



# TEMENOS

The software specialist for banking and finance

# Objectives for the course

- Introducing the participants to the concept of payments hub
- Configuring and processing incoming, outgoing, redirect and book SWIFT payments
- Overview of batch processing (Single debit and multiple credits)
- Understand the need and use of warehousing capability, debit authority, code words and balance reservation
- Overview of linkage to STeP (Automated Repair Tool) and AML (Filtering)
- Understand clearing framework and how system can be scaled to support additional clearings
- Understand how the SEPA payments processing using ESB layer
- Understand how direct debits (both incoming and outgoing) are processed
- Using reports and enquiries to perform payments monitoring and analytics



# Prerequisites for this Course

- ◆ T24 Induction course (T2ITC)
- ◆ Understanding of International and Domestic Payments Business
- ◆ Hands on experience with T24 product (or) Any other Banking / Payment Product

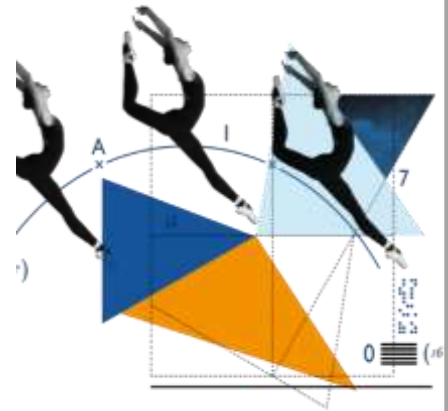
# TPH Day 1

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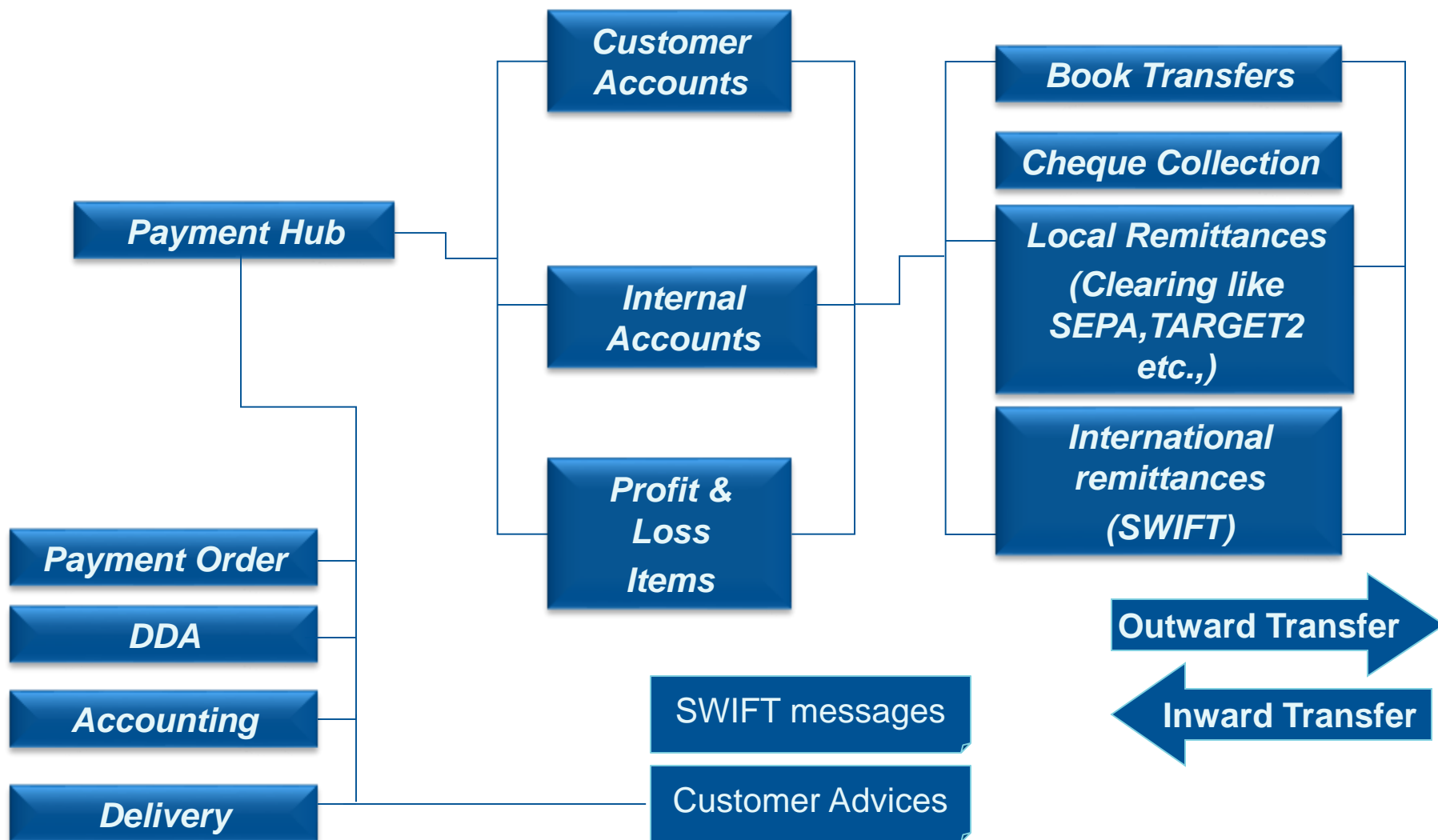
# Learning Objectives

## Objectives

- ◆ Learn about the:
  - Universal Payment Process Flow in Temenos Payment Suite
  - Understand the Data Model of TPH
- ◆ Learn How to setup the basic Static Data Configuration of TPH
- ◆ Understand how Incoming messages are received, accepted and mapped in TPH
- ◆ Understand the concept of
  - Weight Assignment
  - Debit Authority
  - Debit Party Determination
  - Warehousing of Payments
  - Balance Check



# Payment Hub – Overview



# Payment Hub Dependencies

- Payment Hub makes use of
  - CUSTOMER
  - ACCOUNT
- Core dependencies
  - Delivery
  - Accounting
  - Currency & Holiday Table
- Payment Hub also uses other Static tables
- Payment Hub also work as a Standalone Product (communication with external system for Customer, DDA and GL)

# Benefits of Payment Hub

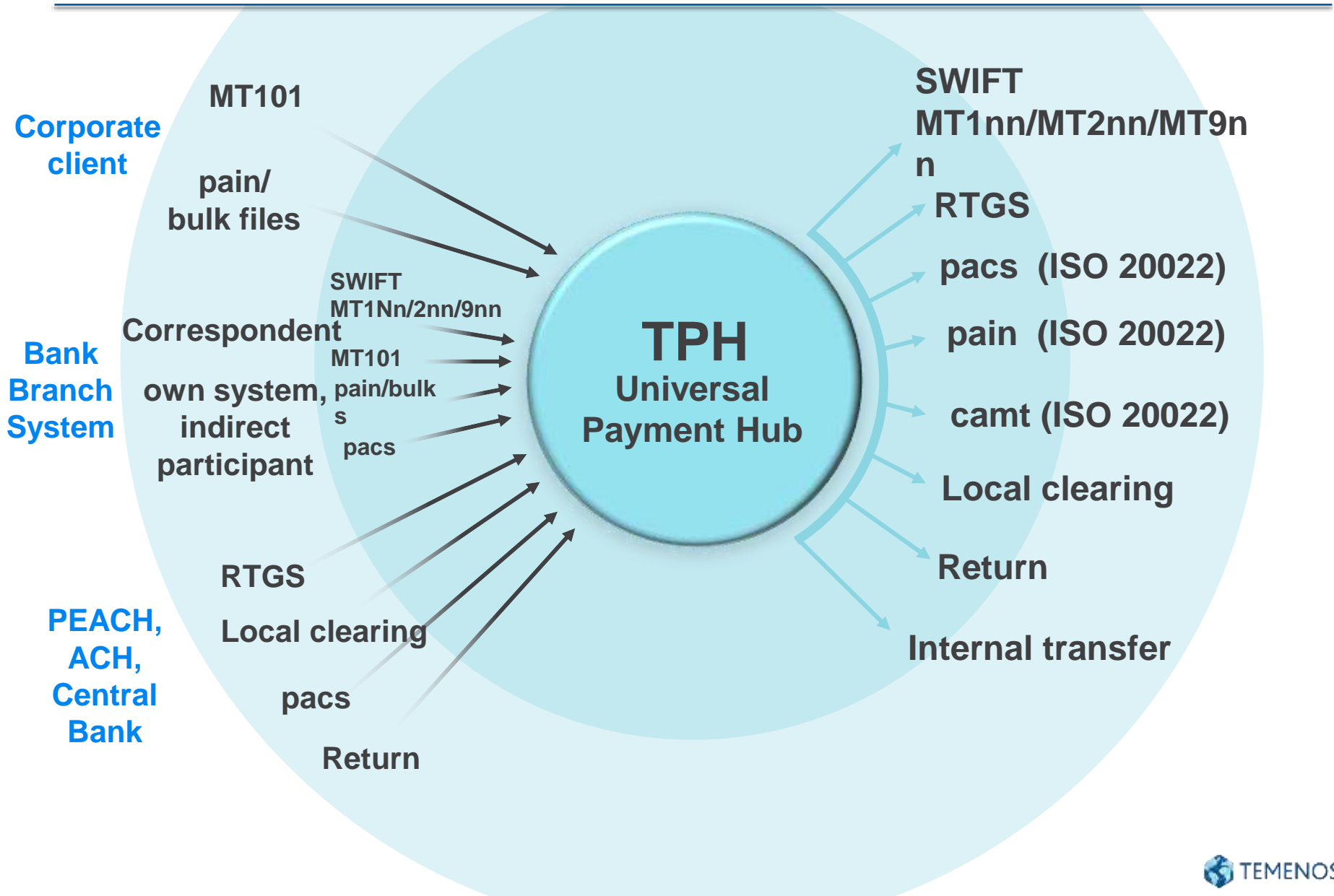
- ◆ TPH offers excellent breadth and depth of functionality as well as flexibility
- ◆ Payment Hub features offers ability to skip, prioritise and specify later date execution or override changes manually and manage service level agreements through parameterization
- ◆ TPH enables maximize Straight-through Processing (STP) with the ability to configure automated actions for exceptions and reduces risk by minimizing manual intervention
- ◆ TPH enables speed of settlement and eliminates unnecessary processing and enables banks to consolidate disparate payment systems and processes into a single standardization solution



