case invokes when the Biller (Creditor) submits a pain.008 Collection that fails pre-processing at GPP.

Note: GPP automatically rejects a pain.008 Collection. A rejected pain.008 is not sent to MyClear for collection.



Details of the flow:

This business scenario describes the process of receiving pain.008 with future-dated Collections from Biller.

1. GPP receives pain.008 from Biller.

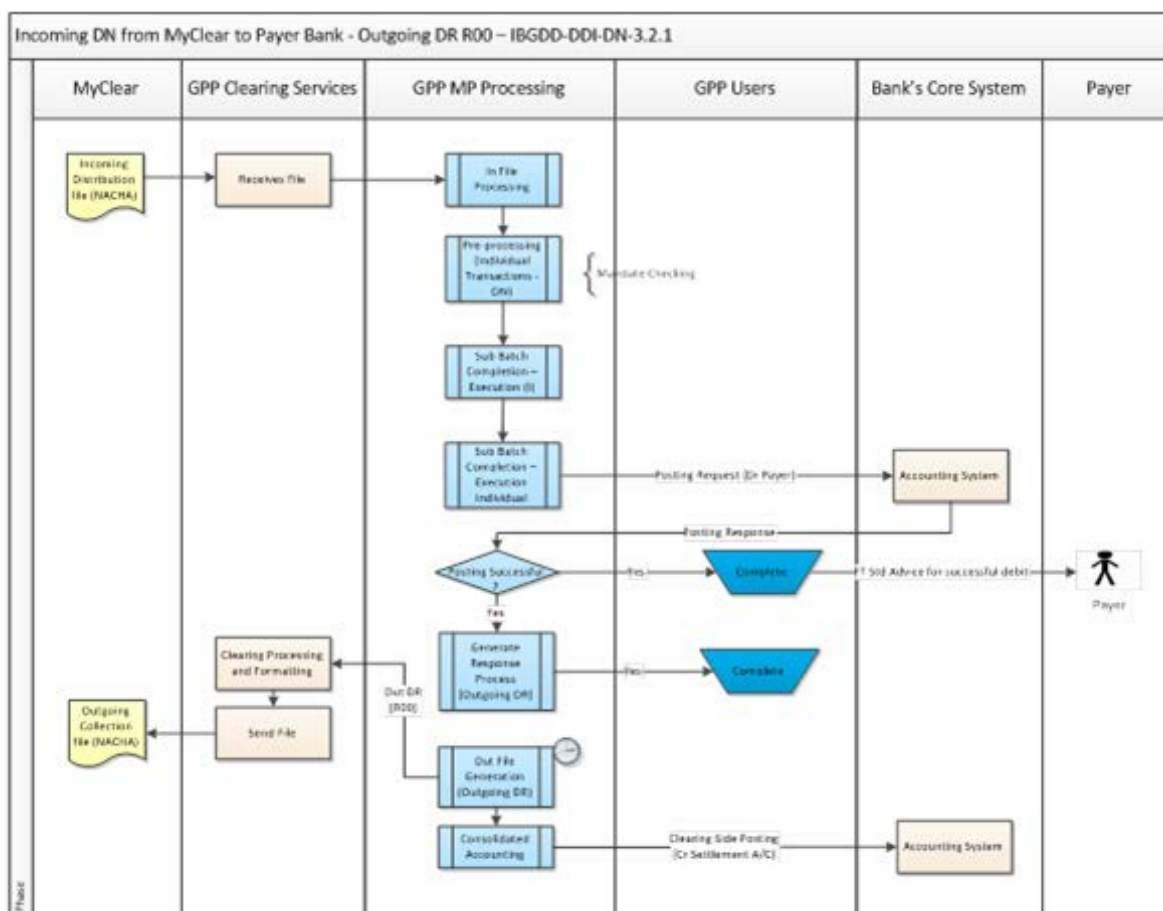
2. GPP parses the pain.008 file as per standard mass payment flow.
3. If pain.008 fails following validations during pre-processing, GPP automatically processes the file to the Rejected queue with the relevant error message and audit trail.
 - 1st in Debit Party Identification failed, Debtor agent is not identified (either missing setup or invalid routing number).
 - 1st in Credit Party Identification failed, Creditor agent is not identified (either missing setup or invalid routing number).
 - MOP Selection failed, Debtor agent is not member of MYIBGDD MOP.
 - Target MOP STP Validation failed, Invalid Debtor Account Type, Biller Code, Biller Name and Debit-Retry is received not correctformat in Unstructured Remittance Information field or Debit-Retry received is greater than 4.

3.3.1.2.2 Inward Direct Debit (Payer) from IBG

Use Case Name	Incoming Direct Debit [DN – Debtor Side]
Actors	MyClear IBG DD, Payer Bank, Bank's core systems, Payer
Description	This flow defines the incoming DN (Debit Normal, Collection) to Payer Bank's received via MyClear.
Trigger	MyClear sends the NACHA Distribution file containing incoming DNs.
Pre-conditions	The NACHA file is formatted per IBG System Message Format V3.3.
Post Condition	NACHA Debit Return transaction is generated as a response to Incoming Debit Normal.
Basic successful flow	<p>GPP as Payer Bank receives an incoming direct debit Collection message [Inward DN] from MyClear.</p> <ul style="list-style-type: none"> • After successful mandate checking, GPP debits the PAYER's account. • After successful debit, GPP provide a successful response DR (R00) to MyClear.
Negative Flows	<ul style="list-style-type: none"> • Inward DN Failed Mandate Validation Returns Outgoing DR (R99) response • Incoming DN with Debit-Retry Requested Scheduled for Next Day Retry • Incoming DN with Insufficient Funds Generates Outgoing DR (R99) • Incoming DN Manual Reject Outgoing DR R99

3.3.1.2.2.1 Inward DD with Successful Outgoing DR

This business scenario invokes when GPP receives an inward direct debit (Incoming DN) instruction. Debit Return (DR) is generated and then sent to IBG.



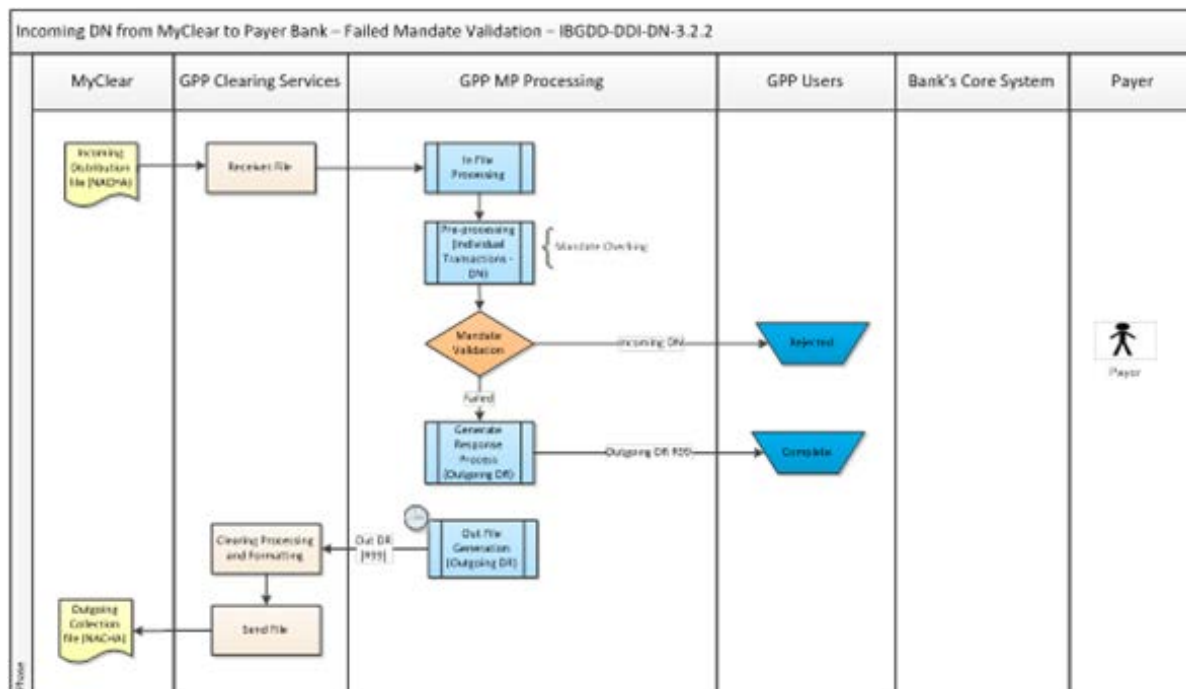
Details of the flow:

This business scenario describes the process for generating Outgoing DR [NACHA_RTN].

1. GPP (as Payer Bank) receives Inward DN IBG DD transaction [NACHA format] from MyClear.
2. GPP parses the NACHA format into NACHA XML and assigns message type as NACHA_DD.
3. GPP processes the NACHA_DD as per the standard mass payment flow.
4. GPP performs the mandate checking as per [Mandate Validation](#).
5. After successful mandate checking, GPP debits the Payer's account.
6. After successful debit to Payer's account, GPP:
 - Updates the mandate. See [Mandate Validation](#) for more information.
 - Sends Incoming DN (NACHA_DD) to the Complete queue.
 - Generates Outgoing DR (NACHA_RTN) with return code R00.
 - Sends Outgoing DR to Complete queue.
7. FT Standard Advice is generated and sent to the Payer for notification about successful debit against Collection.
8. Outgoing DRs are delivered to MyClear in next available window Outgoing Collection File.

3.3.1.2.2.2 Inward DN Failed Mandate Validation Returns Outgoing DR (R99) response

This business scenario invokes when a mandate validation fails for an Incoming DN from MyClear to the Payer Bank.



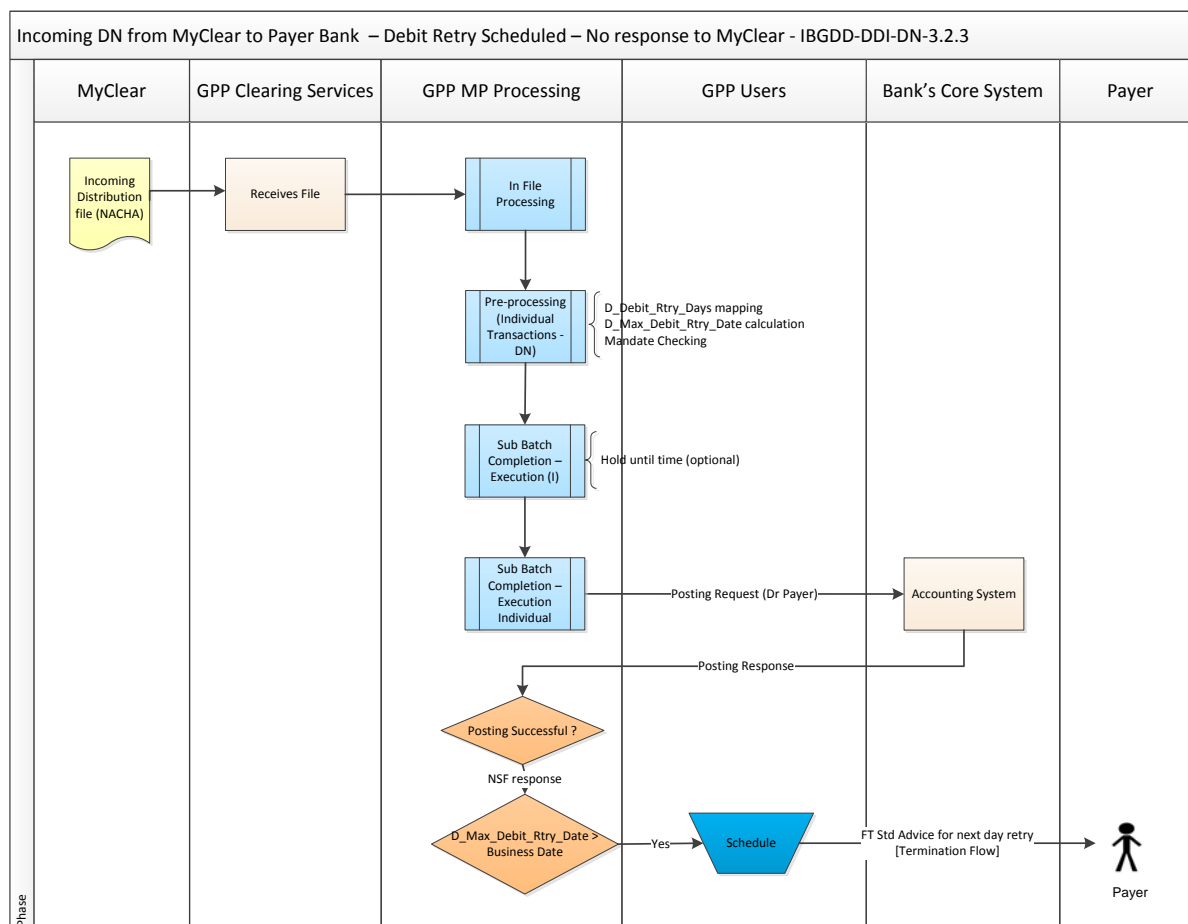
Details of the flow:

1. GPP rejects the Incoming DN and generates an Outgoing DR with the appropriate Return Reason Code.
2. GPP (as Payer Bank) receives Inward DN IBG DD transaction [NACHA format] from MyClear.
3. GPP parses the NACHA format into NACHA XML and assigns message type as NACHA_DD.
4. GPP processes the Incoming DN (NACHA_DD) as per the standard mass payment flow.
5. GPP performs mandate checking. See [Mandate Validation](#) for more information.
6. Incoming DN (NACHA_DD) fails mandate validation.
7. GPP sends Incoming DN to the **Rejected** queue.
8. GPP generates an Outgoing DR with return codes R99 [X_RSN_CD] for all mandate validation failure. See [Mandate Validation](#) for more information.
9. Outgoing DR is processed to the **Complete** queue.

