



Global PAYplus

# Parties Identification

Business Guide

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## Version Control

Version	Date	Summary of Changes
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2.0		Updated Accounts and Parties
3.0	June 2015	Document Restructured
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# 1 Overview

## 1.1 Introduction

Every payment requires both the debit (Dr) and credit (Cr) parties to be identified.

To be able to perform this task three steps are performed:

1. Identify the debit and credit parties from the list of possible parties
2. Load the party information
3. Load the party related account

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Note: For cases where the funds are moved via a clearinghouse, final credit party account identification is possible only after the MOP selection phase is performed.

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On the debit side identification, when the instructing agent (sender) of the message is not the first in debit chain the debit authorization (or debit authorization bypass) is checked.

## 1.2 Target Audience

This document describes the Parties Identification workflow. It is designed for business analysts and system administrators who need to set up and configure this feature.

It is also of value to anyone who wants to know more about how this feature is implemented.

## 2 Processing

The following section describes services that handle both the debit and credit side processing.

Each service is described separately and the different unique Dr and Cr flows are described in a separate section.

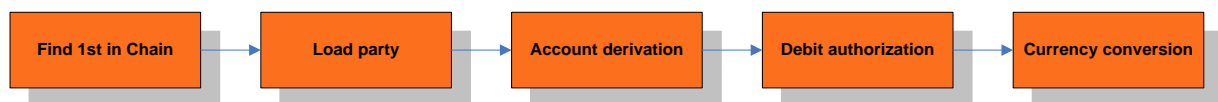
The following services are used for Dr and Cr side identification:

- Identify first-in-chain (service name: FindFirstInChainService)
- Load party (service name: LoadCustomerService)
- Account derivation (service name: AccountDerivationService).

Note: The same service is shared between Dr and Cr sides. An indicator sets the service side correctly.

### 2.1 Party Identification Services Workflow

The following flow describes the processing for identifying debit-side and credit-side parties.



### 2.2 Identify First-in-Chain Party (FindFirstInChainService)

The following indicator defines whether the service caters for the Debit or Credit side processing.

This table includes the FindFirstInChainService Fields.

Field ID	Name	Description
D_FIND_FIRST_IN_CHAIN_TYPE	Find fst in chain tp	Find first in credit chain service required input. Either Credit or Debit enables distinguishing between the two service modes.

#### 2.2.1 Debit Party Chain

If the original message type is Pain 001 use the initiating party (debtor) account (that is, either **X\_DBTR\_ACCT\_IBAN** or **X\_DBTR\_` ACCT\_ID**).

If not use the following priority: Debit Party Chain Priority

	ISO		SWIFT	
Priority	Tag	Name	Tag	Name
	ThrdRmbrsmntAgt	Third reimbursement agent	55	Third Reimbursement Institution
	InstdRmbrsmntAgt	Instructed reimbursement agent	54	Receiver's Correspondent
	InstgRmbrsmntAgt	Instructing reimbursement agent	53	Sender's Correspondent BIC/NCC
	SttlmAcct	Settlement account	53 B	Sender's Correspondent

ISO			SWIFT	
				account
	InstgAgt	Instructing agent	Sender	Sender (Original Sender)

## 2.2.2 Credit Party Chain

### Credit Party Chain Priority

ISO			SWIFT	
Priority	Tag	Name	Tag	Name
1	InstdAgt	Instructed Agent		Receiver
2	N/A	Payment Correspondent	N/A	Correspondent. A derived attributes. See The Building a Correspondent Chain Business Guide.
3	InstdRmbrsmntAgt	IntermediaryAgent1 and IntermediaryAgent1Account	56	Intermediary Institution (Field 56)
4	CdtrAgt & CdtrAgtAcct	CreditorAgent and CreditorAgentAccount	57	Account with Institution (Field 57)
5	Cdtr & CdtrAcct	Creditor and CreditorAccount	58/9	Beneficiary (Field 58/59)

#### Notes:

When the candidate for first-in-credit-chain is the creditor agent and BIC/NCC or IBAN and account ID is not provided, try obtaining the owning BIC from the creditor IBAN field (if applicable) before moving to the next in chain or setting up the creditor name and address as the first in chain.

When deriving first in credit chain from a provided NCC. If the clearing system ISO code = 'USABA' the CUSTOMRS.ABA is used instead of CUSTOMRS.SWIFT\_ID (i.e. BIC).

1. If one of the fields is not empty this party is the '1st in credit chain', continue to the next step (Load party); otherwise perform the same step on the next party in the chain.
2. The first-in-credit chain field that is derived is populated by:
  - a. Debit: Debit Input Fields

Field ID	Name	Description
D_FIRST_IN_DBT_CHAIN_NCC_CODE	First in dbt chain NCC cd	First in debit chain NCC code ID
D_FIRST_IN_DBT_CHAIN_ACC_NUM	First in dbt chain acct nb	First in debit chain account number
D_FIRST_IN_DBT_CHAIN_BIC	First in dbt chain BIC	First in debit chain BIC
D_FIRST_IN_DBT_CHAIN_IBAN	First in dbt chain IBAN	First in debit chain IBAN

- b. Credit: Credit Input Fields

Field ID	Name	Description
D_FIRST_IN_CDT_CHAIN_NCC_CODE	First in cdt chain NCC	First in credit chain NCC code ID



Field ID	Name	Description
D_FIRST_IN_CDT_CHAIN_ACC_NUM	First in cdt chain acct nb	First in credit chain account number
D_FIRST_IN_CDT_CHAIN_BIC	First in cdt chain BIC	First in credit chain BIC
D_FIRST_IN_CDT_CHAIN_IBAN	First in cdt chain IBAN	First in credit chain IBAN

- Failure during this phase causes the payment to end up in Repair status with a relevant error indicating that it was unable to identify 1st in credit or debit chain.
- If the first in chain is identified, continue to the next step.

## 2.3 Load Party (LoadCustomerService)

- The following indicator defines whether the service caters for the Debit or Credit side processing.  
LoadCustomerService Fields

Field ID	Name	Description
D_LOAD_CUSTOMER_TYPE	Load pty tp	Load Customer Service required input. Either Credit or Debit to be able to segregate between the two options.