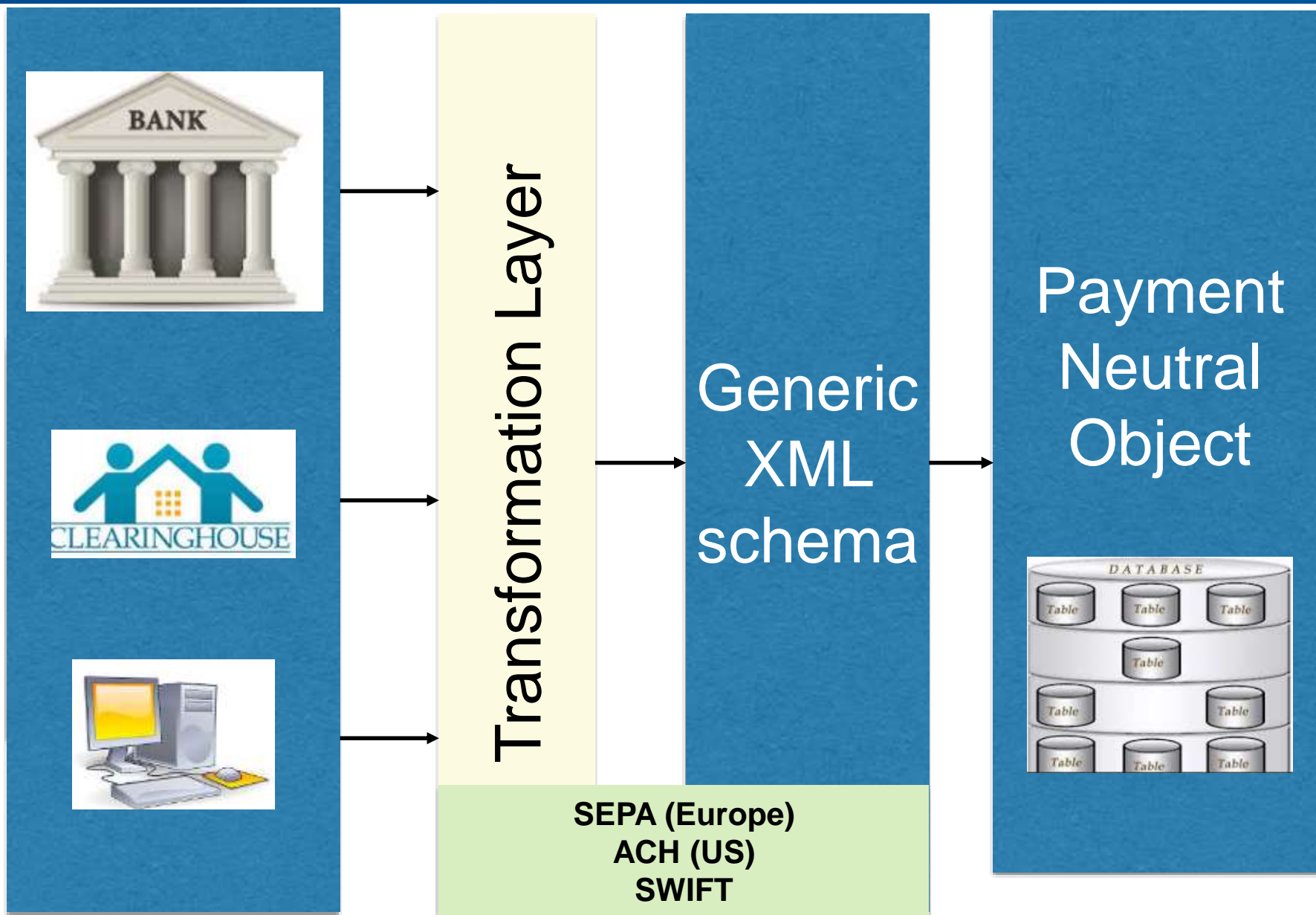
# Supported Swift Message Types

- Temenos supports the following Swift Message Types:
  - MT101 (Single & Multiple) – Request for transfer
  - MT103 – Single customer credit transfer
  - MT103+ – STP Single customer credit transfer
  - MT191 – Request for payment of charges, interest and other expenses
  - MT195 – Queries
  - MT196 – Answers
  - MT199 – Free format message
  - MT200 – Financial Institution Transfer for its Own Account
  - MT202 – General Financial Institution Transfer
  - MT202C – COV General Financial Institution Transfer
  - MT019 – Abort Notification(used for TARGET2)
  - MT 210 - Notice to Receive
- Clearing specific message types are also supported in Payments Hub(like SEPA,BACS,FEDWIRE,USACH etc.,).

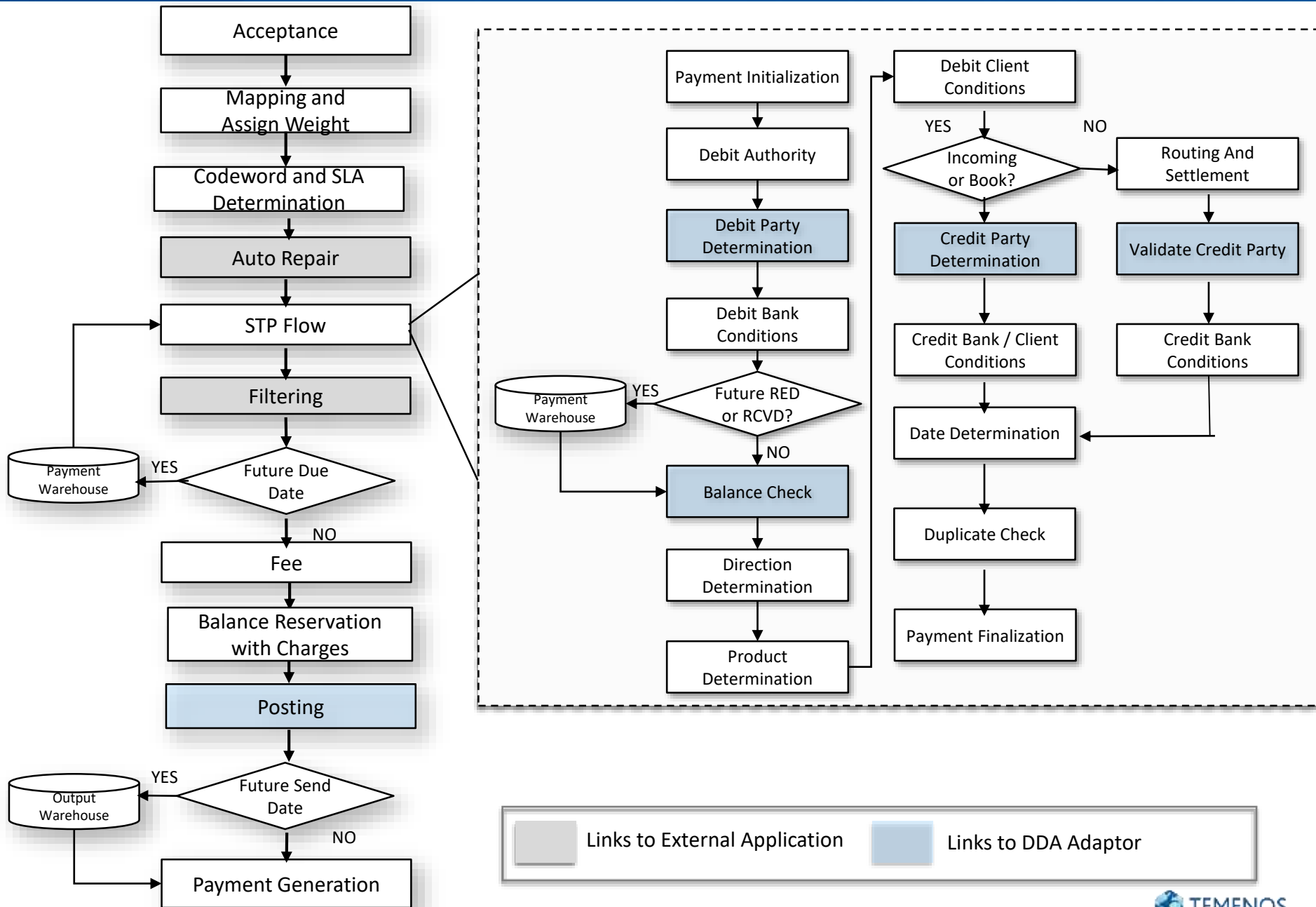
# TPH – Channel Agnostic



# Understanding different message formats



# TPH – Components Overview



# Configuration Driven to enable high STP rates

## Admin Menu > Payment Hub

Payment Hub	^
Static Data GUI	▼
Authorization Principle	🔗
Message Acceptance GUI	▼
Payment Router GUI	🔗
Message Mapping GUI	▼
Batch Server GUI	🔗
Local Clearing GUI	▼
Trip Status Action	🔗
Payment Workflow GUI	▼
Weight Assignment	🔗
Inbound CodeWords GUI	▼
Outbound CodeWords GUI	▼
SLA Per Codeword	🔗
Bank Conditions GUI	🔗
Debit Authority GUI	▼
Balance Check GUI	▼
Product Determination GUI	▼
Client Conditions GUI	▼
Routing And Settlement GUI	▼
Date Determination GUI	▼
Risk Filter GUI	▼
Fee Determination GUI	▼
Filtering GUI	▼
Posting Scheme GUI	▼
Claims GUI	🔗
Automated Repair Tool GUI	▼
Clearing Directory GUI	▼
Payment Purpose Code	▼
Payment Categ Purpose	▼
SEPA Clearing Directory GUI	▼
Templates GUI	▼
Inward Entry GUI	▼
Non Customer Accounts	▼