3.3.1.2.2.3 Incoming DN with Debit-Retry requested scheduled for next day retry

This business scenario describes the process for insufficient funds response handling while attempting to debit debtor's account.

- GPP invokes when Payer (Debtor) has insufficient funds and biller has requested for the Debit Retry on Payer's account for a certain number of days.
- GPP generates FT Standard Advice to notify the Payer to top up the debit account so that funds can be debited next day.



Details of the flow:

1. GPP receives Inward Distribution NACHA file from MyClear.
2. GPP parses the Incoming NACHA file and creates NACHA_DD transactions for Incoming DN transactions. These transactions are processed as per GPP Mass Payment Flow.
3. GPP extracts the Debit-Retry from Incoming DN to the derived field D_Debit_Rtry_Days using STP Mapping Selection rules.
4. GPP performs mandate validation on pacs.003 as per IBG DD specifications.
5. After successful mandate checking, GPP sends the posting request to debit the payer's account.
6. For NSF response, GPP processes the payment as follows:
 - a. GPP sends the Incoming DN to Schedule queue if debit retry is applicable.
 - b. GPP sends the FT Standard Advice to Payer about next day debit retry. Using this advice, PAYER may top up their account.

Note: GPP does not handle IBG R16 (Account Frozen: funds unavailable due to specific action by the RDFI or by legal action) and R20 (No-Transaction Account: ACH entry is destined for a non-transaction account) return codes.

The decision for debit retry based on these errors is determined by the customer. The Debit Retry value has no effect if an account has been successfully debited in the first attempt.

3.3.1.2.2.4 Incoming DN with Insufficient Funds Generates Outgoing DR

This business scenario invokes when the Payer's account cannot be debited due to insufficient funds (even after trying for number of days as per Debit-Retry, if applicable). GPP generates Outgoing DR (R01) to MyClear and rejects the Incoming DN.

Details of the flow:

1. GPP receives an Inward Distribution NACHA file from MyClear.
2. GPP parses the Incoming NACHA file and creates NACHA_DD transactions for Incoming DN transactions. These transactions are processed as per GPP Mass Payment Flow.
3. GPP performs mandate validation on pacs.003 as per IBG DD specifications.
4. GPP attempts to debit the PAYER after successful mandate checking.
5. For NSF response (after exceeding number of Debit-Retries, if applicable):
 - o GPP sends the Incoming DN to Rejected queue.
 - o GPP generates an Outgoing DR with R99 response [X_RSN_CD].
 - o GPP sends an Outgoing DR to the Complete queue.

Note: The Payer is not advised for insufficient funds rejects.

3.3.1.2.3 Outgoing Debit Normal [DN – Biller Side]

The user can click Cancel to cancel any Outgoing DN not yet sent out to IBG DD from Wait Confirmation queue. The cancellation would be allowed only until if the Outgoing DN has not been sent to clearing in the Outgoing (Distribution) File as per it's bulk sending time.

Note: The ACK/Confirmation button does not display in the Wait Confirmation queue for IBG DD outgoing DN.

Upon cancellation of an Outgoing DN, GPP sends the Collection to Approve Cancel queue. Until the Collection is no longer included in the Outgoing File, the Approve Cancel queue can either:

- Approve Cancel
- Refuse

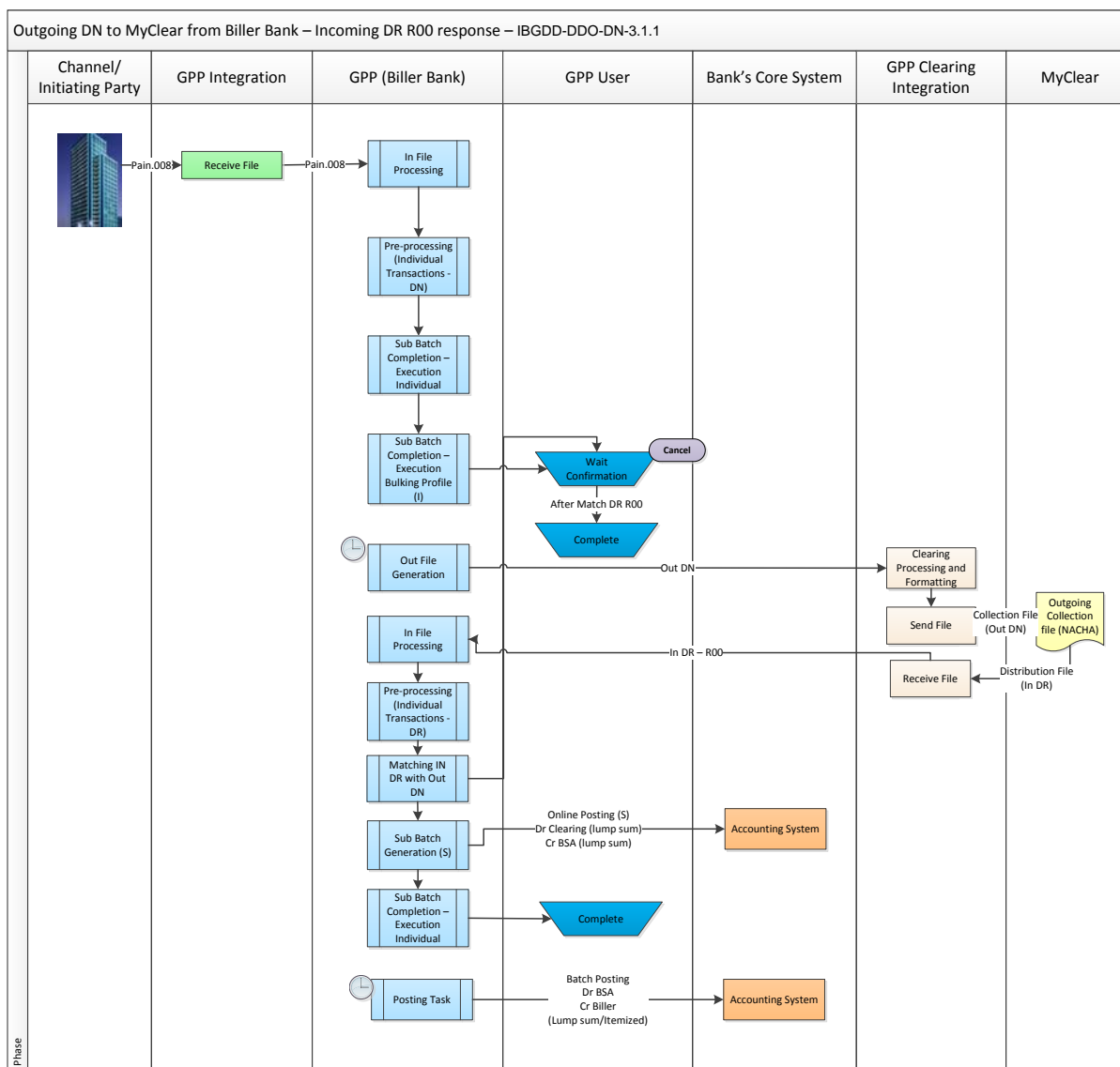
If a Collection has been sent, but is not yet approved, the Approve Cancel option does not display. The user can click Refuse to stop the cancellation request. This action sends the Collection to the Wait Confirmation queue.

3.3.1.2.3.1 Outgoing DN with Incoming DR R00 (success) within Time Frame

This business scenario invokes when a Biller (Creditor) submits a pain.008 collection file. Individual direct debit transactions are sent to IBG DD for collection as an Outgoing DN in Collection file. DNs process to Complete when a successful Incoming DR is received for a corresponding Outgoing DN.

GPP credits the biller (lump sum or itemized) for all successful collections (upon receiving DR with Return Reason Code = R00) received per window per original incoming pain.008 file. Upon receiving this file, the pain.008 processes via standard mass payment process. The pain.008 is recorded in File Summary and Batch Summary as per BAU.

The following diagram highlights the steps that are relevant for pain.008 processing and interaction with IBG DD.



Details of the flow:

This business scenario describes the process of receiving pain.008 and generation of Outgoing DN. The corresponding Incoming DR is received in next distribution file.

1. GPP as Biller Bank receives pain.008 from Biller containing multiple collection request from different payer. Payer's account is either held with Biller Bank or with another bank.
2. GPP parses the pain.008 as per standard mass payment process.
3. GPP creates File Summary and Batch Summary record.
4. GPP creates individual pain.008 transactions and processes each as per standard mass payment business flow – Outgoing DD transactions.
5. GPP assigns MYIBGDD MOP for these individual Outgoing DD transactions.

Note: The transaction is converted to NACHA_DD transaction after MOP selection. A bulking profile is assigned to each transaction.

6. The Outgoing DN is created in NACHA format and stored in Out_File_Buffer table.
7. The Outgoing DN processes to the **Wait Confirmation** queue.
8. Upon receiving the Incoming DR in next Distribution window, GPP attempts to match Incoming DR with existing Outgoing DN in Wait Confirmation queue.
9. After successful matching of Incoming DR with R00,
 - a. Outgoing DN is sent to **Complete** queue from **Wait Confirmation** queue.
 - b. Incoming DR proceeds further in the workflow.
 - c. S message is generated using Incoming DR with R00 return code (X_RSN_CD = R00).
 - d. S message perform the clearing side posting using online posting interface.
 - e. Incoming DR is processed to the **Complete** queue.
10. GPP credits the biller using a timer-based task.

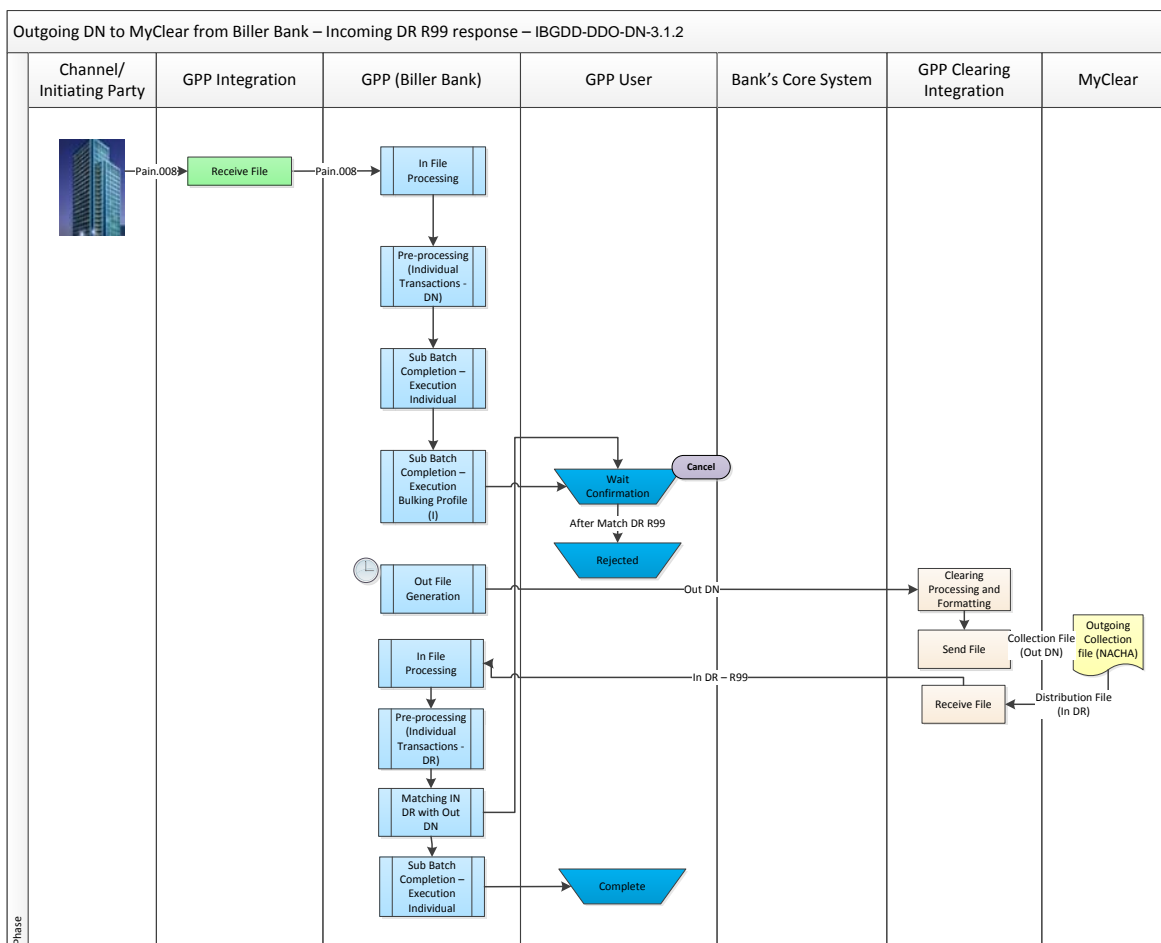
Note: This task triggers at the end of IBG window, and performs either a lump sum or itemized credit to Biller for all successful returns (DR R00) received per window per original pain.008 file received from Biller.