- If credit party code was provided in the message (P\_DBT\_CUST\_CD or P\_CDT\_CUST\_CD), load this customer
- If first-in-chain is unknown (D\_SUCCESS\_CDT\_CUST\_DERIV holds the value of this query for credit side), invoke first in chain service
- If the original message type (P\_ORIG\_MSG\_TYPE) is Pain 001 , use the initiating party code (P\_ORG\_INITG\_PTY\_CUST\_CD)
- Derive party through one of the following options:

### 2.3.1 IBAN

Invoke IBAN deconstruction service (ValidateAndDeriveCustomerFromIBANService). For more information, see the GPP SOA Guide IBAN Validation.

- If the service returns that the IBAN is invalid the payment is sent to an error queue (Repair).
- If the IBAN is valid the IBAN service continues.
- Try to find the owning customer by assessing the IBAN account number and then the account profile owner.
- Try to find the owning customer by assessing the IBAN NCC and then the NCC party owner
- Try to find the owning customer by assessing the IBAN BIC and then the Party that owns that BIC

Example of the possible deconstruction parts that may lead us to the owning party:

Suppose a valid IBAN "IE04IPBS99060880004536"

- IE: Country code. In this case Ireland.
- IPBS: Bank ID: IBAN Bank ID defined in 'Parties' profile for customer
- 990608: Branch ID: Code defined in 'National Clearing Codes' profile for customer (sometimes, a concatenation of Bank ID and Branch ID is required).
- 80004536: Account No: Account defined in 'Accounts' profile for customer

If the IBAN is not followed by a BIC or in all other cases, use the Account to locate the customer.

### 2.3.2 Account Number

Note the special processing (described in the Account derivation) for debit-side around incoming SWIFT field 53B suffixed by /C/ or /D/

Look for an entry in Accounts Profile by:

- Payment Office
- Account
- Instruction Currency

If not found, look for an entry by:

- Payment Office
- Account

The account is linked to the Party by the 'Party code' field.

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**Note:** If multiple Party codes are returned, the party cannot be identified.

F53B may be prefixed by the character C that indicates to first lookup for the account by ACC\_ALIAS (asset account no.) and if not found by Account no.

---

### 2.3.3 NCC

Validates NCC length (defined in COUNTRY\_NCC>NCC\_LENGTH).

- If length is invalid, send to Repair queue for manual handling.
- If the length is valid:
  - Look for the NCC (NCC type and code) under the payment office.
  - If an entry is not found, look for the NCC under the global ('\*\*\*) office.

The NCC is associated with the Party by the 'Party code' field.

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**Note:** If the party cannot be loaded from NCC and the Stop indication of the NCC identifier is flagged, the service stops the Load Customer process and returns a fail response with an indication to send to a manual queue.

If the **Stop** indication is not flagged, the service attempts to load the customer using the next identifier.

---

### 2.3.4 BIC

For provided 11 char BIC length

- BIC & Payment Office
- BIC & Global office ('\*\*\*)

For provided 8 char BIC length BIC, concatenate the provided 8 char BIC and 'XXX'

- Concatenated BIC & Payment Office
- Concatenated BIC & Global office ('\*\*\*)

If none of the entries are flagged the party cannot be identified.

The service continues based on the results provided by the LoadCustomer service:

- Success – Continue to Party Profile
- Fail – Manual Queue – Send the payment to a Manual Queue with the relevant error.

## Service output

LoadCustomerService Output

Field ID	Name	Description
P_CDT_CUST_CD	Credit party ID code	Internal credit party ID unique code (Customer code)
P_DBT_CUST_CD	Debit party ID code	Internal debit party ID unique code (Customer code)

## 2.4 Account Derivation (AccountDerivationService)

The following indicator defines whether the service caters for the Debit or Credit side processing.

AccountDerivationService Fields (1)

Field ID	Name	Description
D_ACCOUNT_DERIVATION_TYPE	Acct derivation tp	In account derivation service, specifies whether the account derived on the debit or credit side. Possible values: Debit or Credit.

- **Debit-side derivation only.** Fetch cases where the funds arrive from a clearinghouse (i.e. when message contains FIN copy and where dbt MOP was identified to be one of the clearinghouses).  
If Debit MOP (**MINF.P\_DBT\_MOP**) is not empty and FIN copy service field (**OX\_CLR\_SYS\_ID**) is not empty obtain the debit account from identifier profile (SWIFT\_ID table) by:
  - Payment Office (MINF.P\_OFFICE)
  - Debit MOP (MINF.P\_DBT\_MOP)
  - Original Receiver (OX\_INSTD\_AGT\_BIC\_2AND)

Look for an entry in the identifier profile:

- Entry found, set the account from identifiers profile (SWIFT\_ID.ACC\_NO) to the payment's debit account (MINF.P\_DBT\_ACCT\_NB) and set the debit account office (MINF.DBT\_ACCT\_OFFICE) and currency (MINF.P\_DBT.ACCT\_CCY)
- Entry not found, send the payment to a manual queue (REPAIR).
- **Credit side derivation only.** Handle incoming MT910:

If message type (P\_MSG\_TYPE) = SWIFT\_910 AND message class (P\_MSG\_CLASS) is not empty, try to find the provided SWIFT tag 25 account identification (X\_NTF\_ACCT\_ID) and validate it.

If account was provided (P\_DBT\_ACCT\_NB or P\_CDT\_ACCT\_NB):

- Check if conversion is required and if the account allows conversion. If not, generate an error.
- If no conversion required, accept the account number.

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Note: Account may be provided within the payment detailed or it may have been populated by the repair and enrichment manipulation rules previously during the message processing flow.

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If the user manually inserted the Debit or Credit account, accept it.

AccountDerivationService Fields (2)

Field ID	Name	Description
MU_CDT_ACC_NB_MANUALY_ENTERE D	User monitor cdt acct manually entered	Credit account manually entered
MU_DBT_ACC_NB_MANUALY_ENTERE D	User monitor dbt acct manually entered	Debit account manually entered

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Note: GPP stores the manually inserted information and will not override it with the automated process.

---

Where payment was not specified in payment details (or it was specified and failed to be derived).

1. If the 'STP account derivation' over the party profile allows to continue with the derivation, derive account as follows:
2. Look for an account in the original settlement currency (OX\_STTLM\_CCY).
3. If not found, find an account in other currencies.
  - If account is found, it should allow conversion.
  - If more than one account is found, select the preferred account.