# Dashboards

## Pending and Processed Payments

Company	FT Number	Ccy	Amt	⌂	Acc Comp	Acc Num	Acc Ccy	Date	Cust Ref	Sender Ref	Status Code	Description
BNK	BNK181070LFMG0FH	EUR	152.00		BNK	EUR1402000010001	EUR	17 APR 2018	13E09T07123321	13D07123D441234	999	Payment complete
BNK	BNK18107F0HKHDMD	EUR	11.03		BNK	EUR1402000010001	EUR	17 APR 2018	533NDTOEND1013	533DTXNID441013	999	Payment complete
BNK	BNK18107FCLJHGCD	EUR	150.00		BNK	EUR1402000010001	EUR	17 APR 2018	123NDT01231123	123D0XN123431321	999	Payment complete
BNK	BNK18107MBJLDF0J	EUR	11.02		BNK	EUR1402000010001	EUR	17 APR 2018	53ENDTOEND1512	53DDTXNID141512	999	Payment complete
BNK	BNK18107LDMFMCMG	EUR	11.01		BNK	EUR1402000010001	EUR	17 APR 2018	5ENDTOENDID1311	5DDT3NID11011	999	Payment complete
BNK	BNK18107LGMLJHGC	EUR	149.00		BNK	EUR1402000010001	EUR	17 APR 2018	1END12377108321	1D123N7877123	999	Payment complete

# Mid Office Payment Entry Screen

Order Entry Outgoing Transfer (CTR)

OE18191TSZ42

✓

🖨

⏸

⬆

ℹ

- Please Select

⌵

🔍

GO

Payment Processing Information

Status

135

Transaction Reference Number

Sender's Reference Number

Related Reference

Source

OE

Direction

O

Transfer Type

C

Incoming Message Type

RFCT

Balance Reservation

Balance Reservation Number

Balance Reservation Debit Chg Acct

Pre-Authorization Number

Intra Company Payment

☐ Yes

Store Template Values

Select from Template

Save As Template

☐ Yes

Nick Name

Processing Company

BNK

Processing Date

10 JUL 2018

10 JUL 2018

Priority

1

Product

Output Channel

Transaction Currency

Transaction Amount

Charge Option

☐ Ben

☒ Sha

☐ Our

Receiver Institution

Beneficiary ID

Processing Date Imposed Flag

☐ Yes

Output Channel Imposed Flag

☐ Yes

Instructed Currency

Instructed Amount

Receiver Institution N C C

# Exception Handling - Repair and Resubmit Payments

Repair View Screen OE18107VNZLW

## Payment Processing Information

Status 235

Transaction Reference Number BNK18107HLLM0LCL

Sender's Reference Number INCOMINREPAIR

Priority 1

Source SWIFT

Output Channel LEDGER

Direction I

Transaction Currency USD

Transfer Type C

Incoming Message Type 103

Balance Reservation A

Balance Reservation Number ACLK1810725207

Processing Company BNK

Processing Date 17 APR 2018

17 APR 2018

Transaction Amount 999.00

Charge Option Sha

Sender Institution BARCGB22

Debit Credit Info

**Error Information**

Charge Information

Routing Information

Additional Information

Audit

## Special Instruction Error Information

Functional Error.1

CPD10003 \*\* Credit Main Account: Account Invalid || / 1113 /



# In detail audit logs – Trace everything that happens to a payment

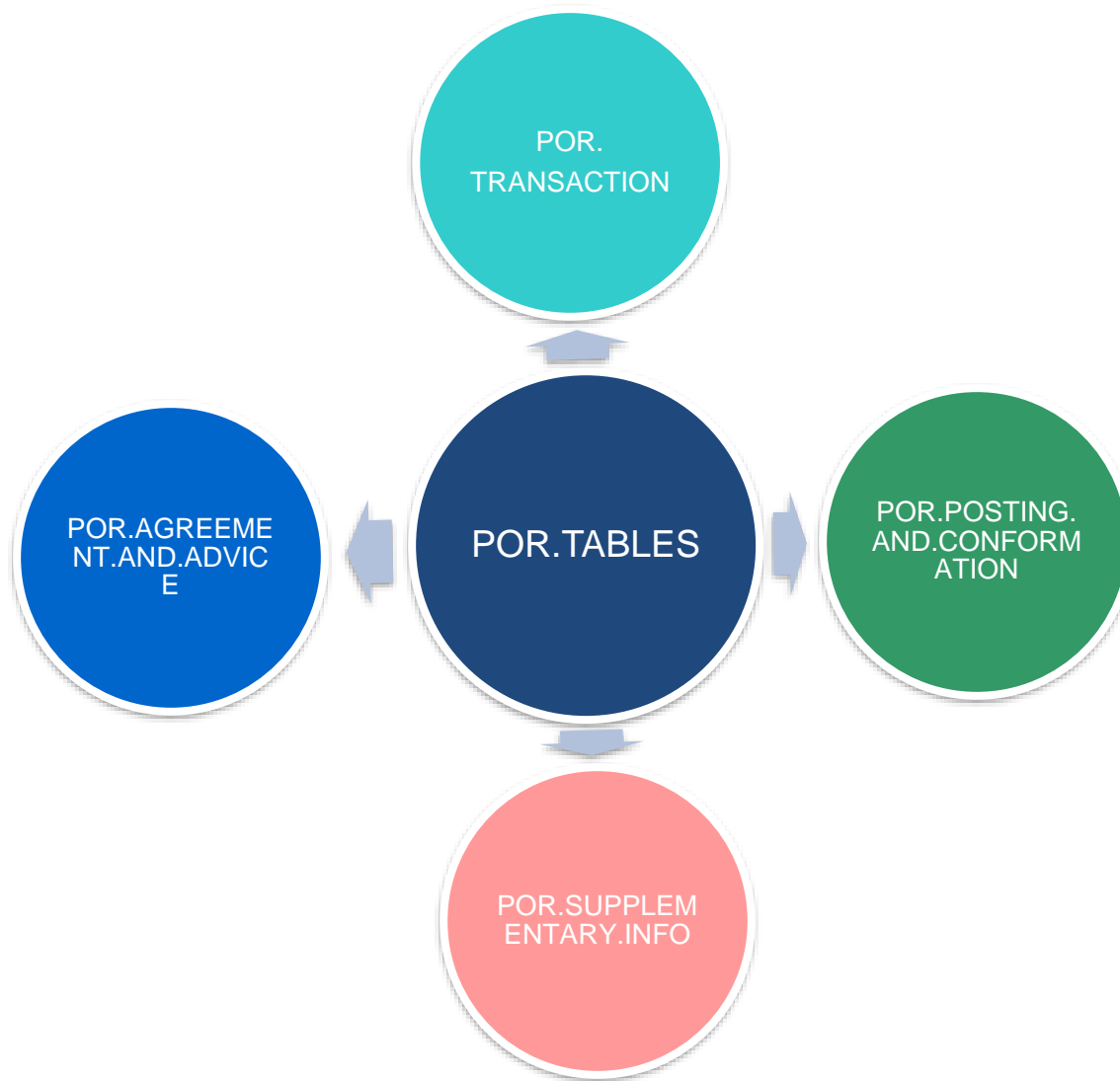
## Audit Trail

Event Type	Event Description	Error Code	Add Info	History Timestamp
INF	Message mapped according to parameters			17 APR 2018 16:10:48.397
INF	Weight assigned successfully		H SWF	17 APR 2018 16:10:48.397
INF	Inbound CodeWord processed successfully			17 APR 2018 18:26:34.279
INF	SLA successfully determined		*	17 APR 2018 18:26:34.279
INF	Automated Repair Tool not required for this weight and specific weight		H,SWF	17 APR 2018 18:26:34.279
INF	Payment Successfully Initialised			17 APR 2018 18:26:34.279
INF	Debit Authority successful - Debit Authority Indicator set		S	17 APR 2018 18:26:34.279
INF	Debit Party Successfully Determined		BNK 23752 USD	17 APR 2018 18:26:34.279
INF	Bank Condition read successfully		DEFAULT-20160101 ** **	17 APR 2018 18:26:34.279
INF	Debit Bank Conditions updated successfully			17 APR 2018 18:26:34.279
INF	Own Account successfully Determined		Y	17 APR 2018 18:26:34.279
INF	Direction and Transfer type successfully determined		IIC	17 APR 2018 18:26:34.279
INF	Product determination successful		HWA PPHPC14112F7RHC-20160101 SWIFT DEFAULT LEDGER DEFAULT HKCLG_CD DEFAULT	17 APR 2018 18:26:34.279
INF	Credit Party successfully determined		11193 / BNK /	17 APR 2018 18:26:34.279
INF	Debit Main Account Successfully Validated		BNK 23752 USD	17 APR 2018 18:26:34.279
INF	Credit Main Account Successfully Validated		BNK 11193 USD	17 APR 2018 18:26:34.279
INF	The Funds Authorization process is skipped for the payment			17 APR 2018 18:26:34.279
INF	Client Condition read successfully		DEFAULTSWIFT***** * DEFAULT SWIFT **	17 APR 2018 18:26:34.279
INF	Requested Credit Value date is in past and it cannot be met		20180417 20160719	17 APR 2018 18:26:34.279
INF	Date Determination Successful		Proc:20180417 CVD:20180417 DVD:20180417 PSD: CSD: BD:20180417 EXD:20180417	17 APR 2018 18:26:34.279
INF	Duplicate check performed successfully			17 APR 2018 18:26:34.279
INF	FATF Regulations Successfully met			17 APR 2018 18:26:34.279
INF	STP successfully completed			17 APR 2018 18:26:34.279
INF	End of STP processing in Single flow service		600 31	17 APR 2018 18:26:34.279
INF	Status code changed to ready for Risk Filter			17 APR 2018 18:26:34.279
INF	Risk Filtering successful			17 APR 2018 18:26:34.279
INF	Record key - ClientCharges table used for peeling off		1-20180316 ** ** * BNK ** **	17 APR 2018 18:26:34.279
INF	Fee Processing is successful			17 APR 2018 18:26:34.279
INF	The Balance Check with charges process is skipped for the payment			17 APR 2018 18:26:34.279
INF	Posting lines and statement lines generated successfully and passed to Ledger			17 APR 2018 18:26:34.279
INF	Posting completed successfully		BNK18107GFCGGFCM	17 APR 2018 18:26:34.279
INF	Payment processing is complete			17 APR 2018 18:26:34.279

# Static Data Configuration

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# Introduction to concept of POR tables





# Process incoming MT103

Alfa Beta in US, wishes to pay USD 340 to his supplier Nike located in UK.