3.3.1.2.3.2 Outgoing DN Receives Negative DR (R99) from MyClear or RFI

This business scenario invokes when MyClear sends the Incoming Distribution File containing the negative DR (Return Reason Code <> R00) for an outgoing DN submitted in previous Outgoing Collection Files.

- GPP performs the matching and after successful match, GPP rejects the matched Outgoing DN.
- GPP process the Incoming DR to the **Complete** queue.

Note: An R99 return reason code (any return code other than R00) represents an error.



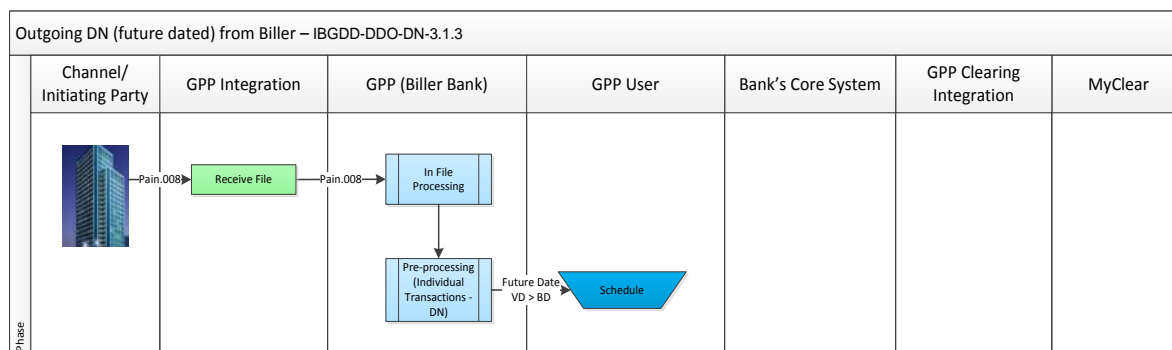
Details of the flow:

This business scenario describes the process of receiving pain.008 and generation of Outgoing DN. The corresponding Incoming DR R00 response is received in next distribution file.

1. GPP receives an Incoming Distribution File with DR R99 (Return Reason Code <> R00) response.
2. GPP performs the matching of Incoming DR with existing Outgoing DN waiting in the Wait Confirmation queue.
3. After successful matching of Incoming DR without R00,
 - a. Outgoing DN is sent to the Rejected queue from the Wait Confirmation queue.
 - b. The Incoming DR processes to the Complete queue.

3.3.1.2.3.3 Outgoing DN Received with Future Date from Biller

This business scenario invokes when the Biller (Creditor) submits the pain.008 collection with a future value date. IBG DD collections are warehoused in GPP until the next value date, they are processed only on the value date.



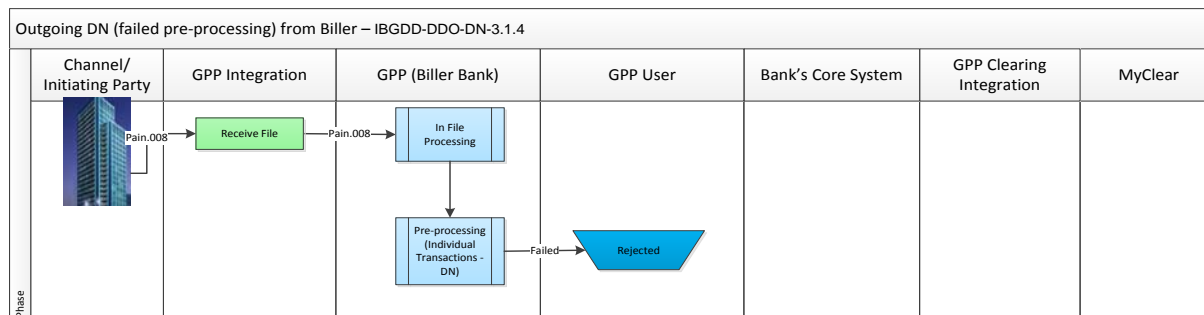
Details of the flow:

This business scenario describes the process of receiving pain.008 received with future dated collections from Biller.

1. GPP receives pain.008 from Biller.
2. GPP parses the pain.008 file as per standard mass payment flow.
3. For pain.008 with Requested Collection Date in future (VD > BD), GPP warehouses the payment in the Schedule queue with IBGDD MOP's Latest Value Date setting = 0 (with appropriate audit as per BAU).
4. Using the existing Release from Schedule queue task, GPP processes the Outgoing DN on value date and sends it to MyClear.

3.3.1.2.3.4 Outgoing DN Fails Pre-processing at Biller Bank

This business scenario invokes when the Biller (Creditor) submits the pain.008 collection that fails pre-processing at GPP. GPP automatically rejects this type of pain.008.



Details of the flow:

1. GPP receives pain.008 from Biller.
2. GPP parses the pain.008 file in the mass payment workflow.
3. If pain.008 fails the following validations during pre-processing, GPP automatically send them to the Rejected queue with relevant error message and audit trail:
 - First in Debit Party Identification failed, Debtor agent is not identified (either missing setup or invalid routing number).

- First in Credit Party Identification failed, Creditor agent is not identified (either missing setup or invalid routing number).
- MOP Selection failed, Debtor agent is not member of MYIBGDD MOP.
- Target MOP STP Validation failed, Invalid Debtor Account Type (not as per MyClear account type 1, 2 or 3). Biller Code, Biller Name and Debit-Retry are not received in the correct format in the Unstructured Remittance Information field. Debit-Retry received is greater than 4.
Note: A rejected pain.008 is not sent to MyClear for collection.

3.3.1.2.4 Outgoing DN Missed DR Time Frame

An outgoing DN is waiting for the response and missed the expected time to wait for the response DR message. In this case, it is expected to reject the outgoing DN.

Details of the flow:

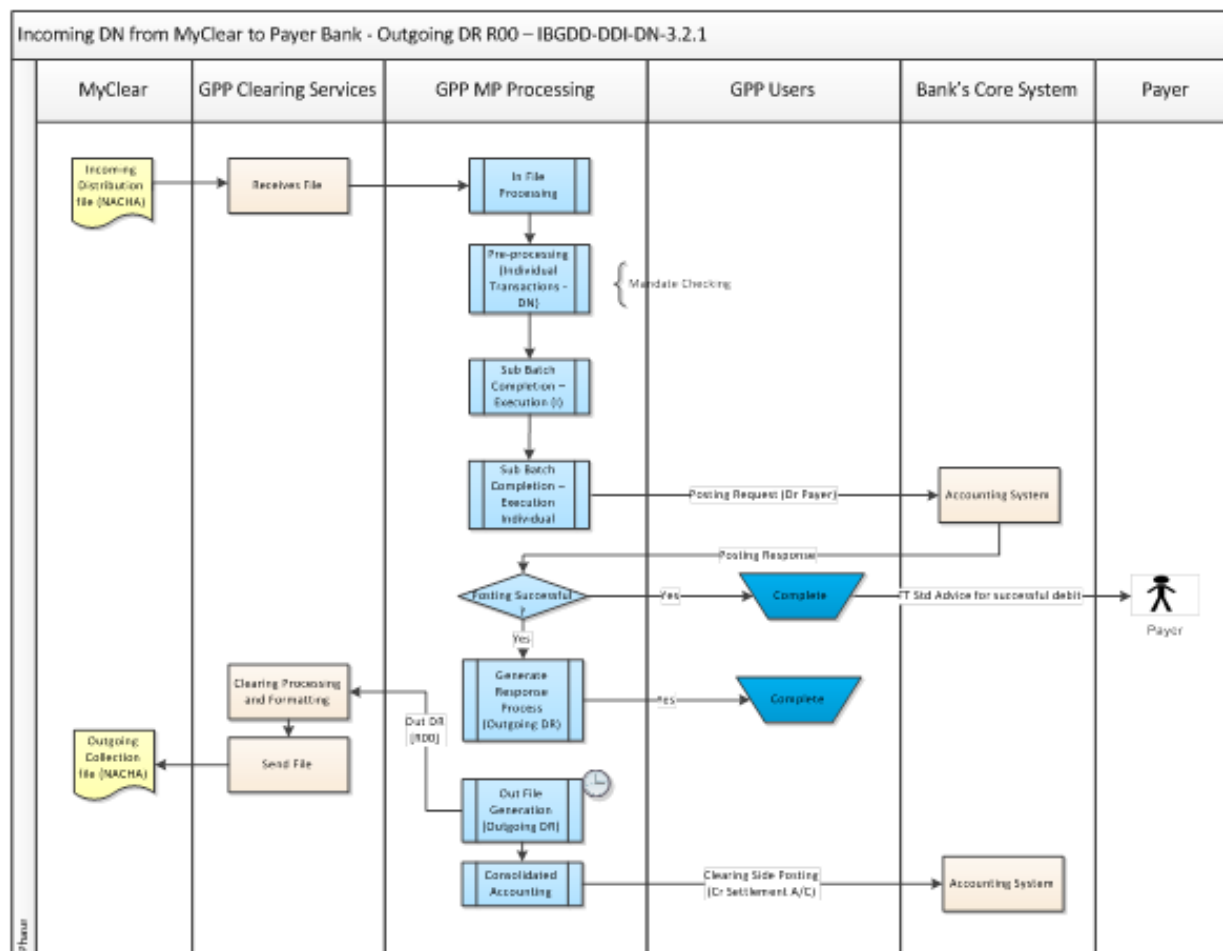
1. Outgoing DN is sent to MyClear.
2. The Outgoing DN waits for the response until DR time frame. The DR time frame is either default Win 2 T+1 or as per the time frame defined by the biller in Debit Retry field.
3. GPP does not get the response within the DR time frame.
4. GPP sends the Outgoing DN to Rejected queue using a task MYIBGDD: Outgoing collection missed response. The task tracks the DR time frame using the D_Max_Debit_Rtry_Date.

3.3.1.2.5 Incoming Debit Normal (DN – Payer Side)

Use Case Name	Incoming Direct Debit (DN – Debtor Side)
Actors	MyClear IBG DD, Payer Bank, Bank's core systems, Payer
Description	This flow defines the incoming debit normal (collection) to Payer Bank's received via MyClear.
Trigger	MyClear sends the NACHA Distribution file containing incoming DNs.
Pre-conditions	The NACHA file is well formatted as per IBG System Message Format V3.3.
Post Condition	NACHA Debit Return transaction would be generated as a response to Incoming Debit Normal.
Basic successful flow	<ul style="list-style-type: none"> • GPP as Payer Bank receives an incoming direct debit collection message [Inward DN] from MyClear. • After successful mandate checking, GPP debits the payer's account. • After successful debit, GPP provide a successful response DR (R00) to MyClear.
Negative Flows	<ul style="list-style-type: none"> • Inward DN Failed Mandate Validation Returns Outgoing DR (R99) response • Incoming DN with Debit-Retry Requested Scheduled for Next Day Retry • Incoming DN with Insufficient Funds Generates Outgoing DR (R99) • Incoming DN Manual Reject Outgoing DR R99

3.3.1.2.5.1 Incoming DN with Outgoing DR R00 (success) within DR Time Frame

This business scenario is invoked when GPP receives an inward direct debit (Incoming DN) instruction. Debit Return (DR) would be generated and send to the MyClear IBG.