---

**Note:** Special debit account derivation is performed for incoming SWIFT payments with account number that is specified in field 53B followed by /C/ or /D/ with or without an account number afterwards. The following is performed:

- When followed by /C/ and an account number, lookup is performed in Accounts profile for asset account number (ACCOUNTS.ACC\_ALIAS) and if not found use Account number (ACCOUNTS.ACC\_NO).
  - When followed by /D/ without an account number, find the preferred account that is also an asset account.
  - When followed by /D/ and an account number, the lookup is done in accounts profile for 'account number (ACCOUNTS.ACC\_NO).
  - When followed by /D/ without an account number, find the preferred account that is also a non-asset account.
- 

If the account cannot be found/derived, it is possible that during the MOP selection phase the account will be defined. Therefore, for credit-side processing, GPP continues processing even if the credit account was not derived.

## 2.4.1 Set Debit Attributes

AccountDerivationService Fields (3)

Field ID	Name
P_DBT_ACCT_NB	Dr account number
P_DBT_ACCT_CCY	Dr account currency
P_DBT_ACCT_OFFICE	Dr account office

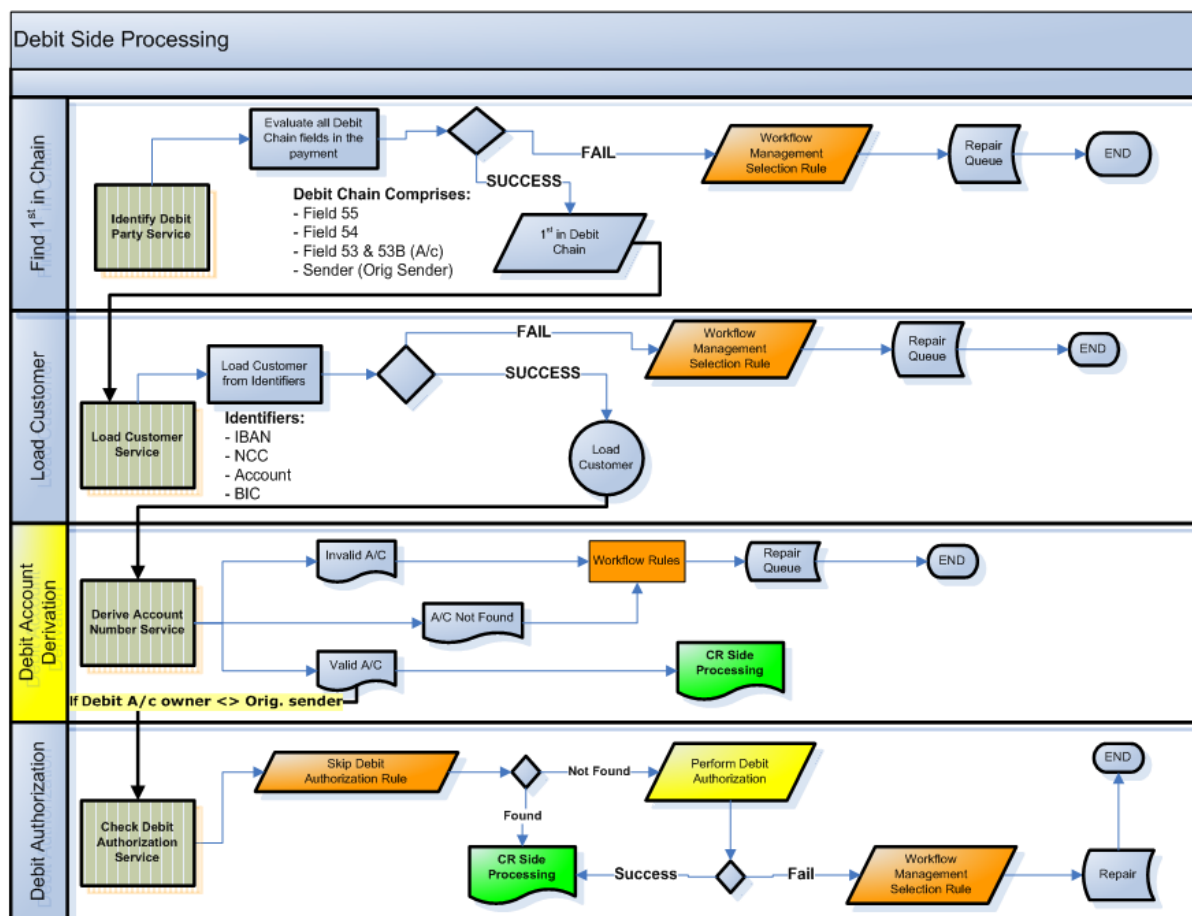
## 2.4.2 Set Credit Attributes

AccountDerivationService Fields (4)

Field ID	Name
P_CDT_ACCT_NB	Cr account number
P_CDT_ACCT_CCY	Cr account currency
P_CDT_ACCT_OFFICE	Cr account office

## 2.5 Debit-side Workflow

The following workflow shows the various services of the debit-side flow process.



### 2.5.1 Prerequisites

Define the dbt MOP (for more information, see GPP Business Guide Payment Initiation). This is done in order to be able to find payments that are sent from the clearinghouse where the settlement account has to be debited.

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Note: In essence: where FIN copy found over the message, the Debit account will be the Dbt MOP settlement account, where payment source is set to BOOK or SWIFT the debit account has to be derived from the debit chain.

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### 2.5.2 Identify First in Chain Party

The Character Set profile is used to amend account numbers:

- It is possible to define a set of characters that are allowed or disallowed
- The First in Chain service, when applicable, invokes the character set type 'account valid/invalid' and performs the required amendments to the account number
- With this feature, it is possible to amend, for example, the following IBAN GB 22-400515/12345678 to GB2240051512345678

### 2.5.3 Load Party

### 2.5.4 Account Derivation

### 2.5.5 Debit Account Enrichment

Assessment of the Debit Account Enrichment business rule provides the bank with the ability to override the system automated derived debit account. Once defined, the specified account (along with the usage guidelines) determines how to proceed.

### 2.5.6 Debit Authorization

Service name: DebitAuthorizationService

The service is triggered when the Debit account owner is not the same party as specified in the message instructing agent (original sender).

Before the service is initiated, the Debit Authorization Bypass business rule is assessed.