Nike holds an USD account with T24 Bank while Alfa Beta has an USD account with CITI Bank in US, NY

CITI Bank, on behalf of Alfa Beta sends a MT103 to T24 Bank

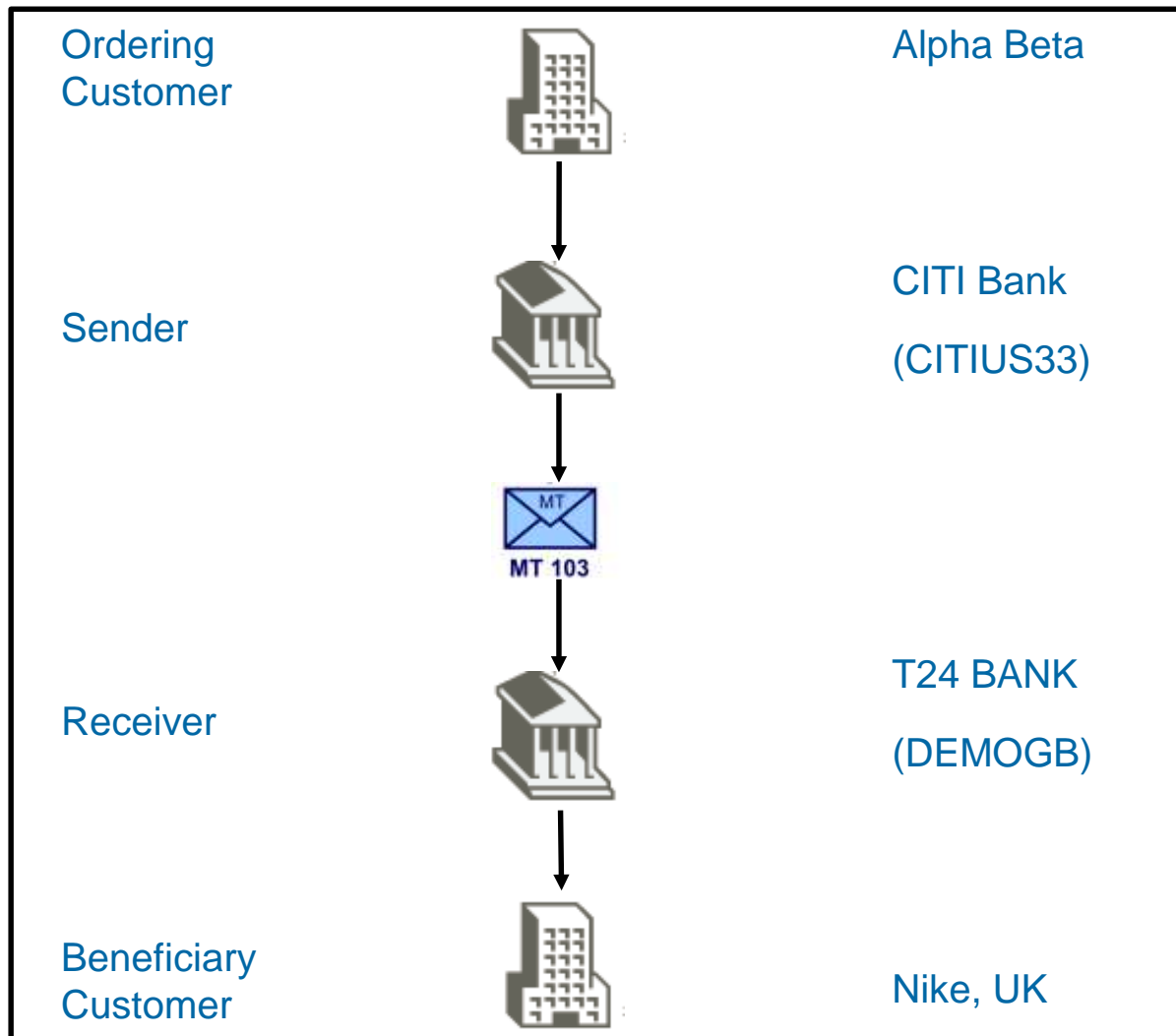
CITI Bank shares a direct account relationship with T24 Bank.

T24BANK uses TPH (Temenos Payment Hub) for handling all types of payment transactions and T24 acts as the DDA system (Demand Deposit Account)

Transaction charges on the receiver's side is NIL

Charge type used is SHA

# Process incoming MT103



# Process incoming MT103

SWIFTMT103-BUC1-001 (2).txt

```
1 {1:F01DEMOGBXPXXX9024629991}{2:01031425131119CITIUS33AXXX89245950131311191435S}{3:{108:BNKMT103FXSHA}}{4:  
2 :20:BUC1MT013INC  
3 :23B:CRED  
4 :32A:160719USD340,00  
5 :50K:/GB10MIDL40051574128754  
6 Alfa Beta  
7 New York  
8 US  
9 :52A:MIDLGB22XXX  
10 :59:/11193  
11 Nike  
12 London  
13 UK  
14 :70:INCOMING STP NO FX  
15 :71A:SHA  
16 -}
```



SWIFTMT103-BUC1-001.txt

# Introduction to payment neutral object

Received File Details											
Received Bulk Details											
Received Message Details											
Received Message/File Details - List											
File Reference	Queue Name	<>	Company	File Status	<>	File Name	<>	Source	Single Multiple Ind	<>	<>
ABC	SWIFT			RECEIVED							

Received File Details											
Received Bulk Details											
Received Message Details											
Received Message/File Details - List											
File Reference	Queue Name	<>	Company	File Status	<>	File Name	<>	Source	Single Multiple Ind	<>	<>
ABC	SWIFT		BNK	MAPPED				SWIFT	S		

Blob Payment File Content	
Blob Unique ID	Message Content
ABC	{1:F01DEMOGBXPAXXX9024629991}{2:01031425131119CITIUS33AXXX89245950131311191435S}{3:{108:BNKMT103FXSHA}}{4: :20:BUC1MT013INC :23B:CRED :32A:160719USD340,00 :50K:/GB10MIDL40051574128754 Alfa Beta New York US :52A:MIDLGB22XXX :59:/11193 Nike London UK :70:INCOMING STP NO FX :71A:SHA -}



# Introduction to concept of POR tables

## ◆ POR.TRANSACTION main payment object table

### Pending and Processed Payments

Company	FT Number	Ccy	Amt	↔	Acc Comp	Acc Num	Acc Ccy	Date	Cust Ref	Sender Ref	Status Code	Description	↔	
BNK	BNK18107GFCGGFCM	USD	340.00		BNK	11193	USD	17 APR 2018		BUC1MT013INC	999	Payment complete		⌂ 📄

#### POR.TRANSACTION BNK18107GFCGGFCM

CompanyID	BNK
FTNumber	BNK18107GFCGGFCM
Status Code	999
Payment Direction	I
C T R I S T R Indicator	C
Own Account Indicator	Y
Status Date Time	20180417182654ZJ9
Specific Weight Code	SWF
Weight Code	H
Heavy Weight Product ID	PPHFC14112FTTHC20160101
Message Priority	1
Domestic International	D
MessageFormat	103
Priority Code	S
Company Region	ALL
Sender Address	CTR533
Receiver Address	DEM02MR
Senders Reference Incoming	BUC1MT013INC
Bank Operation Code	CRED
Debit Main Account Company ID	BNK

Debit Main Account	23752
Debit Main Account Currency Code	USD
Debit Party Line1	Citi Group Inc. (New York
Debit Party Line2	399 Park Ave
Debit Party Line3	New York
Debit Main Amount	340.00
Debit Main Amount Home	340.00
Debit Client ID	100492
Debit Business Line	999
Credit Main Account Company ID	BNK
Credit Main Account	11193
Credit Main Account Currency Code	USD
Credit Party Line1	Nike
Credit Party Line2	1 BOWERMAN DRIVE
Credit Party Line3	BEAVERTON
Credit Main Amount	340.00
Credit Main Amount Home	340.00
Credit Charge Exchange Rate	1.235698000
Credit Charge Currency Pair	GBP/USD
Credit I B A N Indicator	N

Credit Client ID	100492
Credit Business Line	999
TransactionAmount	340.00
TransactionCurrencyCode	USD
Transaction Amount Home	340.00
Home Currency	USD
Transaction Amount G.L.Home	340.00
G.L.Home Currency	USD
Details Of Charges	SHA
Debit Value Date	17 APR 2018 17 APR 2018
Credit Value Date	17 APR 2018 17 APR 2018
Originating Source	SWIFT
Received Source	SWIFT
Originating Channel	SWIFT
Source Product	SWIFT
Incoming Message Type	103
Output Channel	LEDGER
Single Multiple Indicator	S
Number Of Children	0
Message User Reference	BNK18107GFCM