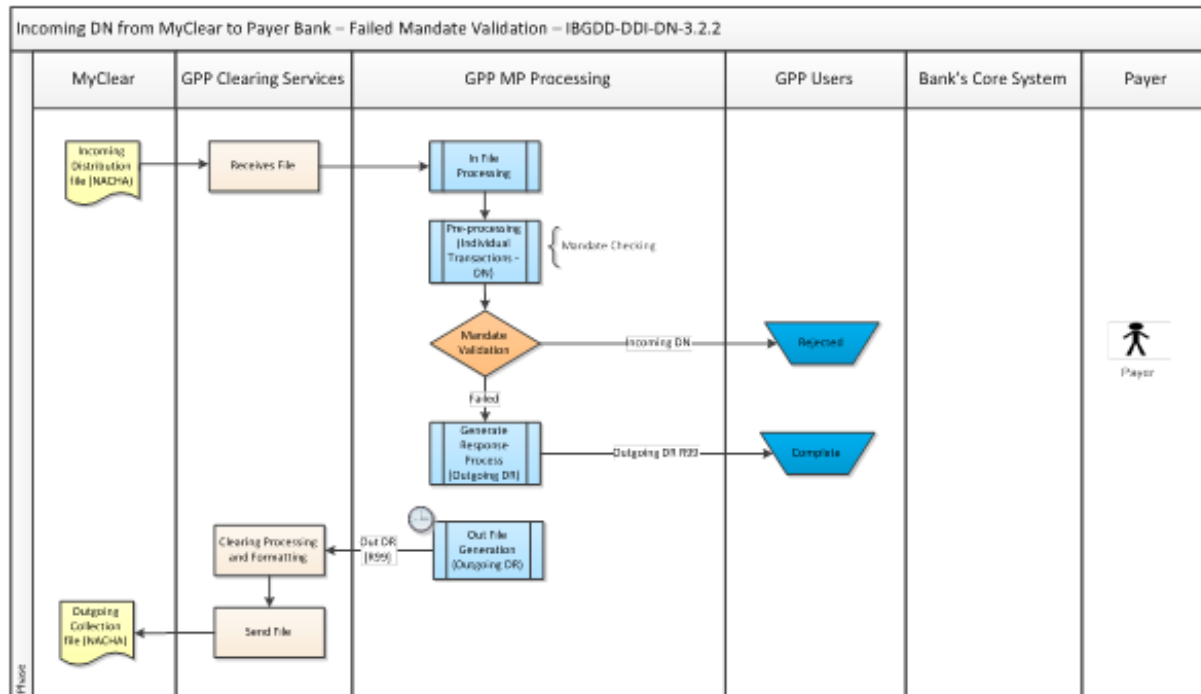


Details of the flow:

1. GPP (as Payer Bank) receives Inward DN IBG DD transaction [NACHA format] from MyClear.
 2. GPP parses the NACHA format into NACHA XML and assigns message type as NACHA_DD.
 3. GPP processes the NACHA_DD as per the standard Mass Payment flow.
- GPP performs mandate checking. For more information, see [Mandate Validation](#).
4. After successful mandate checking, GPP would debit the Payer's account
 5. After successful debit to Payer's account, GPP:
 - a. Updates the mandate.
 - b. Sends Incoming DN (NACHA_DD) to Complete queue.
 - c. Generates Outgoing DR (NACHA_RTN) with return code R00.
 - d. Sends Outgoing DR to Complete queue.
 6. FT Standard Advice is generated and sent to the Payer for notification about successful debit against collection.
 7. Outgoing DRs are delivered to MyClear in next available window Outgoing Collection File.

3.3.1.2.5.2 Incoming DN Failed Mandate Validation Returns Outgoing DR (R99) Response

This business scenario invokes when mandate validations fails for an Incoming DN. GPP rejects the Incoming DN and generates an Outgoing DR with appropriate Return Reason Code.



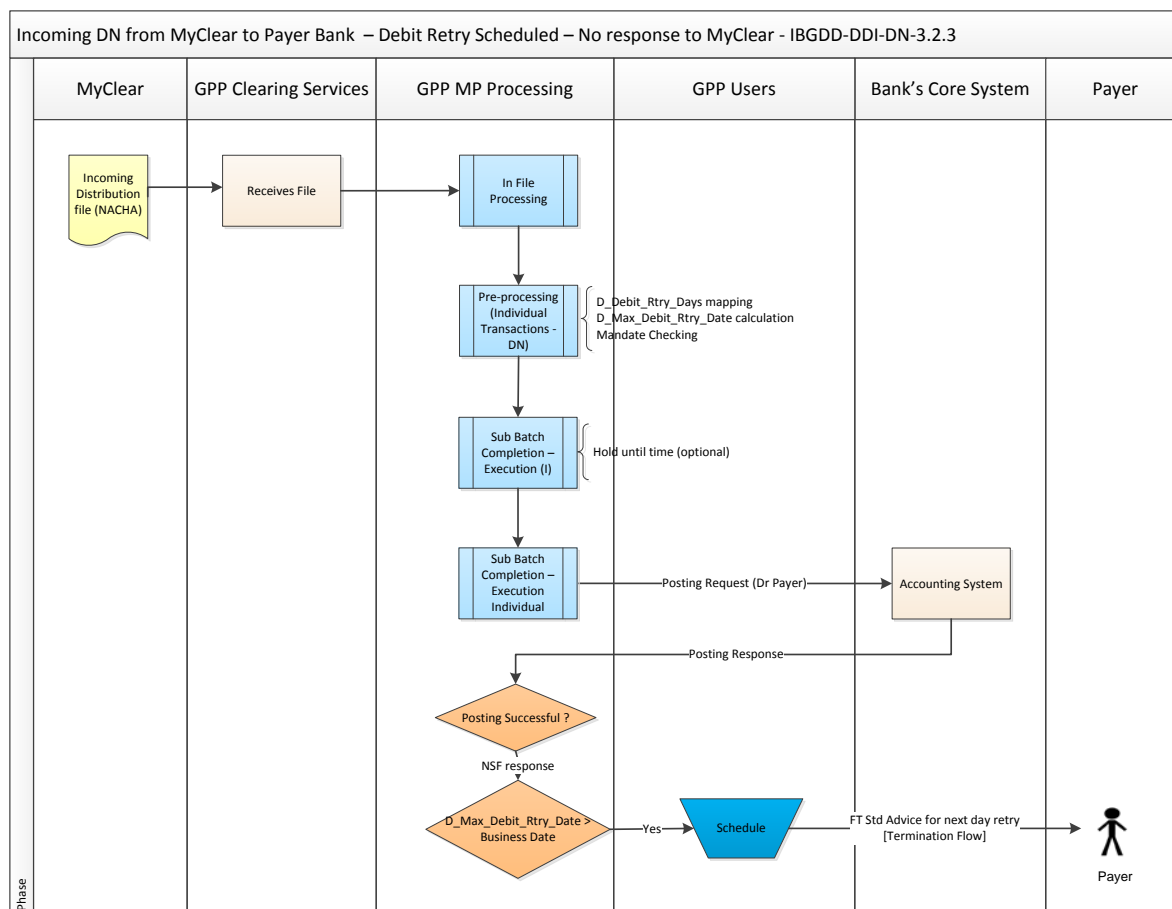
Details of the flow:

1. GPP (as Payer Bank) receives Inward DN IBG DD transaction [NACHA format] from MyClear.
2. GPP parses the NACHA format into NACHA XML and assigns message type as NACHA_DD.
3. GPP processes the Incoming DN (NACHA_DD) as per the standard mass payment flow.
4. GPP performs the mandate checking as described in [Mandate Validation](#).
5. Incoming DN (NACHA_DD) fails mandate validation.
6. GPP sends Incoming DN to the **Rejected** queue.
7. GPP generates an Outgoing DR with return codes R99 [X_RSN_CD] for all mandate validation failure as describes in [Mandate Validation](#).
8. Outgoing DR processes to the **Complete** queue.

3.3.1.2.5.3 Incoming DN with Debit-Retry Requested Scheduled for Next Day Retry

This business scenario invokes when Payer (Debtor) has insufficient funds and the Biller has requested for the Debit Retry on Payer's account for a certain number of days.

GPP generates an FT Standard Advice to notify the Payer to top up the debit account so that funds can be debited next day.



Details of the flow:

1. GPP receives Inward Distribution NACHA file from MyClear.
2. GPP parses the Incoming NACHA file and creates NACHA_DD transactions for Incoming DN transactions, processed per GPP Mass Payment Flow.
3. GPP extracts the Debit-Retry from Incoming DN to the derived field D_Debit_Rtry_Days using STP Mapping Selection rules.
4. GPP performs mandate validation on pacs.003 as per IBG DD specifications.
5. After successful mandate checking, GPP sends the posting request to debit the Payer's account.
6. For NSF response GPP would process payment.
 - a. GPP would send the Incoming DN to Schedule queue if debit retry is applicable.
 - b. GPP would send FT Standard Advice to Payer about next day debit retry. Using this advice, payer may top up their account.

Note: GPP does not handle the return codes IBG R16 and R20 return codes. These return codes are related to account frozen and dormant. The decision for debit retry based on these errors varies from customer to customer and hence GPP would not handle it at product level.

3.3.1.2.5.4 Incoming DN with Insufficient Funds Generates Outgoing DR (R99)

This business scenario invokes when a PayerPs account cannot be debited due to insufficient funds (even after trying for number of days as per Debit-Retry, if applicable). GPP generates an Outgoing DR (R01) to MyClear and rejects the Incoming DN.

Details of the flow:

1. GPP receives Inward Distribution NACHA file from MyClear.
2. GPP parses the Incoming NACHA file and creates NACHA_DD transactions for Incoming DN transactions, which are processed as per GPP Mass Payment Flow.
3. GPP performs [Mandate Validation](#) on pacs.003 as per IBG DD specifications.
4. GPP attempts to debit the payer after successful mandate checking.
5. For NSF response (after exceeding number of Debit-Retries, if applicable):
 - a. GPP sends the Incoming DN to the Rejected queue.
 - b. GPP generates an Outgoing DR with a response.
 - c. GPP sends an Outgoing DR to the Complete queue.

Note: The Payer is not advised for insufficient funds rejects.

3.3.1.2.5.5 Incoming DN Manual Reject Outgoing DR R99

GPP provides an option to manually reject the Incoming DN waiting in the Schedule queue for next day debit retry ([Incoming DN with Debit-Retry Requested Scheduled for Next Day Retry](#)).

For IBG DD Incoming DN waiting in the Schedule queue, if the user clicks Reject, GPP:

- Sends Incoming DN to Rejected queue
- Generates Outgoing DR.

3.3.1.2.6 Manual Message Handling

No manual handling is applicable for successful Collection and Outgoing DR R00 response to MyClear.

3.3.1.2.7 Mandate Validation

3.3.1.2.7.1 Debtor Side Mandate Validation

In the Mandate profile, a UMR (Unique Mandate Reference) is a creditor-supplied identification code. GPP uses the UMR and the CID to identify a mandate.

Note: The UMR is an identification code that can be up to 25 alphanumeric characters in length.

In GPP, the UMR maps to a Mandate Number in an IBG DD file. MyClear assigns a UMR for each DDA form processed by MyClear. Although the Record Number field is mandatory in the mandate upload received from MyClear, it is optional in an IBG DD NACHA file.

GPP validates incoming Collections by searching the mandate using the following criteria:

- Office (Mandate.Office – Transaction Office)
- Debtor Account (Mandate.Debtor_IBAN – Payer's account)
- Creditor ID (Mandate.Creditor_ID – Biller ID)

- Usage (Mandate.Creditor Debtor Usage)

A mandate search must include a UMR. The search criteria Office and Usage are added by the code and not added to the Mandate_Index_Structure and Mandate_Search_Index_Structure. Once a search completes, MyClear determines the Mandate Number and Payment Reference Number.

Multiple mandates can be set for the same Payer account and Biller ID combination. The Payment Reference Number is mandatory in current ENRP specification. With IBG DD scheme, mandate validation does not consider the Payment Reference Number in the mandate index.

For more information about direct debit mandate management, validation, and enrichment, see the GPP Business Guide Mass Payments.

3.3.1.2.7.2 Mandate Lookup Dynamic Index

GPP includes a Dynamic Index, which provides dynamic mandate lookup criteria when searching for a direct debit mandate specific to a particular region, such as IBGDD in Malaysia. This enhancement increases GPP's flexibility to set Mandate search criteria per clearing/scheme.

GPP generates a unique Mandate Index for every new or updated mandate. A thorough validation process verifies that each Mandate ID index is distinctive.

Note: The GPP Scheme MOPs table defines the dynamic mandate index that combines fields as per scheme.