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Note: It is recommended to skip debit authorization in the following cases:

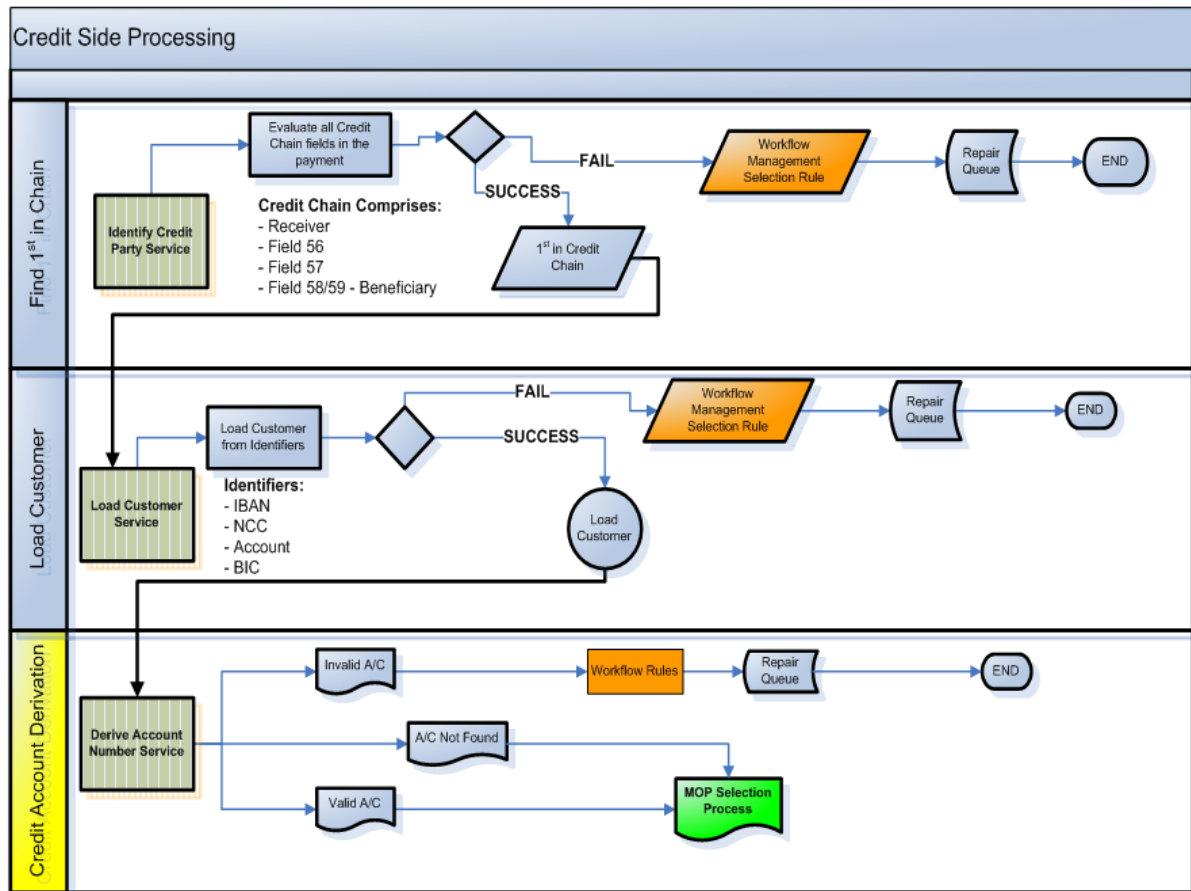
- Debit account is an asset account & Dbt MOP is a clearinghouse (such as EURO1,STEP1,TARGET2,XCT,SCT)
  - Payment was manually created
  - Dbt MOP is BOOK
- 

When a matching rule is found, the service is skipped and the bypass is audited (code 40077).

1. The service checks whether a debit authorization profile is found for the instructing agent (that allows it to debit the specified debit account).
2. When debit authorization is required but not granted, a relevant message error is set (code 40078) and the payment is sent to repair queue.
3. If not, continue processing and audit the authorization (code 40077).

## 2.6 Credit-side Workflow

The following workflow shows the various services of the credit-side flow process.



### 2.6.1 Identify First in Chain Party

Note: For information about this topic, see [Identify First-in-Chain Party \(FindFirstInChainService\)](#).

### 2.6.2 Load Party

### 2.6.3 Credit Party Enrichment

Assessment of the Credit Party Enrichment business rule provides the bank with the ability to override the system automated derived credit account. Once defined, the specified party also holds a usage value which may be using the party as the new first in credit chain or replace the party of the exiting first in credit chain. When a rule is found the Load Party service is invoked again.

The Rule is only invoked once. That is, if a rule is found and replaces/adds a party then once the load party service is performed, the rule will not be invoked again.

### 2.6.4 Account Derivation

### 2.6.5 Credit Account Enrichment

Assessment of the business rule 'Credit account enrichment' allows the bank with the ability to override the system automated derived credit account. Once defined, the specified account (along with the usage guidelines) will determine how to proceed.

### 2.6.6 Debit Authorization

Service name: DebitAuthorizationService

The service is triggered when the Dr account owner is not the same party as specified in the message instructing agent (original sender).

Before the service is initiated, the Debit Authorization Bypass business rule is assessed.

---

**Note:** It is recommended to skip debit authorization in the following cases:

- Dr account is an asset account & Dbt MOP is a clearinghouse (such as EURO1,STEP1,TARGET2,XCT,SCT)
  - Payment was manually created
  - Dbt MOP is BOOK
- 

When a matching rule is found, the service is skipped and the bypass is audited (code 40077).

1. The service checks whether a Debit Authorization profile is found for the instructing agent (that allows it to debit the specified debit account).
2. (When debit authorization is required but not granted, a message error is set (code 40078) and the payment is sent to Repair queue).
3. If not, continue processing and audit the authorization (code 40077).

## 3 Manual Handling (N/A)

## 4 System Configuration and Business Setup

This section describes the solution building blocks later described and used by the processing flow description.

### 4.1 System Parameters

System Parameter	Description
NAMEVALIDATION_TOLERANCE	Specified a tolerance attribute for name matching service. Service outcome is a probability in percentage that two strings are identical. 100 means that the strings are fully identical, 0 – means no similarity between strings that were compared. Above the tolerance threshold continue processing, below send to REPAIR queue. The default value is 80
UNNECESSARY_WORDS_PROFILE	Specifies the unnecessary words list type name for name matching service. The default value for the global office is WORDS.
PUNCTUATIONS_PROFILE	Specifies the punctuation characters set profile name to be used for normalize the input names. The default for the global office is Punc-Chars.

### 4.2 Profiles

These are the details of the required setup in GPP profiles for Currency Conversion.