# Introduction to concept of POR tables-POR.SUPPLEMENTARY.INFO

POR.SUPPLEMENTARY.INFO BNK18107GFCGGFCM ↑ i Please Select GO

Main Or Charge Account Type	Account Company Id	Account Number
D	BNK	23752
C	BNK	11193

< >

Additional Information Code	Add Inf Type Line Seq	Additional Inf Tag	Additional Inf Line
RMTINF	1	70	INCOMING STP NO FX

< >

Party Type	Party Role	Role Indicator	Information Tag
CREDIT	BENFCY	R	59
DEBIT	SENDER	R	
DEBIT	ORDPTY	R	50K
DEBIT	ORDINS	R	52A

< >

Entry IDs.1	184344711799403.00
Entry IDs.2	1-2
Entry IDs.3	1
Eb Duplicate Type Id	PH-INCOMING

Ccy	Account Type	Account Status
USD	N	Active
USD	C	Active

< >

Reserved6	Reserved7

< >




Party Identifier Code	Party Account Line
	/11193
CITIUS33	
	/GB10MIDL40051574128754
MIDLGB22	

# Introduction to concept of POR tables- POR.POSTING.AND.CONFIRMATION

POR.POSTING.AND.CONFIRMATION		BNK18107GFCGGFCM		
Charge Party Indicator	Fee Type	Charge Sign		
C	TRANSACTIONFEE	P		
<b>Booking Date</b> 17 APR 2018 17 APR 2018				
<b>Transaction Ref</b> BNK18107GFCGGFCM				
<b>Local Currency Code</b> USD				
Posting Line Number	Statement Line Number			
1	1	Cust CHDebit HKCL with charges		
2	1	Bank HKCLG standard		
3	1	Charge Credit Detailed		

Type Of Charge	Fee Description	Ch
R	Transaction Fee	6.18
<b>Booking Date</b> 17 APR 2018 17 APR 2018		
<b>Transaction Ref</b> BNK18107GFCGGFCM		
<b>Local Currency Code</b> USD		
Statement Line		
Cust CHDebit HKCL with charges		
Bank HKCLG standard		
Charge Credit Detailed		

# Introduction to concept of POR tables- POR.AGREEMENT.AND.ADVISE

POR.AGREEMENT.AND.ADVISE		BNK18107GFCGGFCM		  - Please Select 		GO	
Debit Credit Indicator				Client Conditions Id			
C		DEFAULTSWIFT*****					
<						>	
Dbt Cdt Bank Cond Ind				Bank Conditions Id			
D		DEFAULT-20160101					
<						>	



































Pc Language Id		Pc Statement Format Name		Billing Indicator			
1				N			
<						>	
Ctr Non Stp Indicator				Btr Non Stp Indicator			
N		N					
<						>	

Charge Posting Separately		Charge Posting Detail		Vat Principal			
N		N		0			
<						>	
Warehouse Flag				Warehouse Release Time		Charge Account Company Id	
J							
<						>	

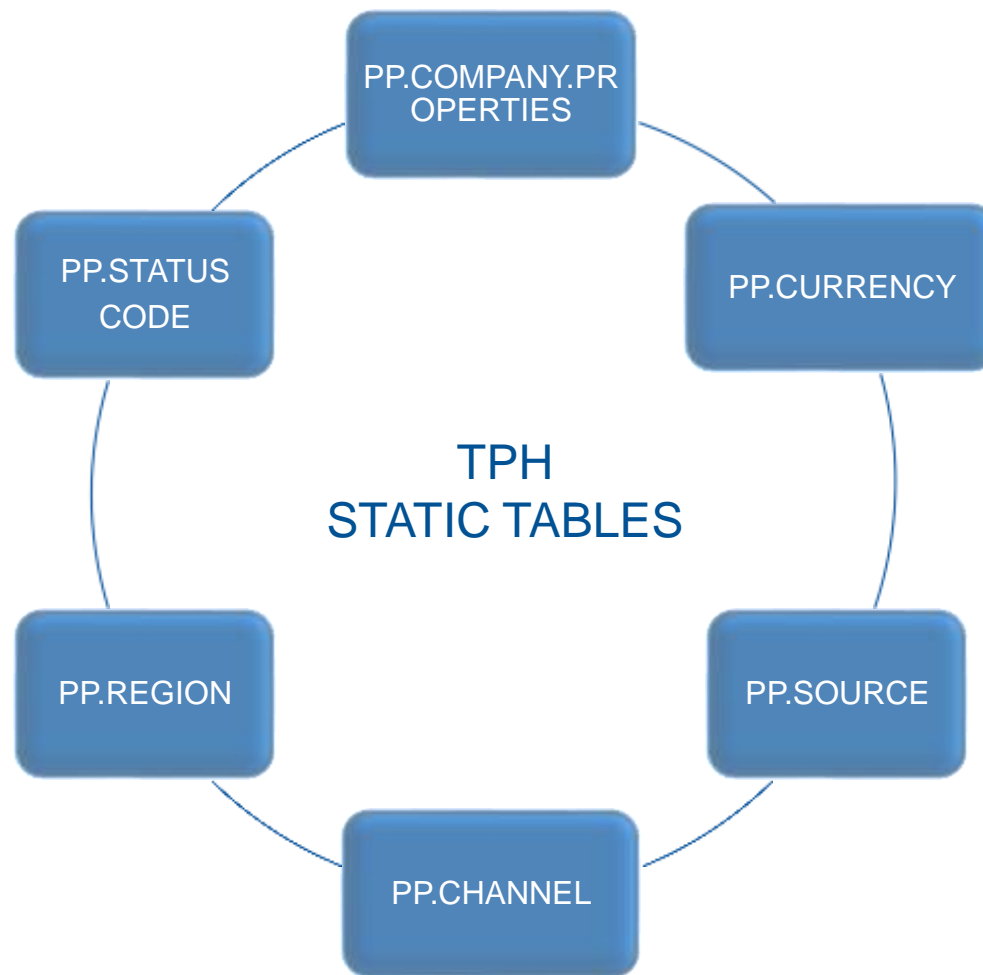
Vat On Charge		Non Stp Indicator		Fx Non Stp Indicator			
N		N		N			
<						>	

# Party Roles

## Party Role List

PartyRole	Party Role Tag	Description	
ACWINS	57	Account with Institution	 
ASVINS	52	Account Servicing Institution	 
BENFCY	59	BENFCY	 
BENINS	58	Beneficiary Institution	 
IMPCDT	50	Implied Credit	 
IMPIDBT	50	Implied Debit Account	 
INSPTY	50	Instructing Party	 
INTINS	56	Intermediary Institution	 
ORDINS	52	Ordering Institution	 
ORDPTY	50	Ordering Party	 
RCVCBK	54	Receiver's Correspondent Bank	 
SENDER	50	Sender	 
SNDCBK	53	Sender's Correspondent Bank	 
SNDINS	51	Sending Institution	 
TRMINS	55	Third Reimbursement Institution	 
ULTCDT	99	Ultimate Creditor.	 
ULTDBT	99	Ultimate Debtor.	 

# Static Data Configuration



# Static Data Configuration – Company Properties

Table	Company Properties
ID	BNK-20161031
Field Name	Field Value
Start Date	31 OCT 2016
Home Country Code	GB
Home Currency Code	USD
Application User ID	INPUTTER
Company Region	ALL
Dealer Desk Enabled	<ul style="list-style-type: none"><li>• Y</li><li>• N</li></ul>
SOD Run Time	07:00
COB Run Time	22:00
Company BIC	DEMOGBPXX
Days Active Payment	30
Days Duplicate Check	
Claim Beneficiary BIC	
Maximum Claim Days	15
Auto Repair Wait Interval Seconds	1
Screen Wait Interval Seconds	100
Default Client ID	23019515
Default Language ID	1

**Admin Menu >  
Payment Hub > Static  
Data GUI > Company  
Properties**

# Static Data Configuration - Currency

Table	PP.CURRENCY
ID	GBP
Field Name	Field Value
Company	BNK
CountryCode	GB
Currency Group	*
Currency Name	Pound Sterling
Fractional Digit	2
Country Name	Great Britan
FX Limit	999,999,999
Weekend Day 1	Saturday
Weekend Day 2	Sunday
Override Through Upload	Y
Reserved5	
Reserved4	
Reserved3	
Reserved2	
Reserved1	
Override.1	
Record Status	
Curr No	1
Inputter.1	1_201611
Date Time.1	4/26/2018 17:09
Authoriser	69990_TRAIN511_OFS_GCS
Company	GB0010001 Model Bank
Dept Code	1 Implementation
Auditor Code	
Audit Date Time	