3.3.1.2.7.2.1 Mandate Frequency Fields

To manage mandate activity, users select a mandate periodicity. These frequencies are available via the Mandate periodicity dropdown that displays in the Mandate Activity area of the Limits tab:

- Daily [DALY]
- Weekly [WEEK]
- Monthly [MNTH]
- Quarterly [QURT]
- Half Yearly [HFYR]
- Yearly [YEAR]

In addition, the following fields have been added to the Mandate Activity area of the Limits tab:

- **Max frequency per period:** This (optional) numeric field allows the user to enter up to 3 (three) digits. It stores the maximum mandate frequency per mandate periodicity, for example 2 (two) times a year (static value). This field is disabled if the **Mandate periodicity** field is blank. During **Create** mode, this field is blank by default.
- **Total number of collections per period:** This field tracks and stores the total number of collections submitted against a selected mandate per mandate periodicity (dynamic value).

3.3.1.2.7.2.2 Counter Clearing Tasks

GPP clears the counters when a mandate periodicity (frequency) ends.

To reset the Total number of collections per period to 0 (zero), use these EOD (End of Day) tasks, with 1 (one) task per mandate periodicity: (Daily, Weekly, Monthly, Quarterly, Half Year, and Year).

Periodicity	Reset Mandate
RESET_MNDT_WEEKLY_COUNT	Weekly used count
RESET_MNDT_DAILY_COUNT	Daily used count
RESET_MNDT_MONTHLY_COUNT	Monthly used count
RESET_MNDT_QUARTERLY_COUNT	Quarterly used count
RESET_MNDT_HALF_YEAR_COUNT	Half year used count
RESET_MNDT_YEAR_COUNT	Year used count

Note: Mandate-related tasks for counter updates must be executed before the start of the next period (last business date).

GPP resets these dates and uses tasks to clear the counters:

Date	Description	
Business date	Current business day, according to the local office calendar.	
Next business date	Next business day, according to the local office calendar.	
Next periodicity date	Calculation of next periodicity is based on the current business date.	
	Task	Description
	Daily [DALY]	Clears the Total number of collections per period counter each time the task activates. [DALY] task must be set to the next business day.
	Weekly [WEEK]	Determines the next Sunday from today (including current date). Sunday is not a business day, so the next [WEEK] task invokes on Saturday. If Saturday is not a business day, the task invokes on Friday.
	Monthly [MNTH]	Determines the last day of the current month.
	Quarterly [QURT]	Determines the last day of the quarter that is in the months of March, June, September or December (the closest to current date).
	Half Yearly [HFYR]	Determines the last day of the half year that is in the month of June or December (the closest to current date).
	Yearly [YEAR]	Determines the last day of the year that is in the month of December. If the 31st of December falls is on a non-business day (for example, a holiday), then the next [YEAR] task is set to invoke on the 30th. If the 30th is a non-business day, the task is set to invoke on the 29th.

3.3.1.3 Business Setup

These are the details of the required setup in GPP profiles for the IBG clearing.

Note: For a detailed description of profile fields, see GPP Online Help.

3.3.1.3.1 Profiles

3.3.1.3.1.1 MOP Profile (BOOK Transactions)

This MOP Profile is used for BOOK transactions.

Field	Value for IBG
General Tab	
MOP	BOOK
Earliest Value Date	<any value>
Latest Value Date	<any value>
Currency	Blank
Max amount	Blank
RMA check required	Unchecked
Calendar	Blank
Send outgoing message	Unchecked
Membership Required	Unchecked
Roll forward at start of day	Checked
Processing Tab	
Communication Preferences	NONE
MOP Cycle	
	Closing time = 07:00 Closing time = 10:00 Closing time = 13:00 Closing time = 16:00 Closing time = 19:00 Note: MOP cycle settings not listed here follow the default MOP setting.

3.3.1.3.1.2 MOP Profile (IBG DD Transactions)

This MOP profile is used for IBG DD transactions.

Field	Value for IBG
General Tab	
MOP	MYIBGDD
Currency	MYR
Earliest Value Date	0

3.3.1.3.1.3 Identifiers Profile

This profile is used as an identifier IBG DD transactions.

Field	Value for IBG
MOP	MYIBGDD
Currency	MYR
Identifier	<NCC (Routing Number) of the local office>
Default ID for MOP office	Checked
Default office for ID	Checked
Settlement Account Office	DHM
Account	<Settlement account>

3.3.1.3.1.4 Bulking Profile

This profile is used as the bulking profile for IBG DD transactions.

Field	Value for IBG
Name	MYIBGDD_BULK
File Type	NACHA
Min transaction per file	<not specified by MyClear>
Max transaction per bulk	9999999
Max total amount per file	9,999,999,999.99
Max total amount per bulk	9,999,999,999.99
Credit Lump Sum	Checked
Outgoing Interface	MYIBG_MP_BULK

3.3.1.3.1.5 Sending Time Profile

This profile is used as the sending time profile for IBG DD transactions.

Field	Value for IBG
Bulking profile	MYIBGDD_BULK
Time to send	Checked. Select: 06:45 09:45 12:45 15:45 18:45*
Last send time	Unchecked. *For Time to send value of 18:45, select the Last send time checkbox.

3.3.1.3.1.6 NCC Profile

This is the NCC profile used to store an IBG DD participant's routing number.

Field	Value for IBG
Department	DHM
Office	DHM
Clearing System ID	MYIBG
Member ID	<Routing number>
Party Code	<Local office default party code>

3.3.1.3.1.7 Membership Profile

This profile is used as the membership profile for IBG DD participating banks.

Field	Value for IBG
MOP	MYIBGDD
Member Type	MYIBG
Member ID	<Routing number of the participating bank 1>
Type of Membership	Full

3.3.1.3.1.8 Parameters Profile

This profile is used for processing the Biller's pain.008.

Field	Value for IBG
Department	DHM
Scheme	MYIBGDD
Scheme Type	MYIBGDD
Party Code	<Party code of Biller Code from Parties profile>
Creditor ID	<Biller code as registered with MyClear>
Validate DD Creditor ID Account	
Validate DD creditor ID	False
Validate DD creditor ID Account	False
Management Parameters	
Mandate management option	Unchecked

3.3.1.3.1.9 Cut-off Times Profile

This profile is used for sending the last collection file for all IBG DD transactions.

Field	Value for IBG
Cut-off name	MYIBGDD_CC
Cut-off type	Clearing
Time Zone	MYT
Interim cut-off time	18:45

Field	Value for IBG
Final cut-off time	18:45

3.3.1.3.1.10 Direct Debit Transaction Code Profile

This profile defines the Default Debit Transaction Code for all IBG DD transactions.

Field	Value for IBG
Transaction code	DEF_DR
Description	Default DHM Debit Transaction Code

3.3.1.3.1.11 Currency Preferences Profile

This profile is used to indicate the MYR currency preference for all IBG DD transactions.

Field	Value for IBG
Currency	MYR
Display currency	Checked
Soonest value date	0
Batch suspense account	<account number>

3.3.1.3.1.12 User Codes Profile

This profile is used when GPP generates a transmittal file for preparing an IBG DD Collection file. For each collection, GPP generates one transmittal file per IBG file.

Field	Value for IBG
Type	ACK
Code	MYIBG_DD_MP_TRANSMITTAL_FILE

3.3.1.3.2 Rules

3.3.1.3.2.1 MOP Selection Rule

Rule	Rule Attribute	Setup Guidelines
1	Assign MYIBGDD MOP for all pain.008 files	
	Rule Name	MYIBG_DD_MP_OUT
	Attachment	DHM
	Rule conditions	All of the following conditions should be met: Message type is pain_008 And [Orgnl msg tp] = pain_008 And [Lcl instrm hdr cd] = CTX And Creditor Agent NCC Proprietary = MYIBG
	Action	Profile to be selected: MYIBGDD
2	Assign BOOK MOP for Inward Collections	
	Rule Name	MYIBG_DD_MP_IN
	Attachment	DHM
	Rule conditions	All of the following conditions should be met: [Msg tp] = NACHA_DD
	Action	Profile to be selected: BOOK

3.3.1.3.2.2 Incoming File Filter Rule

To validate that a file is received at the correct RFI, an FI can set the F_FILE_SOURCE condition in the Incoming File Filter rule. This rule validates if the local bank's routing number is the immediate destination for files received from MyClear.

Rule	Rule Attribute	Setup Guidelines
1	Accepts files received for correct RFI; rejects files not designated for correct RFI.	
	Rule Name	MYIBG_DD_MP_IN
	Attachment	DHM
	Rule conditions	All of the following conditions should be met: [File Source] = MYIBGDD And [Instd agt NCC cd] = MYIBG And [Instd agt ID] <><Local office routing number>
	Action	Rejected

3.3.1.3.2.3 Clearing Cut-off Rule

Rule	Rule Attribute	Setup Guidelines
1	Clearing cut off for IBGDD transactions	
	Rule Name	MYIBG_DD_MP_CC
	Attachment	DHM

Rule	Rule Attribute	Setup Guidelines
	Rule conditions	All of the following conditions should be met: [Cdt MOP] = MYIBGDD
	Action	MYIBGD_CC

3.3.1.3.2.4 Debit Transaction Code Rule

Rule	Rule Attribute	Setup Guidelines
1	Default code for debit transactions	
	Rule Name	MP_DD_DR_TC
	Attachment	DHM
	Rule conditions	All of the following conditions should be met: [Cdt MOP] = MYIBGDD
	Action	DEF_DR

3.3.1.3.2.5 Credit Transaction Code Rule

Rule	Rule Attribute	Setup Guidelines
1	Default code for credit transactions	
	Rule Name	MP_DD_CR_TC
	Attachment	DHM
	Rule conditions	
	Action	DEF_CR

3.3.1.3.2.6 Fee Bypass Rule

For incoming collections (with source MOP as MYIBGDD) or inward IBG transactions, the Fee Bypass rule can be configured.

File Source [F_FILE_SOURCE] is a new condition with the Fee Bypass Rule. To configure the Fee Bypass rule, an FI can set the F_FILE_SOURCE condition in the MYIBG_DD_MP_BYPASS_FEE rule.

Note: MyClear does not charge fees to the Payer Bank.

Rule	Rule Attribute	Setup Guidelines
1	Bypass fees for Inward IBG transactions	
	Rule Name	MYIBG_DD_MP_BYPASS_FEE
	Attachment	DHM
	Rule conditions	All of the following conditions should be met: [File Source] = MYIBGDD
	Action	BYPASS

3.3.1.3.2.7 Advising Type Selection Rule

Rule	Rule Attribute	Setup Guidelines
1	Setup guidelines for selecting advising type	
	Rule Name	MYIBG_DD_MP_DR_ADV
	Attachment	DHM

Rule	Rule Attribute	Setup Guidelines
	Rule conditions	All of the following conditions should be met: [Msg Sts] = Completed And [Msg tp] = NACHA_DD And [Cdt MOP] = MYIBGDD
	Action	ADVISING

3.3.1.3.2.8 Matching Index Rule

Rule	Rule Attribute	Setup Guidelines
1	Matching index for Incoming Distribution File	
	Rule Name	MYIBG_DD_MP_FILE_DUPL
	Attachment	MYIBG_DD_MP_FILE_DUPL
	Rule conditions	All of the following conditions should be met: [File duplicate ind] setVal [File nm]
	Action	Rejected

3.3.1.3.2.9 Matching Check Profile Selection Rule

The matching of Incoming DR with Outgoing DN is handled via the Matching Check profile and Automatic Matching Algorithm mechanism. The Incoming DR links with Outgoing DN with relation type Incoming Reject Return^Original Payment.