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

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#### 4.2.1 Accounts

The Accounts Profile enables an authorized user to create and manage accounts for local Banks and Parties. This account is selected to be the account to be debited and credited for the payment. When



an account cannot be found in the GPP database, GPP is capable of generating an account lookup request to the bank back-office system in order to retrieve the account.

This table describes the relevant fields in the Accounts Profile, General Tab.

Field Name	Description
Account number	Number of the account
Currency	ISO currency code for this account
Party code	Select the internal code of the account owner from the Parties <b>Data Search</b> window.
Account name	Alternative name for this account
Preferred account	If selected, designates the preferred account if multiple accounts exist for the same party in the same currency or if multiple accounts exist in different currencies.
Asset account no	Account number of the Asset account. Enabled and mandatory if the Asset check box is selected.
Asset	If selected, indicates the account is a Nostro settlement account.

This table describes the relevant fields in the Accounts Profile, Accounting and Fees Tab.

Field Name	Description
Currency Conversion	
Allow other credit	If selected, allows conversion from other payment currencies to the credit account currency.
Allow other debit	If selected, allows conversion from other payment currencies to the debit account currency.
Rebate Account Office	Office that holds the Rebate Account. This field is populated automatically based on the account selected.
Rebate Account Number	Rebate account to which the rebate amount should be credited to.
Rebate Account Currency	Rebate account currency

## 4.2.2 Parties

The Parties profile maintains the customer data. Customers can be financial institutions with which the office has a relationship or a private (non-financial) customer of the bank. The Parties profile defines bank information within the SWIFT or similar payment network. In this context, a Party includes any financial institution in the payment network, including your own financial institution.

This table describes the relevant fields in the Parties profile, Main tab.

Field Name	Description
Party Code	Unique party ID. The GPP BICplusIBAN upload uses the following naming convention: XXX –Office name SA – SWIFT address YYYYYYYYYYYY – 11-character BIC Example: XXXSACHASUS33UBD is the BICplusIBAN upload entry for

Field Name	Description
	the UBD branch of JPMORGAN CHASE BANK, N.A. in the US. Local office entries (with whom we maintain an accounting relationship) have a different Party Code prefix.
Party Name	Name of the party
Party Type	Either a bank (BK) or a customer (CU)
Party Name 2	An alternative name for the party
BIC/BEI	<b>ISO 9362</b> (also known as <b>BIC code</b> or <b>SWIFT code</b> ) is a standard format of <b>Bank Identifier Codes</b> approved by the International Organization for Standardization. It is the unique identification code of a particular bank.
ABA	The <b>American Bankers Association</b> (ABA) is a free-trade and professional association that promotes and advocates issues important to the banking industry in the United States. ABA codes are assigned to American banks
Clearing Participant ID	Additional optional identification code for the clearing house. Registration code that identifies a financial institution that is engaged in trading securities.

This table describes the relevant fields in the Parties profile, Processing tab.

Field Name	Description
STP account derivation	Indicates whether the service should continue to derive an account from the customer if the quoted account fails validation.

### 4.2.3 National Clearing Codes (NCC)

The National Clearing Codes (NCC) profile is used to manage the list of National Clearing Codes used by banks and countries. For example, UK Bank Sort Codes are stored in this profile. Each entry in this profile is associated with a party profile (that is later used by the party load service).

This table describes the relevant fields in the National Clearing Codes profile.

Field Name	Description
Clearing System ID	ISO 20022 code that helps recognize the NCC code that is used. The list of clearing system IDs used to identify a financial institution by its Member ID in a specific payment clearing and/or settlement system. Examples: Australia – AUBSB Canada – CACPA USA routing number– USABA USA participant identifier- USPID UK domestic sort code – GBDSC
NCC Type (SWIFT)	Populated automatically based on the selected Clearing System ID
<input type="checkbox"/> Proprietary	An indication for 'Clearing System ID' that specifies whether the clearing code is an ISO or proprietary code (for example, the usage of GBDSC for the UK ISO or the usage of SC for the proprietary code)
Member ID	The national clearing code itself.

#### 4.2.4 Debit Authorization

Debit Authorization profile validates that sender of the funds is authorized to debit an account which does not belong to him.

In GPP, debit authorization is given to a bank- original sender against the accounts that belong to another bank. Authorization can be given to a specific bank or at a wider level; group of branches within a region, country or bank. This is defined by the Sender matching level field. Similarly, authorization can be given against a specific bank or at a wider level (Owner matching level field) or against a specific account (Account number field). When wider authorization is given, it is possible to exclude a specific account, specific branch or group of branches using the 'Exclude' button.

This table describes the relevant Debit Authorization profile fields.

Field Name	Description
Sender matching level	Enables the definition of authorization at a global level by defining the matching level. Possible values: 11 chars – No branch 8 chars – Region 6 chars – Country 4 chars - Bank
Sender ID	The BIC or partial BIC of the bank that is authorized to debit. The Sender ID value is trimmed according to the value in the 'Sender matching level'. Selection from Parties Profile Data Search window.
Owner matching level	Enables the definition of authorization at a global level by defining the matching level. Possible values: 11 chars – No branch 8 chars – Region 6 chars – Country 4 chars - Bank
Owner ID	The BIC or partial BIC of the bank to which the debit authorization is associated. This field is used to define debit authorization at a global level. If selected by user, then the 'Debit account number field should be <i>disabled</i> . The Owner ID value is trimmed according to the value in the 'Owner matching level'. Selection from Parties Profile Data Search window.
Debit account number	The account number to which the debit authorization is associated. If selected by user, then the 'Owner matching level' and 'Debit account owner ID' should be <i>disabled</i> . 'Owner matching level' should be populated with the value '11 chars'. 'Debit account owner ID' should be populated with the BIC of the selected account
Currency	The currency of the debit account. Populated automatically based on selection of Debit Account Number.
Exclude button	Excludes the specified account from wider authorization.

#### 4.2.5 Character Set

The Character Set profile is used to define the characters that can be used in a specific field. For example, the field Beneficiary Account ID can be configured to only allow numeric characters.

Note: This profile can be activated as part of an external STP validation service and also to validate the Dr and Cr accounts.

The Customized Fields panel is enabled only if there are Customized Fields in this profile.

This table describes the fields in the Character Set profile.