**Admin Menu > Payment Hub  
>Static Data GUI > Currency**

## PP.CURRENCY - Default List

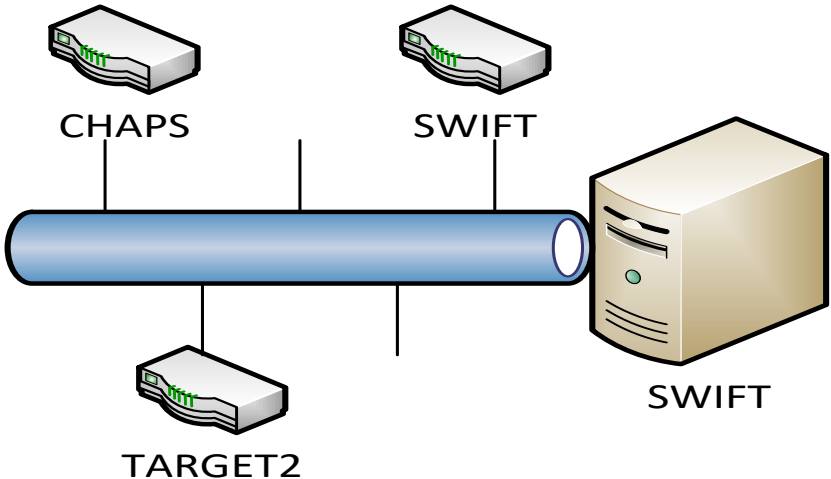
CurrencyCode	CompanyID	CountryCode	CurrencyGroup	CurrencyName
<u>AED</u>	BNK	AE	*	UAE DIRHAM
<u>AUD</u>	BNK	AU	*	AUSTRALIAN DOLLAR
<u>CAD</u>	BNK	CA	*	CANADIAN DOLLAR
<u>CHF</u>	BNK	CH	*	SWISS FRANC
<u>CNY</u>	BNK	CN	*	YUAN RENMINBI
<u>CZK</u>	BNK	CZ	*	CZECH KORUNA
<u>DKK</u>	BNK	DK	*	DANISH KRONE
<u>EUR</u>	BNK	EU	*	EURO
<u>GBP</u>	BNK	GB	*	POUND STERLING
<u>HKD</u>	BNK	HK	*	HONG KONG DOLLAR

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# Static Data Configuration - Source

## “SOURCE” using Swift Channel



Source	ChannelName	SourceDescription
CHAPS	SWIFT	CHAPS payments received via SWIFT
SWIFT	SWIFT	SWIFT messages received via SWIFT
TARGET	SWIFT	TARGET2 payments received via SWIFT

Admin Menu > Payment Hub  
>Static Data GUI > Source

Table	PP.SOURCE
ID	SWIFT
Field Name	Field Value
Channel Name	SWIFT
Source Product	SWIFT
SourceDescription	SWIFT
SourcePDGroup	SWIFT
Source Type	<ul style="list-style-type: none"><li>X</li></ul>
	<ul style="list-style-type: none"><li>Nc</li></ul>
	<ul style="list-style-type: none"><li>I</li></ul>
Reserved4	
Reserved3	
Reserved2	
Reserved1	
Override.1	
Record Status	

# Static Data Configuration - Channel

## Payment Channels



**Admin Menu > Payment Hub  
>Static Data GUI > Channel**

Table	PP.CHANNEL
ID	SWIFT
Field Name	Field Value
Channel Description	SWIFT
Reserved5	
Reserved4	
Reserved3	
Reserved2	
Reserved1	
Override.1	
Record Status	
Curr No	1

# Static Data Configuration - Region

- Entity's Region in the country
  - Country Code
  - Region

**Admin Menu > Payment Hub >Static Data GUI > Region**

Table	PP.REGION
ID	EU
Field Name	Field Value
Region.1	ALL
Reserved5	
Reserved4	
Reserved3	
Reserved2	
Reserved1	
Override.1	
Record Status	
Curr No	1

# Static Data Configuration – Status Code



## STATUSCODE

- Payment transaction flow monitor
- Signifies payment current state and completion (i.e. '999')

### PP.STATUS.CODE - Default List

Status Code	Status Description	Reserved 5	Reserved 4	Reserved 3	
<u>100</u>	Completed - Credit Party Determination				
<u>109</u>	Completed - Charge Account validated from Credit Bank Condition				
<u>117</u>	Completed - Charge Account validated from Credit Client Condition				
<u>135</u>	Waiting - Payment moved to Order Entry Pending Submit Queue				
<u>145</u>	Processing - Debit Party Determination and Validation for Order Entry				
<u>148</u>	Completed - Debit Party Determination and Validation for Order Entry				
<u>15</u>	Transaction Sent to Auto Enrichment Engine				
<u>155</u>	Processing - Debit Charge Account Validation for OE derived from Debit Bank Conditions				
<u>158</u>	Completed - Debit Charge Account Validation for OE derived from Debit Bank Conditions				
<u>165</u>	Processing - Debit Charge Account Validation for OE derived from Debit Client Conditions				

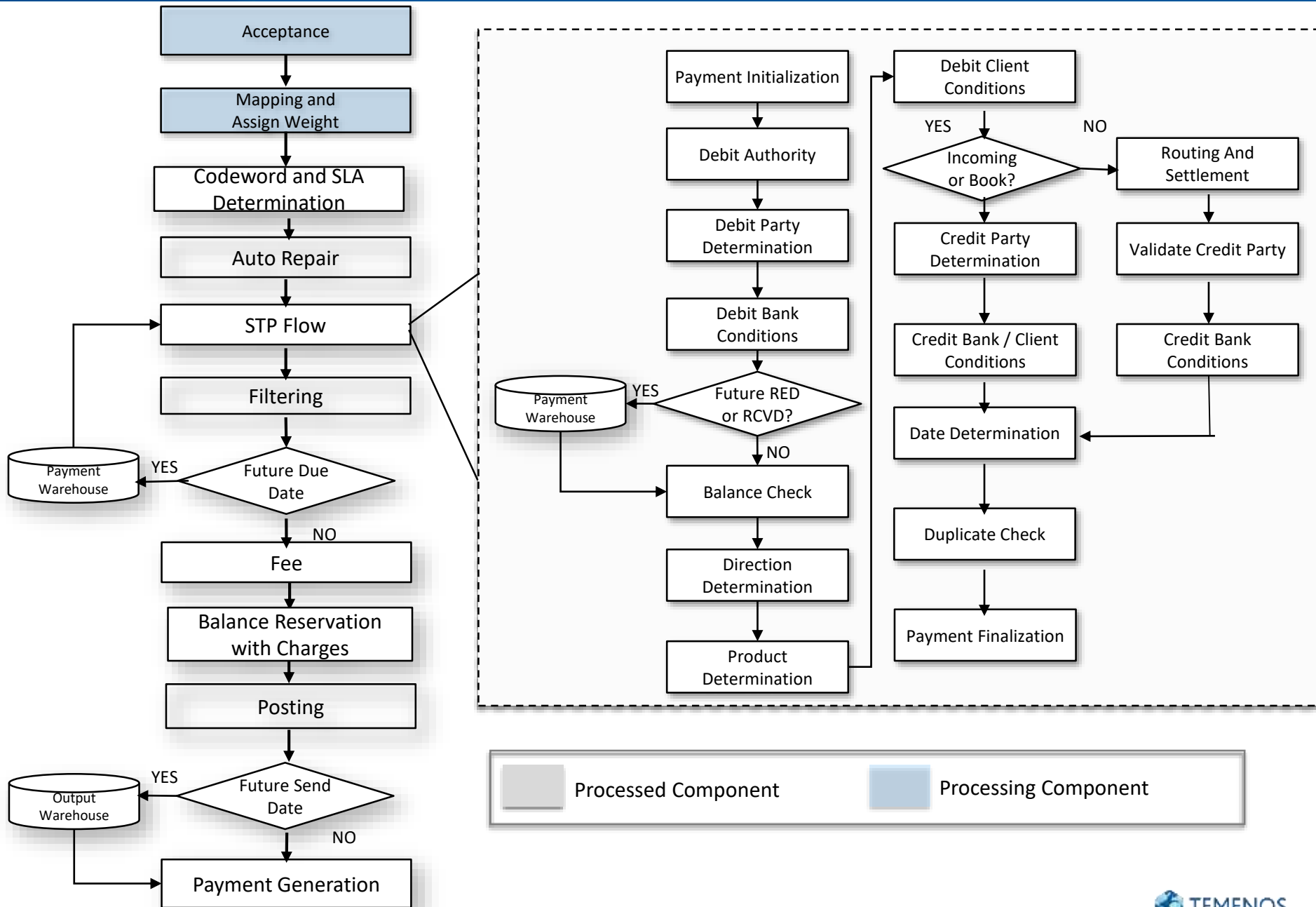
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### Pending and Processed Payments

Results 1 - 19

Company	FT Number	Ccy	Amt	Acc Comp	Acc Num	Acc Ccy	Date	Cust Ref	Sender Ref	Status Code	Description
BNK	BNK181070LFMG0FH	EUR	152.00	BNK	EUR1402000010001	EUR	17 APR 2018	13E09TO7123321	13D07123D441234	999	Payment complete
BNK	BNK181070FHKHDM	EUR	11.03	BNK	EUR1402000010001	EUR	17 APR 2018	533NDTOEND1013	533DTXNID441013	999	Payment complete
BNK	BNK18107FCLJHGCD	EUR	150.00	BNK	EUR1402000010001	EUR	17 APR 2018	123NDTO1231123	123D0XN123431321	999	Payment complete
BNK	BNK18107MBJLDF0J	EUR	11.02	BNK	EUR1402000010001	EUR	17 APR 2018	53ENDTOEND1512	53DDTXNID141512	999	Payment complete
BNK	BNK18107LDMFMCMD	EUR	11.01	BNK	EUR1402000010001	EUR	17 APR 2018	5ENDTOENDID1311	5DDT3NID11011	999	Payment complete
BNK	BNK18107LGLMJHGC	EUR	149.00	BNK	EUR1402000010001	EUR	17 APR 2018	1END12377108321	1D123N7877123	999	Payment complete
BNK	BNK18080HMFHMLFB	USD	7,000.00		USD1402500010001		21 MAR 2018	TT18080CG5CD	CC1808000003	235	Waiting - Payment moved to General Repair Queue
BNK	BNK18080J00LDHHK	USD	500.00		USD1402500010001		21 MAR 2018	TT18080VF0LN	CC1808000012	235	Waiting - Payment moved to General Repair Queue
BNK	BNK18080G0BCGCCB	USD	600.00		USD1402500010001		21 MAR 2018	TT1808032JQH	CC1808000005	235	Waiting - Payment moved to General Repair Queue
BNK	BNK18080LLFGLCLG	USD	10,000.00		USD1402500010001		21 MAR 2018	TT180802QK01	CC1808000007	235	Waiting - Payment moved to General Repair Queue
BNK	BNK180800JCKF0KC	GBP	150.00	BNK	GBP1591500010001	GBP	21 MAR 2018	TT18080397VR	CC1808000001	730	Sent to Clearing

# How does TPH process a payment message?



# Message Receiving and Mapping

Message Format	Support
SWIFT	Consumed as is by TPH. No transformation required.
SEPA	Native formats for SEPA messages are supported.
US ACH	Received by the US regional layer, de-bulked and sent to TPH in a bilaterally agreed format. Communication between the Regional layer and TPH is in an embedded mode.
TARGET2	Native Formats are supported.
Messages from Payment Order	Directly mapped to TPH internal tables. Communication between Payment Order and TPH is in an embedded mode.
Proprietary format messages	To be mapped to the exposed XML schema

# Concept of Message Acceptance and Mapping

Tables Used	
F.PRF.BLOB	To store the received message
F.PPT.RECEIVEDFILED ETAILS	Stores the attributes of the received message such as source, format etc.