Rule	Rule Attribute	Setup Guidelines
1	File duplicate checking for Incoming Distribution File from MyClear	
	Rule Name	MYIBG_DD_MP_FILE_DUPL
	Attachment	
	Rule conditions	All of the following conditions should be met: F_FILE_SOURCE = MYIBGDD
	Action	MYIBG_DD_MP_FILE_DUPL
2	Incoming DR matching with Outgoing DN for MYIBGDD collections Note: Attach this rule on higher priority than existing NACHA rule NACHA_IN_RTND.	
	Rule Name	MYIBG_DD_MP_IN_DR
	Attachment	
	Rule conditions	All of the following conditions should be met: COMPARE_STRING ([Msg class], =, RDD,) Is TRUE And COMPARE_STRING ([Msg tp], =, NACHA_RTND,) Is TRUE And [Dbt MOP] = MYIBGDD
	Action	MYIBG_DD_MP_IN_DR

3.3.1.3.2.10 Mandate Validation Rule

Rule	Rule Attribute	Setup Guidelines
1	Ensures the number of Collections made against mandate for a given period does not exceed the Max frequency per period.	
	Rule Name	MP_DD_TOTAL_COLL_PER_PERIOD
	Attachment	Global office
	Rule conditions	<p>All of the following conditions should be met:</p> <p>BASE_CONDITION(PROCESSING_RECEIPT_VAL) Is TRUE</p> <p>And</p> <p>[F_MANDATE_TOTAL_COLL_PER_PERIOD] + 1 > [F_MAX_COLLECTION_PER_PERIOD]</p> <p>And</p> <p>[F_MANDATE_CDT_DBT_USAGE] = DR</p> <p>And</p> <p>IS_EMPTY([F_MAX_COLLECTION_PER_PERIOD]) Is Not TRUE</p> <p>And</p> <p>IS_EMPTY([P_MANDATE_UID]) Is Not TRUE</p> <p>And</p> <p>UPPER(F_MANDATE_PERIODICITY_TYPE) = PER PERIOD</p>
	Action	MP_DD_TOTAL_COLL_PER_PERIOD

The Mandate Validation rule supports these scheme validations:

#	Mandate Validation	Mandate Validation Rule
1	Instruction amount must be less than or equal to the maximum amount as authorized by Payer.	MP_DD_MAX_COLL_AMT
2	The number of successful debits does not exceed the maximum frequency for each mandate as authorized by Payer.	MP_DD_TOTAL_COLL_PER_PERIOD
3	The effective date of the mandate must be current business date or less than current business date.	MP_DD_REJECT_COL_PRIOR
4	The expiry date of mandate must not be passed (expiry date must be greater than current business date).	MP_DD_REJECT_COL_AFTER
5	Mandate must be active (not marked as Cancel in GPP).	MP_DD_CD_CANCELLED MANDATE

3.3.1.4 STP Message Processing

3.3.1.4.1 GPP High Level Mass Payment Flow

When GPP receives an inward collection file from clearing, it parses the file into a File Summary and Batch Summary. Individual transactions are created and processed individually. Once the collections are debited successfully after mandate checking as per MyClear validations (as per section), GPP generates a response DR message back to the clearing.

For the description of the end-to-end GPP mass payment flow of Incoming DN, see end-to-end GPP mass payment flow in GPP Business Guide Mass Payments.

3.3.1.4.2 Generation of Debit Response - Outgoing DR

The Outgoing DR with R00 response is generated after the Incoming DN moves to the Complete queue.

3.3.1.5 Outgoing DN missed DR Time Frame

This business scenario refers to the case when an outgoing DN is waiting for the response and missed the expected time to wait for the response DR message. In this case, it is expected to reject such outgoing DN.

- Outgoing DN is sent to MyClear.

The Outgoing DN is expected to wait for the response until DR time frame. The DR time frame would be either default Win 2 T+1 or as per the time frame defined by the biller in Debit Retry field.

GPP does not get the response within the DR time frame.

- GPP sends the Outgoing DN to Rejected queue using a task MYIBGDD: Outgoing collection missed response. The task tracks the DR time frame using existing derived field D_Max_Debit_Rtry_Date.

4 Distributed Ledger Payment Processing

4.1 Clearing Processing on Distributed Payment Environment

4.1.1 Ripple

4.1.1.1 Overview

Ripple is an Internet-based technology for directly connecting banks and payment systems. Banks can use Ripple as a common ledger to clear and settle transactions in real-time at the lowest-possible cost. Ripple structurally alters the payment process by enabling:

- Bilateral settlement: Eliminates intermediaries, midpoint failure, delays, lifting fees
- Real-time funding: Minimizes exchange spreads, credit risk, collateral costs

The Ripple protocol enables two critical functions:

- A common ledger to connect banks and payment networks: To clear transactions, Ripple provides continuous (24/7/365) connectivity between banks for real-time (approximately every 5 seconds) clearing, netting and monitoring, all without a central counterparty.
- A real-time funds-exchange to settle transactions: To settle same-currency transactions, Ripple transfers funds bilaterally; for cross-currency transactions, Ripple sources funds at the best exchange rate from a competitive marketplace of liquidity providers.

Ripple is a neutral, decentralized protocol. It is not owned or controlled by a government or corporate entity. Banks can use Ripple as an open standard, like other Internet protocols (for example, SMTP for email), to facilitate connectivity and interoperability.

4.1.1.1.1 Ripple participants

Participants

Network members: Banks and financial service businesses

Network operators: Payment networks, clearinghouses

Liquidity providers: Central banks, banks, non-bank market makers

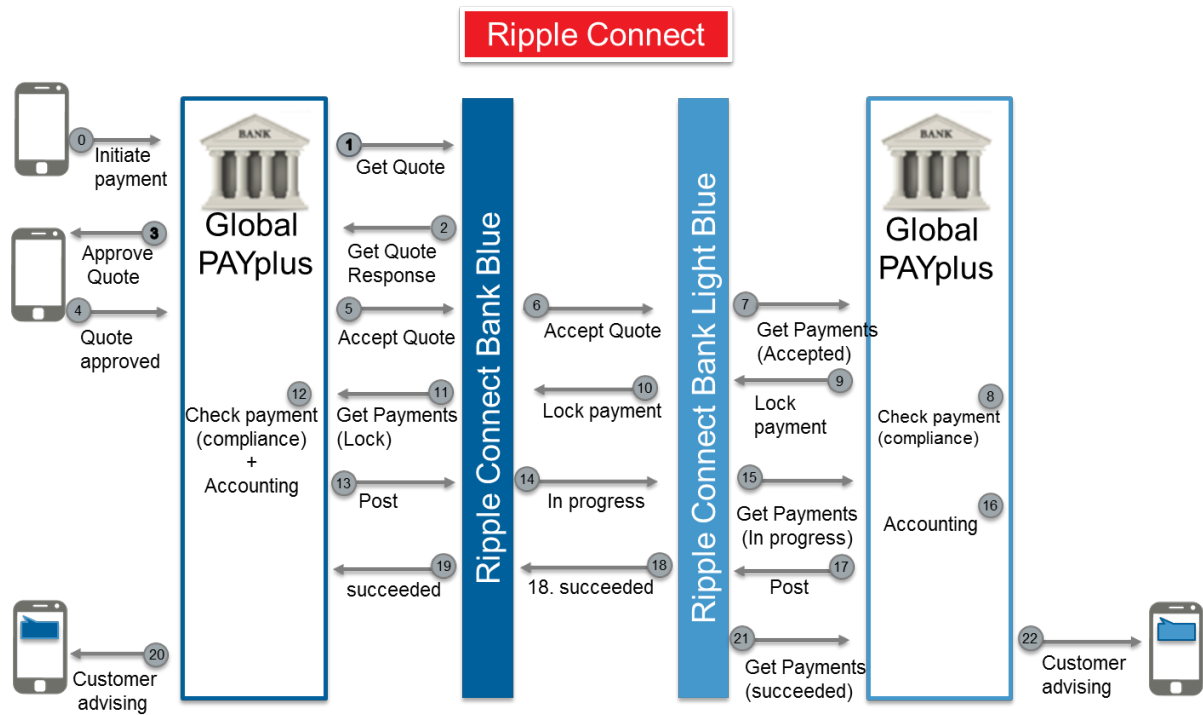
4.1.1.1.2 Message Types

GPP supports the following Message Types for Ripple within GPP:

- pacs.008/MT103 – FI to FI customer credit transfer

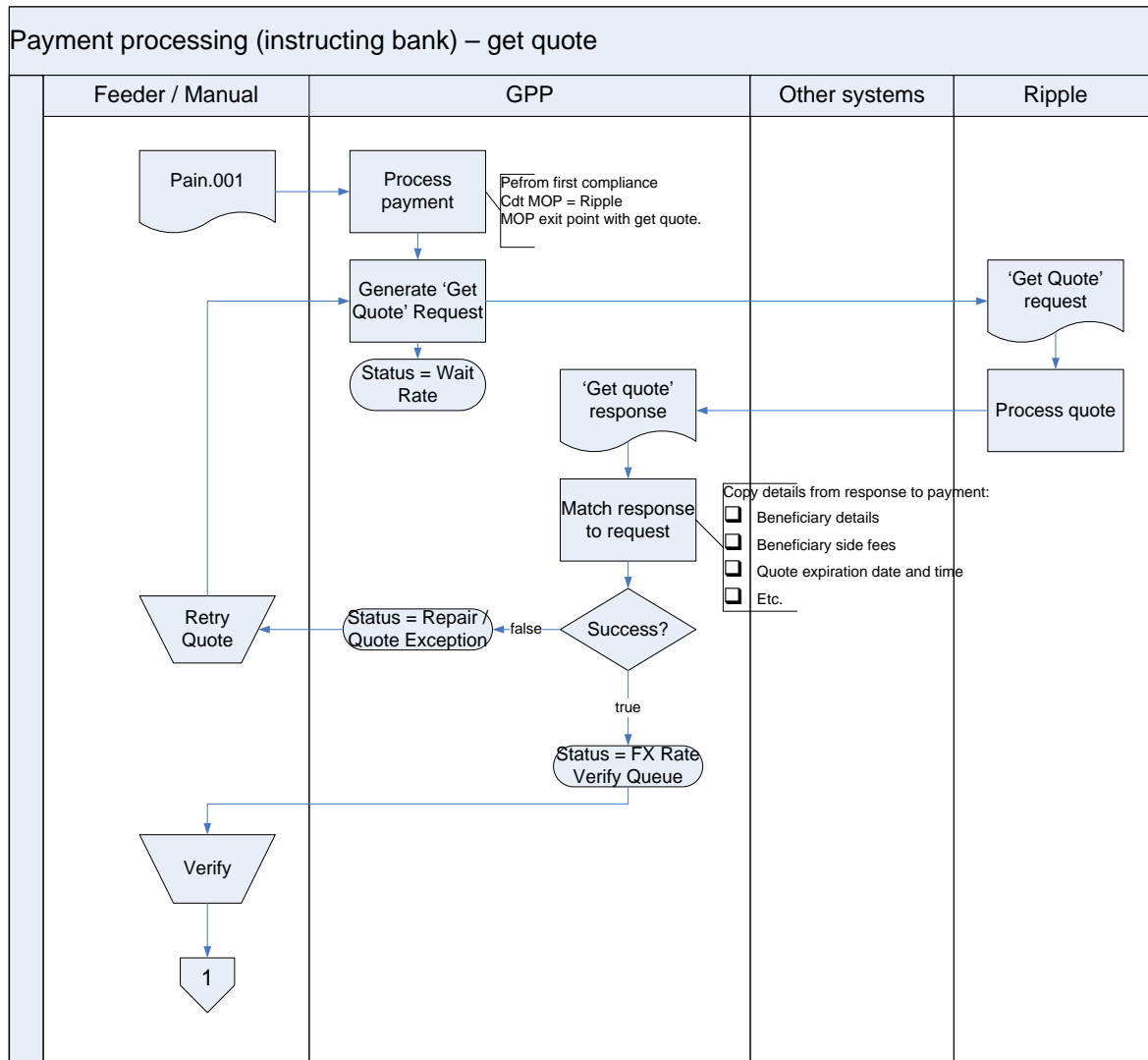
4.1.1.2 Business Flow

High level flow of Ripple within GPP.