Field Name	Description
Name	Character name.
Type	<p>List box. Choices include:</p> <ul style="list-style-type: none"> <li>• <b>Accents</b> – Used for the STP validation service as one of the validation options</li> <li>• <b>Printable</b> – Used for the STP validation service as one of the validation options</li> <li>• <b>Restricted</b> – Used for the STP validation service as one of the validation options</li> <li>• <b>Standard</b>– Used for the STP validation service as one of the validation options</li> <li>• <b>Account invalid</b> – Used to validate that the debit/credit account are valid accounts. This profile specifies all the invalid account characters (for example: forward slash, dot, dash etc.)</li> <li>• <b>Account valid</b> - Used to validate that the debit/credit account are valid accounts. This profile specifies all the valid account characters (for example: numbers 0-9 and the letters A,B &amp; C)</li> </ul>
Description	The text or name of the Character name.
Support char replacement	<p>Yes or No option. Default is No.</p> <p>The Replace field is grayed out unless Yes is selected.</p>
Include line feed	Yes or No option. Default is No. Supports the SWIFT character set.
Include carriage return	Yes or No option. Default is No. Supports the SWIFT character set.
Include space	<p>Yes or No option. Default is No. Supports the SWIFT character set.</p> <p>The behavior varies depending on the type value.</p> <ul style="list-style-type: none"> <li>• Where type =Account valid &amp; 'include space' radio button is set to Yes, then where space is found in the account no. it is ignored.</li> <li>• Where type =Account invalid &amp; 'include space' radio button is set to Yes, then spaces are not allowed and are removed (Example: 123 456 becomes 123456). See matrix below</li> </ul>
Support invalid char. with space Replacement	<p>Yes or No option. Default is No.</p> <p>If Yes, the characters that do not have a "Replace" character will be replaced by a space.</p> <p>If No, the characters will be truncated.</p> <p>Note: The character replacement is relevant only for files. The system will not replace invalid characters for payments coming from the UI.</p>
Char	Type in the character in the spaces provided.
Replace	Only enabled with the Support character replacement option is Yes.

## 4.3 Business Rules

### 4.3.1 Account Lookup

Performed when a specific account cannot be found in GPP accounts profiles. It stipulates whether an account lookup call to the bank's back office system is required.

### 4.3.2 Debit Authorization Bypass

Performed on the debit-side identification module. When the sender of the message is not the debit party, a debit authorization is required. This rule allows the debit authorization step to be skipped.

### 4.3.3 Debit Account Enrichment

Defines an account number to debit and usage instructions for the defined account (whether to replace the automatically derived account with the specified account or use it only for the posting purposes).

### 4.3.4 Credit Party Chain Enrichment

Allows replacing (or adding into the chain as new first-in-credit-chain party) the automatically derived credit party.

### 4.3.5 Credit Account Enrichment

Defines an account number to credit and usage instructions for the defined account (whether to replace the automatically derived account with the specified account or use it only for the posting purposes).

### 4.3.6 Party Details Enrichment

Enables enriching a party with additional information fields. If for example, when sending a message to the creditor agent HSBC UK it is possible to send in the creditor agent field the following information:

- BIC
- NCC
- Name
- Address

## 4.4 Statuses

This table describes actions for the Repair status.

Name	Available actions	Comments
Repair	<p>Submit – The operator reads the error text, changes some payment attributes and submits the changes. The System re-evaluate the payment information and continues according to the message processing flow.</p> <p>Cancel – The operator decides to cancel the payment. That is, handle the payment outside of GPP</p>	This is a generic error queue where straight through processing cannot proceed and manual intervention is required.

## 4.5 Access Class Entitlements

Ensure the proper personnel get the permission to access the repair queue and take the relevant (submit and Cancel) action buttons.

## 4.6 Beneficiary Name Validation

The D+H Beneficiary Name Validation algorithm increases the STP rate of payment messages by enabling the system to better match beneficiary names during message processing. The system uses the algorithm to correct errors and differences in name strings, which are typically caused by user typing errors.

The system uses the algorithm to edit and match the following:

- Beneficiary Name: Received from an external system, such as a clearing system
- Beneficiary Account Name: Input by a GPP user

The Beneficiary Name Validation service is a stateless service invoked in a multi-threaded environment, which increases performance and minimizes synchronization blocks.

The service calculates the similarity between two input strings (beneficiary names) using a system-wide setup and returns a confidence score on a scale of 0 to 100, with 0 indicating completely different strings and 100 indicating completely identical strings.

The Beneficiary Name Validation service includes the following processes:

- Name Validation: In this process, the system checks whether the two input strings are identical. If the system determines the two strings as identical, it assigns a confidence calculation of 100 and concludes the name validation processing.
- String Normalization: This process removes unnecessary words. The system searches the two input strings for distinct words that are defined in a list. The words in the string must be separated from surrounding words with a space or punctuation mark. When the system successfully matches a word in the list with a word in the string, the system removes the word from the string.  
For example, if the word Mr is defined in the unnecessary words list and Mr John Doe is an input string, the system removes the Mr and returns John Doe.
- Removes Spaces and Punctuation: In this process, the system removes all spaces and punctuation marks from both input strings.
- Confidence Calculation: The system invokes this process only after normalizing both input strings. In this process, the system uses the Levenshtein distance algorithm, which counts the number of edits required to transform one input string into the other, to calculate a confidence score. The confidence score is a value of 0 to 100 to indicate the percentage of similarity between the two strings.

The system matches the score against the defined tolerance value to determine the similarity between the two input strings.

GPP generates log entries with the following information in GPP trace files for each Beneficiary Name Validation call:

- Original input strings
- Defined tolerance value
- Normalized input strings
- Calculated Levenshtein distance
- Confidence score

For information about Beneficiary Name Validation input and output parameters, see [Beneficiary Name Validation Input](#) and

[Beneficiary Name Validation](#) Output.

#### 4.6.1 Beneficiary Name Validation Input

The following table describes the Beneficiary Name Validation service input parameters.

Parameter	Description
Beneficiary Name	The beneficiary name received from the external system (clearing system). The service matches this name against the Beneficiary Account Name.
Beneficiary Account	The beneficiary name as it is defined in the bank, which is retrieved by the

Parameter	Description
Name	account lookup interface. The service matches this name against the Beneficiary Name.
Office	The office used for uploading the office-related configuration.

## 4.6.2 Beneficiary Name Validation Output

The following describes the Beneficiary Name Validation service output parameters.

Parameter	Description
Beneficiary Name	The beneficiary name received from the external system (clearing system). The service matches this name against the Beneficiary Account Name.
Beneficiary Account Name	The beneficiary name as it is defined in the bank, which is retrieved by the account lookup interface. The service matches this name against the Beneficiary Name.
Office	The office used for uploading the office-related configuration.