Messaging process consists of below stages:

- RECEIVED: Original Message is received
- ACCEPTED: Post successful validation of received message
- MAPPED: Transformed into TPH and status assigned for payment transaction process

# Concept of Message Acceptance and Mapping

## Received Message/File Details - List

File Reference	Queue Name	<>	Company	File Status	<>	File Name	<>	Source
TPS18016000016003	EBAINST		BNK	MAPPED		INSTANT-PACS008-TPS18016000016-003.xml		EBAINST
TPS18016000016001	TPHINSTC2B			MAPPED		INSTANT-PAIN001-TPS18016000016-001.xml		CTIINST
TPS18016000016004	EBAINST		BNK	MAPPED		INSTANT-PACS008-TPS18016000016-004.xml		EBAINST
TPS18016000016005	TPHINSTC2B			MAPPED		INSTANT-PAIN001-TPS18016000016-005.xml		CTIINST
TPS18016000016006	EBAINST		BNK	MAPPED		INSTANT-PACS008-TPS18016000016-006.xml		EBAINST
TPS18016000016007	EBAINST		BNK	MAPPED		INSTANT-PACS008-TPS18016000016-007.xml		EBAINST
TPS18016000016008	EBAINST		BNK	MAPPED		INSTANT-PACS008-TPS18016000016-008.xml		EBAINST
TPS18016000016009	EBAINST		BNK	MAPPED		INSTANT-PACS002-TPS18016000016-009.xml		EBAINST
TPS18016000016010	EBAINST		BNK	REJECTED		INSTANT-PACS002-TPS18016000016-010.xml		EBAINST
TPS18016000016013	EBAINST		BNK	MAPPED		INSTANT-PACS002-TPS18016000016-013.xml		EBAINST
TPS18074880001002	CHQCLGXML		BNK	MAPPED		SEPA-PACS003-TPS18074880001-002.xml		CHQCLG
TPS18017880001011	TPHDDI			ACCEPTED		SEPA-PAIN008-TPS18017880001-011.xml		DDI
TPS18074880001003	CHQCLGXML		BNK	MAPPED		SEPA-PACS003-TPS18074880001-003.xml		CHQCLG
TPS17311000016004	STEP2		BNK	MAPPED		SEPA-PACS003-TPS17311000016-004.xml		STEP2
TPS17311000016007	TPHCTI			MAPPED		SEPA-PAIN001-TPS17311000016-007.xml		CTI
TPS17311000016002	STEP2		BNK	MAPPED		SEPA-PACS008-TPS17311000016-002.xml		STEP2
SWIFT-MT101-TPS16173000001-005	SWIFT		BNK	MAPPED				SWIFT
SWIFT-MT103-TPS16173000001-011	SWIFT		BNK	MAPPED				SWIFT
SWIFT-MT103-TPS16173000001-009	SWIFT		BNK	MAPPED				SWIFT



# Message Acceptance - Configuration

## Admin Menu > Payment Hub > Message Acceptance GUI > Message Acceptance Param

Admin Menu	^
Multi Tenant Administration	v
Framework Parameter	v
Product Builder	v
Retail Administration	v
Islamic Administration	v
CRM Administration	v
Credit Administration	v
Payment Administration	v
Corporate Administration	v
Treasury Administration	v
Private Administration	v
Finance Administration	v
Business Tools	v
System Administration	v
External User Administration	v
Implementation Utilities	v
Payment Hub	^
Static Data GUI	v
Authorization Principle	↗
Message Acceptance GUI	^
Message Acceptance Parameters	↗
Message Formats	↗
Message Format Per Channel	↗

ID	SWIFT
Field Name	Field Value
Incoming Message Directory	
Channel	<b>SWIFT</b>
Single Multiple Indicator	• S
	• B
	• C
Interpret API	<b>SwiftService.interpretSwift</b>
Validate API	
Check Dup Ind	• Y
	• N
ACK Required Y?	• Y
	• N
ACK API	
ACK NACK Queue	
Message Forward API	<b>SwiftService.forwardSwiftMessage</b>
Message Forward Queue	
Read Message API	<b>SWIFT.IN</b>
Debulk API	

# Message Mapping - Configuration

## Admin Menu > Payment Hub > Message Mapping GUI > Message Mapping Param

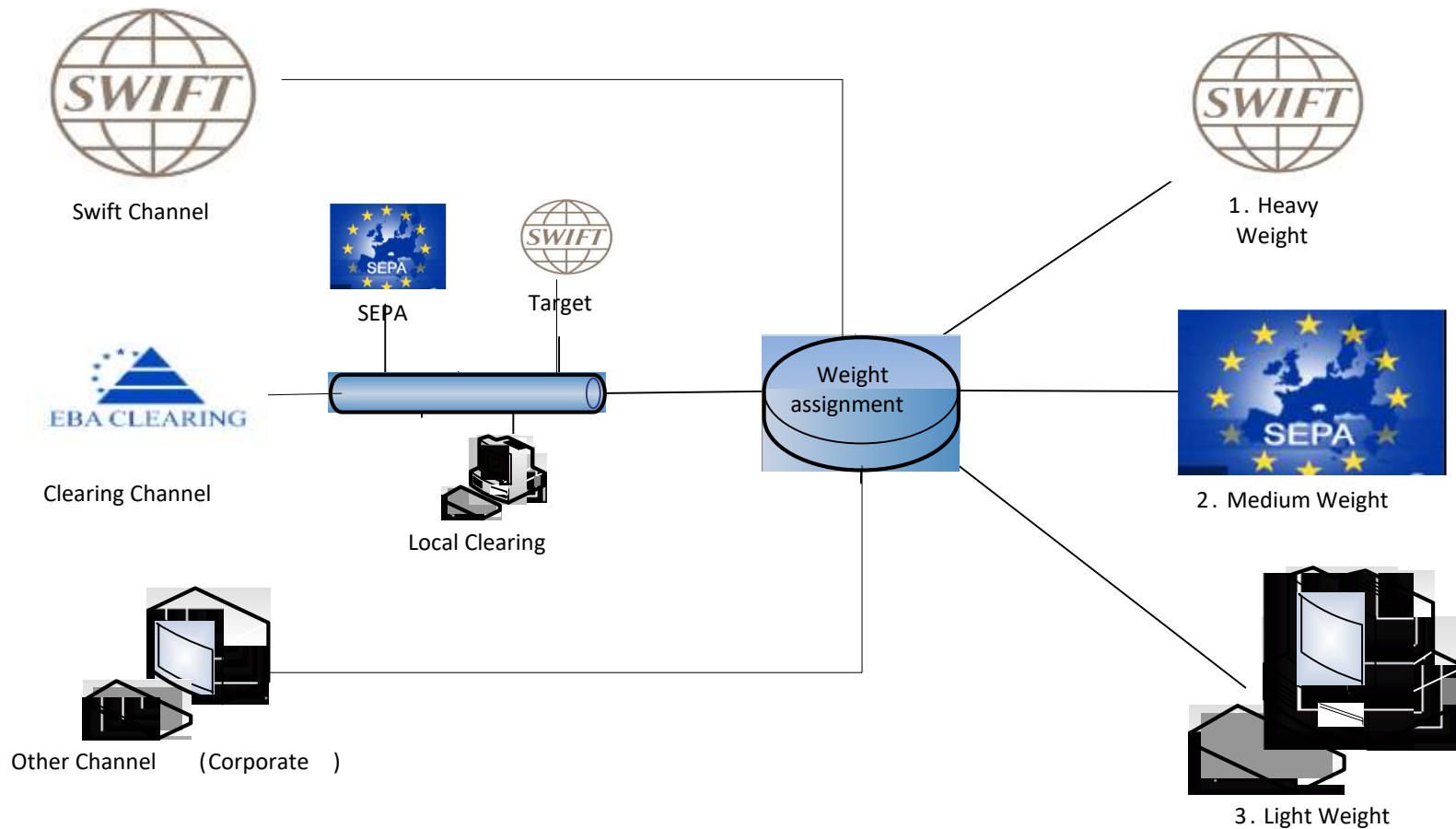
Payment Hub	^
Static Data GUI	▼
Authorization Principle	🔗
Message Acceptance GUI	^
Message Acceptance Parameters	🔗
Message Formats	🔗
Message Format Per Channel	🔗

Modify

Audit

Debulk API	HKCLGMessageMappingService.debulkHKCLGMessage
Mapping API *	HKCLGMessageMappingService.doMessageMappingHKCLG
Source Type API	
Clearing Transaction Type	▼
Clearing Nature Code.1	- Please Select ▼ +