4.1.1.3 Use Cases & Flow Processes

4.1.1.3.1 Request for 'Get Quote' from Ripple

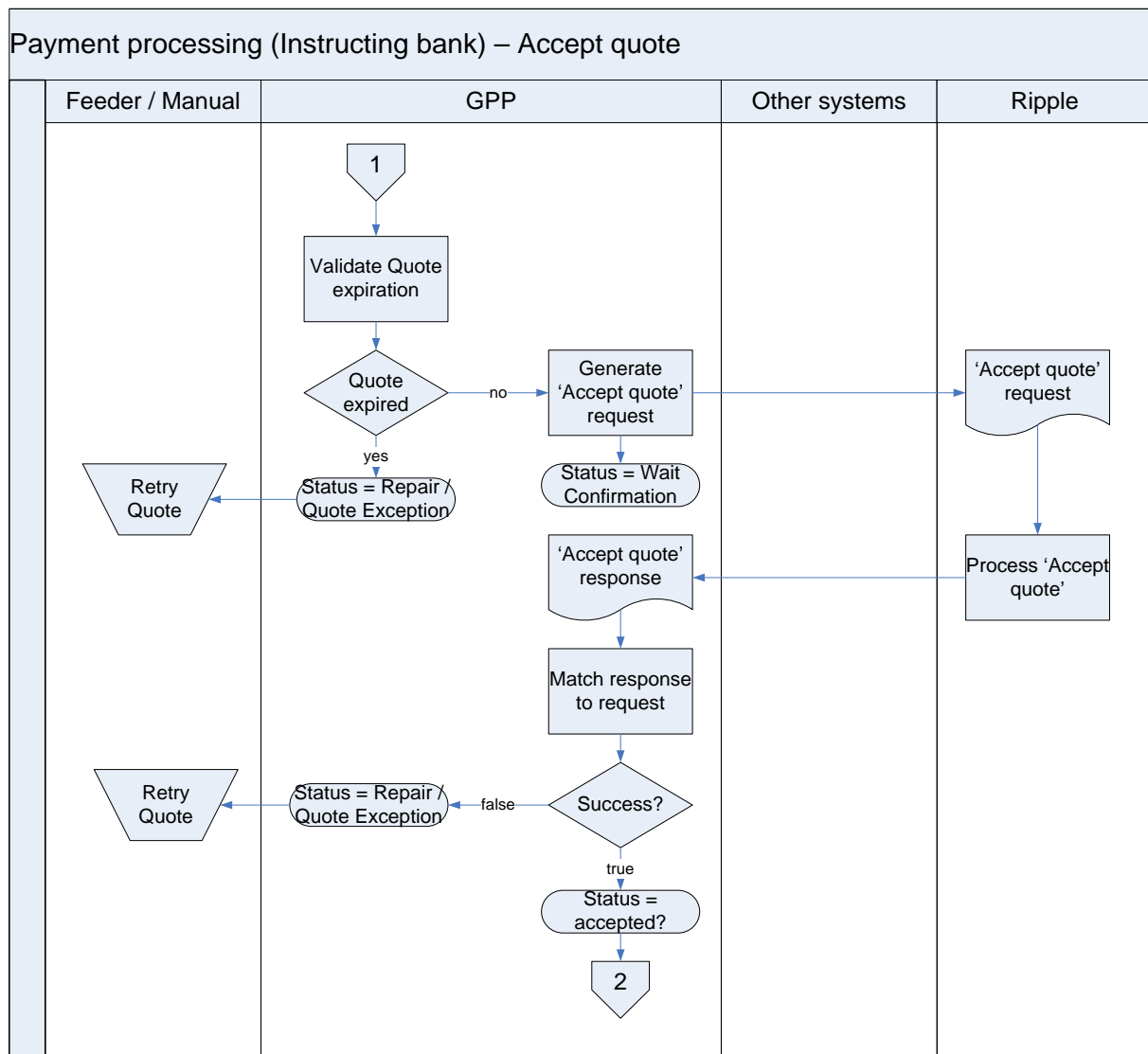


When a payment is received, GPP performs validations and selections, for example, validation, debit/credit party identification, MOP selection.

When Ripple is selected, GPP uses an exit point to go for 'Get Quote' request form Ripple. When waiting for quote, the payment is routed to Wait Rate queue.

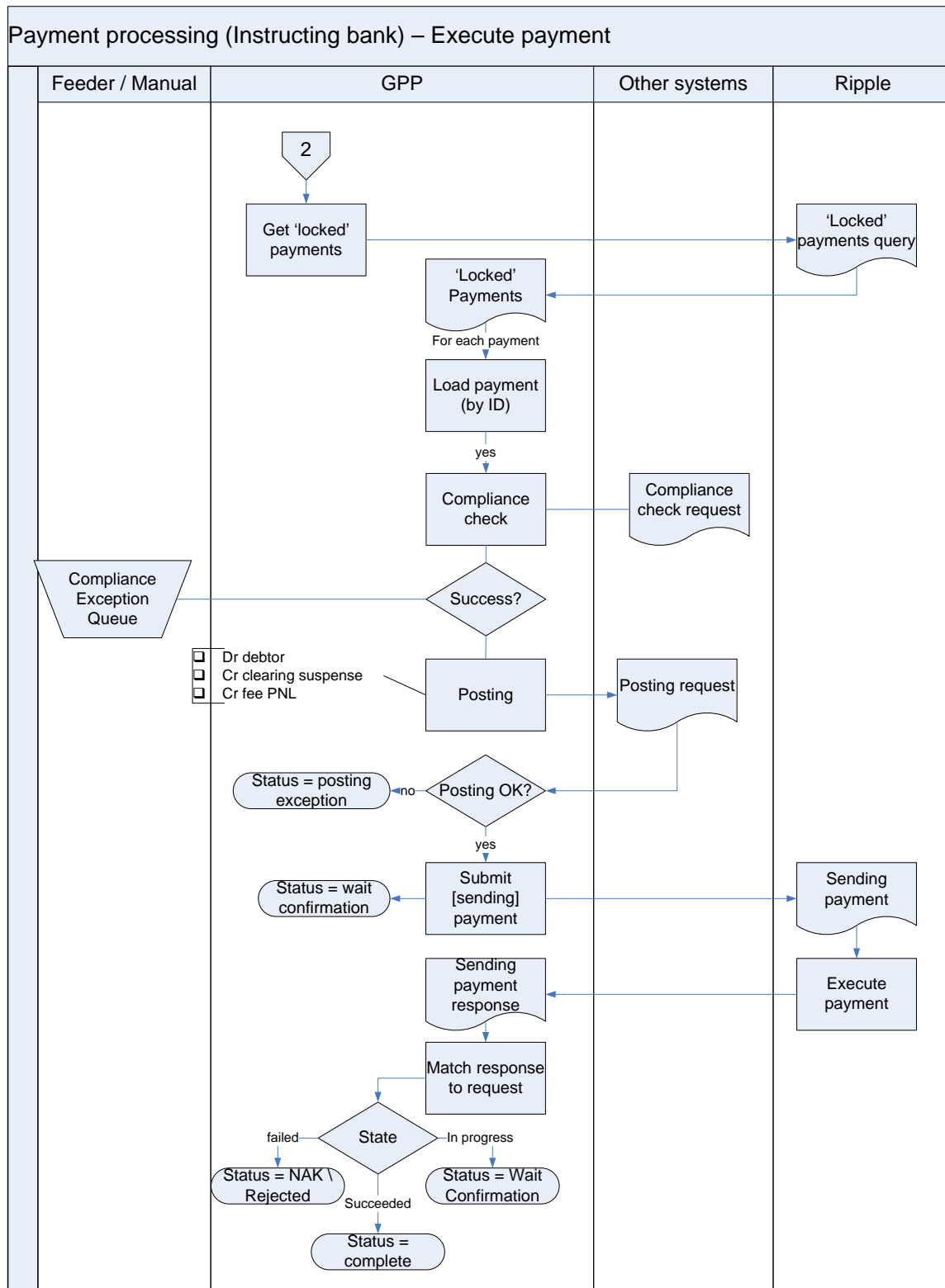
Once the rate is received and the rate response is matched to the request, the payment is routed to the FX Rate Verify queue for manual rate verification.

4.1.1.3.2 Receipt of Get Quote Response from Ripple



Once the user verifies the rate, GPP generates 'Accept Quote' request. The payment is routed to the Wait Confirmation queue. An 'Accept Quote' response is matched to the request and if status is accepted, the payment continues to the next processing step.

4.1.1.3.3 Execute Payment to Ripple (Instructing Agent)

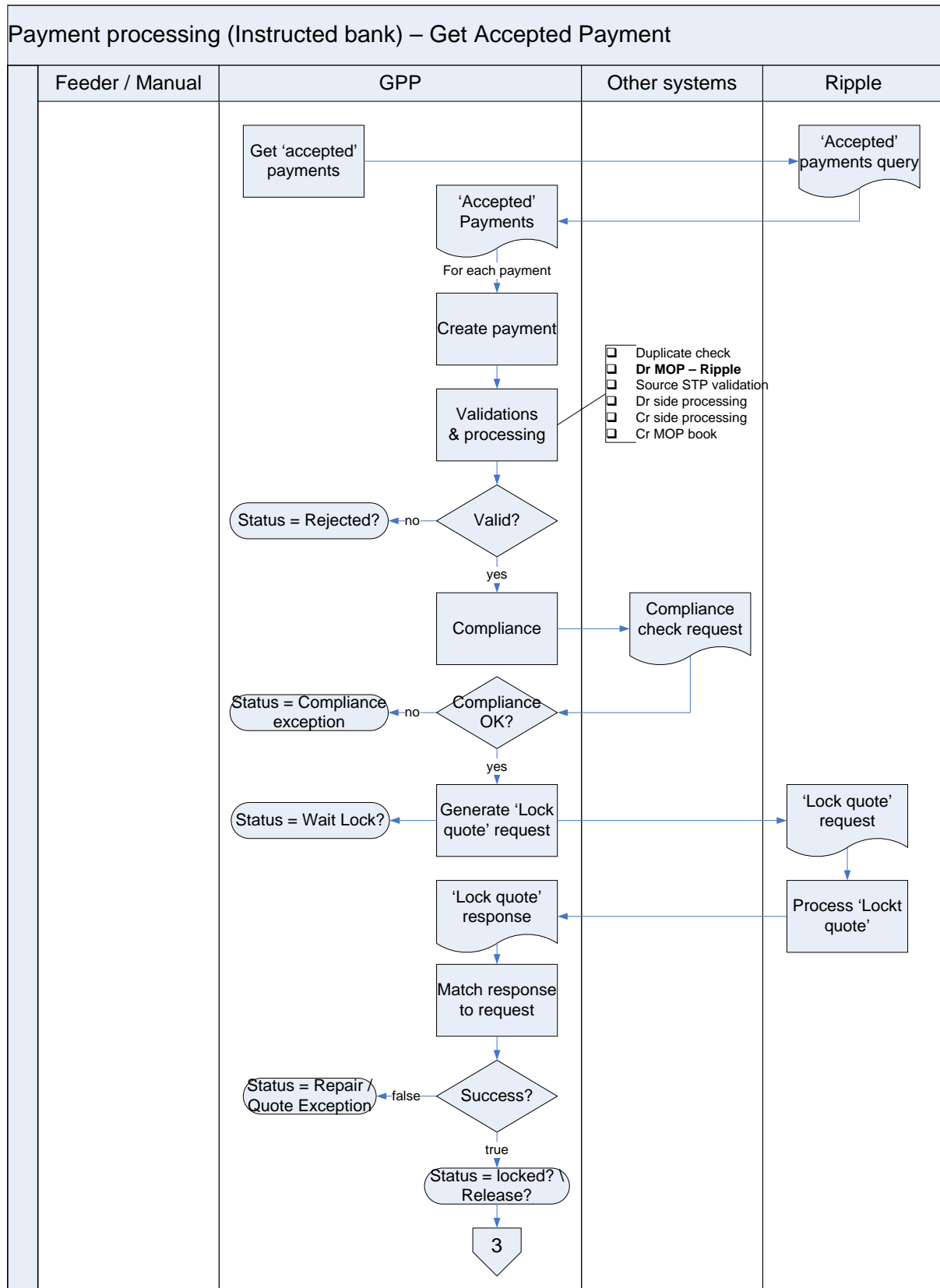


GPP checks with Ripple Connect (RC) for a payment with status Locked payments to match to original request payment. GPP matches the response to the request. Performs compliance checking and posting.

- If a positive response is received, GPP sends the payment to Complete queue.

- If NAK is received, GPP sends the payment to Rejected queue.

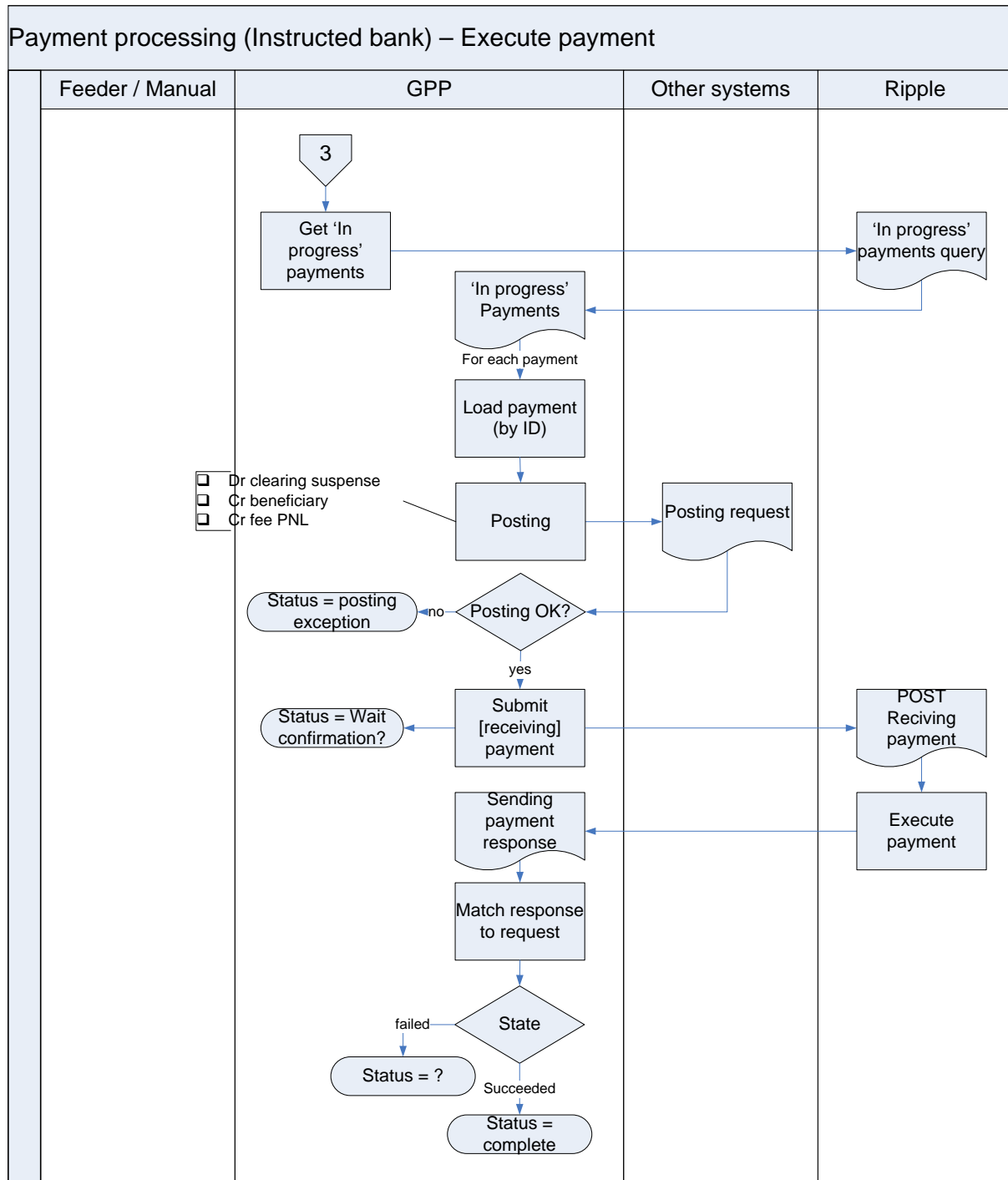
4.1.1.3.4 Get Payment Accepted (At the Instructed Agent)



- Receiving bank gets the payments that were accepted.