## 4.7 Recommended Setup

### 4.7.1 Profiles

	Office	Profile Name	Description	Attributes
1.	***	Value List Types	Value list type for the name matching unnecessary words.	WORDS
2.	***	Value Lists	Value list for the name matching unnecessary words.	WORDS
1.	***	Character Set	The profile replaces the punctuation with spaces.	PUNC-CHARS

#### 4.7.1.1 Value List Types

The list of unnecessary words is saved as a value list type in GPP, a new list "WORDS" created for this purpose. The GPP UI expose forms for editing list of values, office can create its own list instead the one defined for the global office, in that case the list name should be set in the system parameter UNNECESSARY\_WORDS\_PROFILE for that office .

The WORDS Value List Type can be defined in GPP under: System Setup, Business Rules Settings, Value List Types for Rules.

The following settings will be applied for the WORDS value list type:

Name		Exchange Rate Data		
Department	Department code to which the profile belongs.	***	M	
Office	Office ID	***	M	
List ID	Unique ID for a list of values.	WORDS	M	max. 8 characters

Name		Exchange Rate Data		
Description	Enter a description for the list. This list is displayed in the business rules view when using the operator in value list	Name match unnecessary words	M	max. 30 characters
Allow manual update	If selected, the user can define values that are connected to this list ID	True	M	Boolean
External list	If selected, specifies that an external update is allowed.	True	M	Boolean
Partner	Select Partner	N/A	O	
Last upload	Specifies the time the value was updated.	N/A	O	

#### 4.7.1.2 Value List

The unnecessary words which should be removed from the name before matching, is saved as a value list in GPP. The Value List can be defined in GPP under: System Setup. Business Rules Settings, Value Lists for Rules.

The following settings will be uploaded for the WORDS value list type:

Name		Exchange Rate Data		
Department	Department code to which the profile belongs.	***	M	
Office	Office ID	***	M	
List ID	Unique ID for a list of values.	WORDS	M	Selected from the value list types available for the office.
Description	Enter a description for the list. This list is displayed in the business rules view when using the operator in value list	Name match unnecessary words	M	Derived based on the list ID selected.
List Value	Single value for the list	MR	M	

#### 4.7.1.3 Character set

The Character Set Profile replaces the punctuation with spaces from the string before matching.

The Character Set can be defined in GPP under: System Setup, Miscellaneous Settings, Character Set.

The following settings will be applied for the 'PUNC-CHARS' character set:

Name		Exchange Rate Data		
------	--	--------------------	--	--



Name		Exchange Rate Data		
Department	Department code to which the profile belongs.	***	M	
Office	Office ID	***	M	
Name	character set name	PUNC-CHARS	M	max. 10 characters
Type	Used to validate that the debit/credit account are valid accounts. This profile specifies all the invalid account characters	Account invalid	M	Options: Accents, Printable, Restricted, Standard, Account invalid, Account valid.
Description	Enter description of character set	Character set for removing punctuation characters from a given string	M	
Support char replacement	The Replace field is grayed out unless Yes is selected. In the Char line the user specifies the characters that need to be replaced. In the Replace line, the user specifies the characters to use as a replacement.	True	M	Boolean
Include line feed	Supports the SWIFT character set.	False	M	Boolean
Include carriage return	Supports the SWIFT character set.	False	M	Boolean
Include space	Supports the SWIFT character set. The behavior varies depending on the type value. Where type =Account valid & 'include space' radio button is set to Yes, then where space is found in the account no. it is ignored.	False	M	Boolean
Support invalid char. with space Replacement	Characters that do not have a Replace character are replaced by a space	True	M	Boolean
Char list: Char	Enter the characters to be replaced in the spaces provided	' [ ] ( ) { }, - - - — ! . « » - ? ' ' " " ; /	O	
Char list: Replace	Replacement characters. Only enabled when the Support character replacement option is		O	Each character will be replaced by a single space

Name		Exchange Rate Data		
	Yes.			