- Debit MOP is identified as Ripple.

4.1.1.3.5 Execute Payment (at the Instructed Agent)



The payment is now in Completion Processing. GPP:

- Gets payments that were paid
- Identifies funds that have been transferred
- Continues workflow (or selects posting workflow)
- Executes posting

- Completes processing and sends SMS to beneficiary
- Changes status to **Complete**

4.1.1.4 Business Setup

	Setup	Additional Information
System Parameters	N/A	
Profiles	MOP Selection	Profiles
Rules	N/A	
Permissions	N/A	
Tasks	N/A	
queues	N/A	
System Configuration	Interface profile	

4.1.1.4.1 Profiles

4.1.1.4.1.1 MOP Selection

On the initiating party a MOP Ripple should be defined

Field	Value for Ripple	Comment
Name	Ripple	
Calendar	Relevant calendar or no value	

On the receiving party MOP Lock should be defined as the payment is not completed until the initiating party accepts the payment. Then MOP Book is selected and accounting is performed.

4.1.1.4.2 System Configuration

Interface Profile with connectivity of Get Quote needs to be defined.

Appendix A: Glossary

This table describes the terms used in this document.

Term	Description
Account Identifier	The Identifier used within the Business Reference Data to resolve to a Participant that acts as the Account Servicer.
Abort	Termination of the payment instruction processing by the Basic Infrastructure as a result of an error or exception preventing the completion of the transaction.
Abort Notification	A system message that alerts the sender of an acknowledged, live input message that the system has aborted the delivery of the message. An error code indicates the reason for the delivery abort
ACH	Automated Clearing House. A system that receives and sends files of transactions from and to participating parties, nets the amounts, and initiates settlement between banks.
ACK	A positive technical acknowledgement.
ACTC	File Acceptance. A file reason code indicating an accepted technical validation, which means successful authentication, both syntactically and semantically.
ADI	Authorized Deposit-taking Institution as set out by APRA
Addressing Service	Delivers the ability to identify an account at a Participant as the destination for a message using the Alias Identifier (such as a mobile phone number or email address) of the Payee rather than the account number.
Alias	An Alias is a unique identifier which can be used through the Addressing Service to identify a serviceable account through reference to the Alias Record. The Alias includes both the Alias Type and the Alias Identifier (for example 'email' and 'wsmith@gmail.com')
AN	Abort Notification from FSS to Payee Bank and Payer Bank PAG to Payee Payer Bank's BOs
AOS	Additional Optional Services
APCA	Australian Payments Clearing Association Limited
APRA	Australia Prudential Regulation Authority
Available	The positive state of Availability where a computer system is available for use. In the context of NPP, a measure of how long a system (participant or BI) is available and able to process or respond to NPP messages.
BAH	Business Application Header
Basic Messaging	Basic Messages are messages that do not form part of the orchestrated transaction flow (pacs.008/ 002/009).
BAU	Business as Usual
BI	Basic Infrastructure network and Addressing Service operated by SWIFT, with link settlement via the FSS.
BIC	Business Identifier Code. BIC is an international standard for identification of institutions within the financial services industry. BICs are used in automated processing to unambiguously identify a financial institution or a non-financial institution. The ISO 9362 standard specifies the elements and the structure of a BIC. A BIC consists of either eight (BIC8) or eleven (BIC11) contiguous characters.
BO	Back Office – A participant's Back Office systems

Term	Description
BSA	Batch Suspense Account. A posting account used to accumulate transactions for consolidated posting.
Business Day	A working day other than a Saturday, Sunday or legal public holiday.
Business Retry	Business Retry is the sending of the same business transaction in a new message with a new Transaction ID.
CBT	CHAPS Central Bank Interface
CHAPS	Clearing House Automated Payment System
CHESS	Clearing House Electronic Subregister System
CID	Creditor ID. Unique creditor identification code supplied by a creditor bank. GPP uses the CID and the UMR to identify a mandate.
CN	Clearing Notification – pacs.002 from Payee Bank to Payer Bank and vice versa
CR	Clearing Request – pacs.008 from Payer Bank to Payee Bank
CSM	Clearing and Settlement Mechanism
CTO	Credit Transfer Outgoing
CUG	Closed User Group
DC	Direct Clearing
DD	Direct Debit
DDA	Direct Debtor Authorization
DDO	Direct Debit Outgoing
Debtor	The party that owes an amount of money to the creditor, and/or a debit account owner.
DFI	Depository Financial Institution. A bank or other financial institution.
DS	Direct Settlement
Direct Deposit	A credit transfer in a NACHA-based system.
Direct Payment	A direct debit in a NACHA-based system.
DUPEX	Duplication exception.
ENRP	A file received from a clearing that loads a mandate in GPP.
ESA	Exchange Settlement Account; An account held at the RBA by financial institutions to settle financial obligations arising from the clearing of payments.
FI	Financial Institution
Final status	One of the following statuses beyond which no manual or system processing will be done - Complete, Reject, Cancelled, etc.
FSS	Fast Settlement Service - RITS Fast Settlement Service operated by the Reserve Bank of Australia
FSS Outage	An FSS Outage is defined as the period during which the FSS (PAG and BO combination) is consistently unable to respond to Settlement Requests being received from all Participant PAGs.
Full Legal Account Name	Full Legal Account Name (FLAN) means the full account name as allocated by the Account Servicer based on Know Your Customer procedures. This may be different to other names used for the account and sometimes different to the names of the account owner(s) – such as when a trading name is appended. It is a name determined by the Bank and is not controlled by the customer. Guidance – The FLAN is the name

Term	Description
	of the individual or organization that owns the account, not who controls the account. It deals with ownership rather than the authority to use the account. For example, this could be from a Participants core banking system or statements system.
Gateway	Point of entry or exit into the Basic messaging infrastructure.
GIRO	A giro (or giro transfer) is a payment transfer from one bank account to another bank account and instigated by the PAYER, not the payee.
GPP	Global PAYplus
Gross Accounting	Accounting method that performs postings for all transactions, regardless of whether a transaction was processed, rejected, or canceled. Rejected and canceled transactions are also posted separately as offsets to the account, either in bulk (lump sum) or individually as defined in the party profile.
HLD	SWIFT High Level Design for the NPP
HVCS	High Value Clearing System
IC	Indirect Clearing
Interface Services	A secure means for Participants to connect to the BI. Interface services include sending and receiving messages, receiving enquiries, and providing access to the helpdesk and settlement.
Intrabank Transfers	A transaction scenario that occurs when both parties to an Austraclear transaction are bank customers, potentially causing the Austraclear Trade to result in both an MT198-036 and MT198-037 being received for the same Austraclear trade transaction.
IP	Immediate Payment
IS	Indirect Settlement
MAS	Monetary Authority of Singapore
MEPS	MAS Electronic Payment System
Message Processing	The processing of messages submitted to the Switch by Participants, FSS, and Overlay Services. This includes the Switch processing of payment messages (single Credit Transfers), non-value messages (business and technical), settlement messages (settlement request and notification), error and exception notification messages, and Overlay Service messages.
MOP	Method of Payment. The means via which a payment is executed, such as BOOK or SWIFT.
MP	Mass Payments
MQ	IBM WebSphere MQ (Message Queue)
NAB	National Australia Bank Limited
N/A	Not applicable
NCC	National Clearing Code
Net Accounting	Accounting method that performs postings for processed transactions only. Posting is not performed for rejected or canceled transactions.
NPP	New Payments Platform at an FI that: <ul style="list-style-type: none"> Facilitates on a 24x7 basis near real-time settlement of payment transactions in Australian dollars without having to specify full destination account details and provide more complete remittance information, such settlement to be effected through the RBA

Term	Description
	<ul style="list-style-type: none"> Is accessible to all ADIs (and other approved entities) on an equitable basis Is efficient, flexible and scalable and has high levels of reliability and security Supports ongoing innovation in payment services including through enablement of multiple overlay services tailored to payment needs.
NPPA	NPP Australia Limited, a mutual organization, which owns and governs the core business architecture (Basic Infrastructure). The NPPA's membership consists of Participants and other approved entities.
ON-US Payment	A payment where the drawing and paying accounts are at the same FI.
pacs	Payments Clearing and Settlement messages sent only by ADI Participants
PAG	SWIFT Payment Access Gateway (Clearing Gateway), a component of the Distributed Switch embedding the business logic for processing the payment clearing and settlement flows.
PAIN	Payments Initiation messages originating from Participants', Connected Institutions and from connected Overlay Services
PART	Partial File Rejection. A file reason code indicating that one or more payments are rejected.
Participant	A shareholder of NPPA
Payee bank	The receiver of the Credit transfers through FSS
Payer bank	The sender of the Credit transfers through FSS
PDA	NPP Program Delivery Authority
PDE	Possible Duplication Emission flag
PDO	Payment Data Object. Data object that holds all payment data, including: XML message data (original and enriched) Relational data Reference data Rates, fees, and errors
PDS	Payment Delivery System
RBA	Reserve Bank of Australia
R Message	GPP supports recall, return, and reject messages for both the originating bank and the receiving bank.
RITS	Reserve Bank Information & Transfer System used for interbank settlement
RJCT	File Rejection. A file reason code indicating a rejected settlement, rejected payment initiation, or rejected individual transaction.
RPO	Recovery Point Objective
RTO	Recovery Time Objective
RTGS	Real-Time Gross Settlement. A settlement system that transfers funds in real-time, processes each transaction upon receipt, and settles each transaction individually.
SEPA	Single Euro Payments Area. A European financial infrastructure that creates a zone in which Euro payments (or any other agreed upon currency) are considered domestic.
SLA	Service Level Agreement, as it may apply to SWIFT or Participants

Term	Description
SN	Settlement Notification – pacs.002 from FSS to Payee Bank and Payer Bank
SR	Settlement Request generated automatically from the Payer PAG after receipt of a successful CN
STEP2	The Pan-European Automated Clearing House (PE-ACH), a platform that process bulk payments in euro.
STP	Straight-Through Processing. The concept that enables GPP to process transactions to completion without the need for manual intervention. STP enables shortened processing cycles, reduced settlement risk, and lower operating costs.
SWIFT	A member-owned cooperative that provides the communications platform, products, and services to connect over 8,600 banking organizations, securities institutions, and corporate customers in more than 208 countries.
SWIFT Interface	The bundle of software constituting the Switch, including the PAG and DMC.
TPS	Transactions Per Second. The number of transactions GPP is able to process per second.
Transfer	To sell, transfer, assign or otherwise dispose of, create or deal with any legal or equitable interest in a Share.
UMR	Unique Mandate Reference. Unique mandate identification code supplied by a creditor. GPP uses the UMR and the CID to identify a mandate.
Unavailable	The negative state of Availability where a computer system is not available for use. In the context of NPP clearing, a measure of how long a system (participant or BI) is not available and thus not able to process or respond to NPP messages.
Under Stress	This state occurs when BO systems are consistently unable to meet the Clearing Response SLA and will not be able to improve in short term without intervention. A Participant BO environment is deemed to be under stress for one or more business services and they require action by other NPP counterparties to restrict message delivery to their PAGs and BO environment