#### 4.7.2 System Parameters (available for Customer)

#### 4.7.3 User-Defined Rules – (N/A)

#### 4.7.4 Alerts – (N/A)

## 5 Message Data

### 5.1 Message Attributes (N/A)

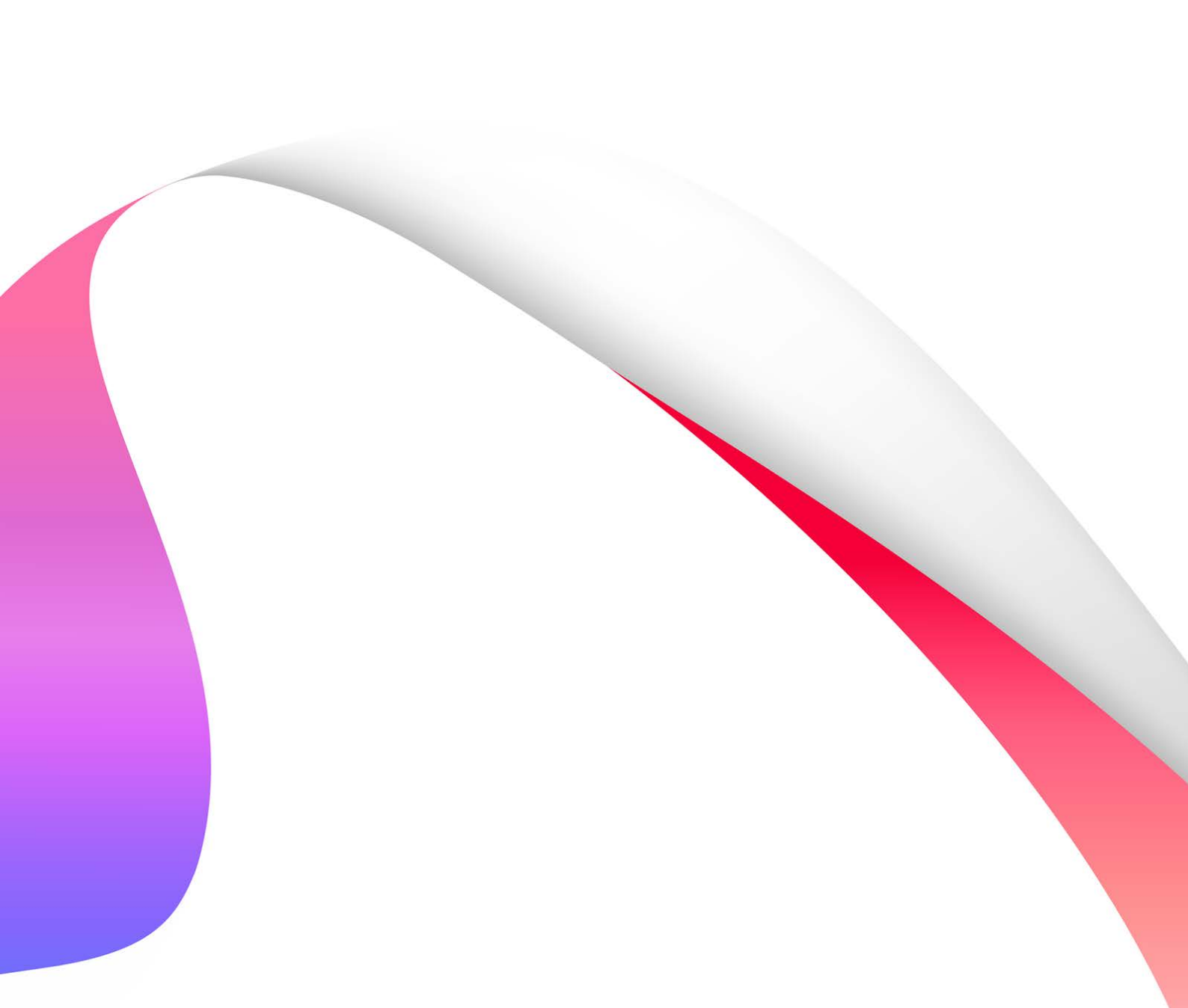
### 5.2 Audit & Errors

Code	Description	Notes
40039	Unable to identify 1st in credit chain Unable to identify 1st in debit chain	Identify First in Chain Party
40041	Failed to derive account number	
40077	Debit authorization check has been bypassed due to Bypass Debit Authorization rule [Rule Unique ID]	Debit authorization check has been bypassed
40078	Sender [Original Sender BIC] has no debit authorization on account number [Debit account number] [Debit party BIC]	Debit authorization check has failed
40077	Sender [Original Sender BIC] has debit authorization on	Debit authorization check has been successful
40122	Failed to derive account number for customer code [customer code]: multiple accounts were found but none of them is preferred.	Account derivation failure
40121	Failed to derive account number; for customer code [customer code] and currency [currency] multiple accounts were found but none of them is preferred.	Account derivation failure
40125	Failed to derive account number; for account quoted in payment [account Number], Multiple accounts were found but none of them is preferred.	Account derivation failure
40118	Failed to derive account number; more than one preferred account that allows conversion was found for customer code [customer code].	Account derivation failure
40117	Failed to derive account number; more than one preferred account that allows conversion was found for customer code [customer code] and currency [currency].	Account derivation failure
40149	Failed to derive account number; for customer code [customer code] and currency [currency] preferred account [Preferred account number] was found but field [53B or 54B or 55B]:/C exists and the account is not an asset account.	Account derivation failure
40222	Failed to derive account number; for customer code [customer code] and currency [currency] preferred account [Preferred account number] was found but field [53B or 54B or 55B]:/C exists and the account is not a non-asset account	Account derivation failure
40124	Failed to derive account number; for account quoted in payment [account number], multiple accounts were found but none of them	Account derivation failure

Code	Description	Notes
	allows conversion.	
40123	Failed to derive account number; for account quoted in payment [account number], a single account was found but it does not allow conversion: account [account number], office [office] and currency [currency].	Account derivation failure
40133	Failed to derive account number; account does not allow conversion: account [account number], office [office], and currency [currency].	Account derivation failure
40120	Failed to derive account number; for customer code [customer code], multiple accounts were found but none of them allows conversion	Account derivation failure
40119	Failed to derive account number; for customer code [customer code] and currency [currency], multiple accounts were found but none of them allows conversion	Account derivation failure
40116	Failed to derive account number; for customer code [customer code], single account was found but it does not allow conversion: account [account number], office [office] and currency [currency]	Account derivation failure
40222	Failed to derive account number; for customer code [customer code] and currency [currency] preferred account [preferred account number] was found but field [53B or 54B or 55B]:/D exists and the account is not a non-asset account	Account derivation failure
40251	Failed to derive account number; for customer code [customer code], single account [account number] was found but field [53B or 54B or 55B]:/C exists and the account is not an asset account	Account derivation failure
40252	Failed to derive account number; for customer code [customer code], single account [account number] was found but field [53B or 54B or 55B]:/D exists and the account is not a non-asset account	Account derivation failure
40114	Failed to derive account number from debit MOP [Debit MOP] and Instructed agent [Instructed agent]; account object was not found for account number [account number], office [office] and currency [currency]	Account derivation failure
40115	Failed to derive account number; identifier object, (SWIFT_ID), was not found for debit MOP [Debit MOP] and instructed agent [instructed agent]	Account derivation failure
40147	Failed to derive account number from debit MOP [Debit MOP] and Instructed agent [instructed agent]; found account's currency doesn't equal the payment currency and account doesn't allow debit conversion: account number [account number], office [office] and currency [currency]	Account derivation failure
28353	Failed to derive account number; for debit MOP [debit MOP] sender ID is [Sender ID] but value of [OX_INSTD_AGT_BIC_2AND or X_INSTD_AGT_ID_2AND] is null	Manual handling required.
28335	Failed to validate Name for  1 account number:  2; failure percentage:  3. Name in message:  4, name returned from CDB:  5	Manual handling required

## Appendix A: Glossary

Term	Description
BIC	Bank International Code
IBAN	The <b>International Bank Account Number (IBAN)</b> is an international standard for identifying bank accounts across national borders with a minimal of risk of propagating transcription errors. It was originally adopted by the European Committee for Banking Standards (ECBS), and was later adopted as an international standard under ISO 13616:1997 and now as ISO 13616-1:2007. The official IBAN registrar under ISO 13616-2:2007 is SWIFT.
NCC	National Clearing Code
Nostro and Vostro accounts	<b>Nostro</b> and <b>Vostro</b> (Italian, from Latin, <i>noster</i> and <i>voster</i> , English, <i>ours</i> and <i>yours</i> ) are accounting terms used to distinguish an account you hold for another entity from an account another entity holds for you. The entities in question are almost always, but need not be, banks.



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