# Assign Weight for the Payment



# Assign Weight for the Payment

## Admin Menu > Payment Hub > Weight Assignment



















Payment Hub	^
Static Data GUI	v
Authorization Principle	≡
Message Acceptance GUI	v
Payment Router GUI	≡
Message Mapping GUI	v
Batch Server GUI	≡
Local Clearing GUI	v
Trip Status Action	≡
Payment Workflow GUI	v
Weight Assignment	≡

ID	STEP2.pacs.008.CT-20170203		
Field Name	Field Value		
Company ID	BNK		
Rank	12		
Specific WeightCode	SCT		
Weight Description	Incoming SEPA Credit Transfer		
Weight Code	<ul style="list-style-type: none"><li>H</li><li>Λ</li><li>M</li></ul>		
Start Date	3-Feb-17		
End Date	DD MM YYYY		
AutoRepair Instance Name			

Company ID	Originating Source	Message Type	Rank	Specific Weight	High Level Weight
BNK	*	*	3	P2	H
BNK	SWIFT	103	1	P1	H
BNK	SWIFT	*	2	P3	H

# Skip Programs based on weight

Admin Menu > Payment Hub > Static Data GUI > ProgramsPerWeight

ProductDetermination.H	BNK	*	10			
ProductDetermination.L	BNK	CDR	4			
		STL	9			
		ICD	10			
		CCR	15			
		*	20			
ProductDetermination.M	BNK	CQE	28			
		CQS	29			
		*	30			
RiskFilter.H	BNK	CLM	5			
		*	20			
RiskFilter.L	BNK	CDR	4			
		STL	9			
		ICD	10			
		CCR	20			
		*	40			
RiskFilter.M	BNK	CQE	28			

# Skip Programs based on weight

**ProgramsPerWeight** RiskFilter.H

**Amend** Audit

Company ID

BNK

+

Specific Weight Code.1 \*

CLM

Ranking.1 \*

5.00

Program Name.1

RiskFilterService.doRiskFiltering

ProgramsPerWeight Description.1

EN Skip program

Program SkipIndicator.1 \*

☒ Y ☐ N

+

Specific Weight Code.2 \*

\*

Ranking.2 \*

20.00

Program Name.2

RiskFilterService.doRiskFiltering

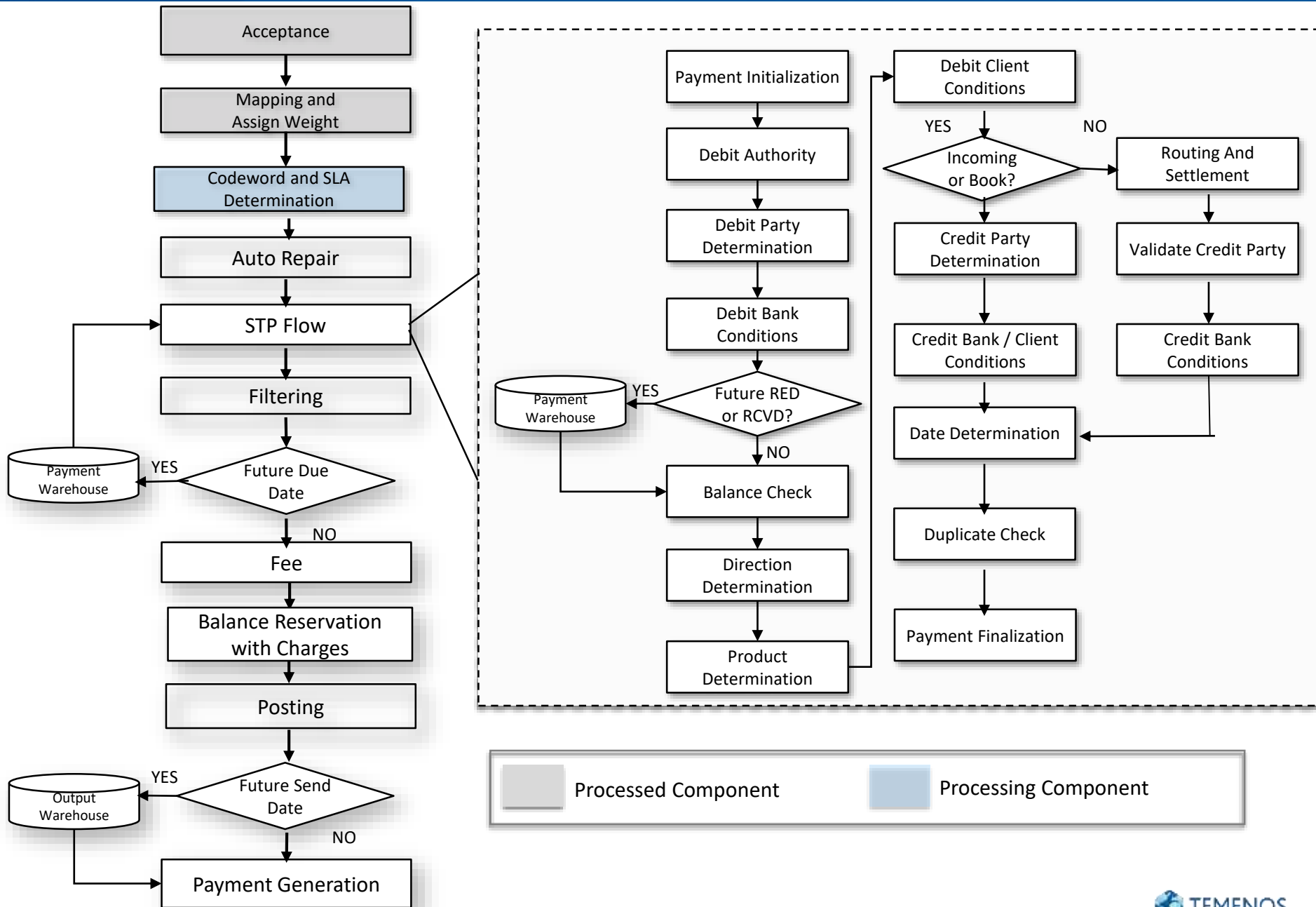
ProgramsPerWeight Description.2

EN Process Program

Program SkipIndicator.2 \*

☐ Y ☒ N

# How does TPH process a payment message?



# Code Words

## Admin Menu > Payment Hub > Inbound Codeword GUI > Inbound Codeword

Payment Hub	^
Static Data GUI	v
Authorization Principle	≡
Message Acceptance GUI	v
Payment Router GUI	≡
Message Mapping GUI	v
Batch Server GUI	≡
Local Clearing GUI	v
Trip Status Action	≡
Payment Workflow GUI	v
Weight Assignment	≡
Inbound CodeWords GUI	^
Inbound Codeword	≡
Processing Sequence	≡

**Inbound Codeword** CORT.INSBNK-20160101

**Modify** **Audit**

Company

BNK

CodeWord \*

CORT

Information Code \*

☐ Timind

☒ Insbnk

☐ Inssdr

☐ Regrep

☐ Inscvr

Message Payment Type \*

\*

Originating Source \*

\*

Codeword Ranking.1 \*

10.00

Codeword Text.1 \*

\*

Codeword Priority for PD.1 \*

1

Adjusted Message Priority.1

- Please Select

Processing Sequence Number.1

Non STP Indicator.1

☒ Y

☐ N

Fee Codeword Flag.1

☐ Y

☒ N

Outbound Codeword Applicable Flag.1

☒ Y

☐ N

LinkID


CORTINSBNK\*\*-20160101

Start Date

01 JAN 2016

End Date

31 DEC 2099





# Code Words – Processing Sequence

## Admin Menu > Payment Hub > Inbound Codewords GUI > Processing Sequence

Payment Hub	^
Static Data GUI	▼
Authorization Principle	🔗
Message Acceptance GUI	▼
Payment Router GUI	🔗
Message Mapping GUI	▼
Batch Server GUI	🔗
Local Clearing GUI	▼
Trip Status Action	🔗
Payment Workflow GUI	▼
Weight Assignment	🔗
Inbound CodeWords GUI	^
Inbound Codeword	🔗
Processing Sequence	🔗

ID	1
Field Name	Field Value
Company ID	BNK
Processing Sequence Desc	Inbound Processing Sequence 1
Processing Sequence Routine Name	InboundCodeWordService.setCreditValueDate
Inbound Processing Sequence Flag	<ul style="list-style-type: none"><li>• Y</li><li>• N</li></ul>
Outbound Processing Sequence Flag	<ul style="list-style-type: none"><li>• Y</li><li>• N</li></ul>

# Processing Sequence – Additional Information

Processing Sequence	Information Code and Code Words	Result of Processing Sequence API	Fags/Code Words that will be set
1	OTHR/BBDD	Assign Requested Credit Value Date equal to Requested Execution Date	
2	INSBNK (In tag 23E) OTHR/NBALANCE/Dddmmyy and /or /Cddmmyy	Assign Requested Credit Value date = Credit Value date in the message for Cddmmyy and impose the same for processing  Assign Debit Value date = Debit value date in the message for Dddmmyy and impose the same for processing	<ul style="list-style-type: none"> <li>• Set Credit value Date Imposed Flag</li> <li>• Set the Skip Balance Check flag</li> <li>• Set the SkipBoundaryCheck flag</li> <li>• Set the value of the Skip Fee flag to 'A' (Skip All charges)</li> <li>• Set the value of the Debit Authority Indicator field to 'S'</li> </ul>
3	INSSDR (In tag 72) REC/NBALANCE	Debit Value Date = Requested Credit value Date in the message	<ul style="list-style-type: none"> <li>• Set Credit value Date Imposed Flag</li> <li>• Set the Skip Balance Check flag</li> <li>• Set the SkipBoundaryCheck flag</li> <li>• Set the value of the Skip Fee flag to 'A' (Skip All charges)</li> <li>• Set the value of the Debit Authority Indicator field to 'S'</li> </ul>
6	INSBNK (In tag 23E)	Set RED to RCVD if RED is in future and make RED as blank.	

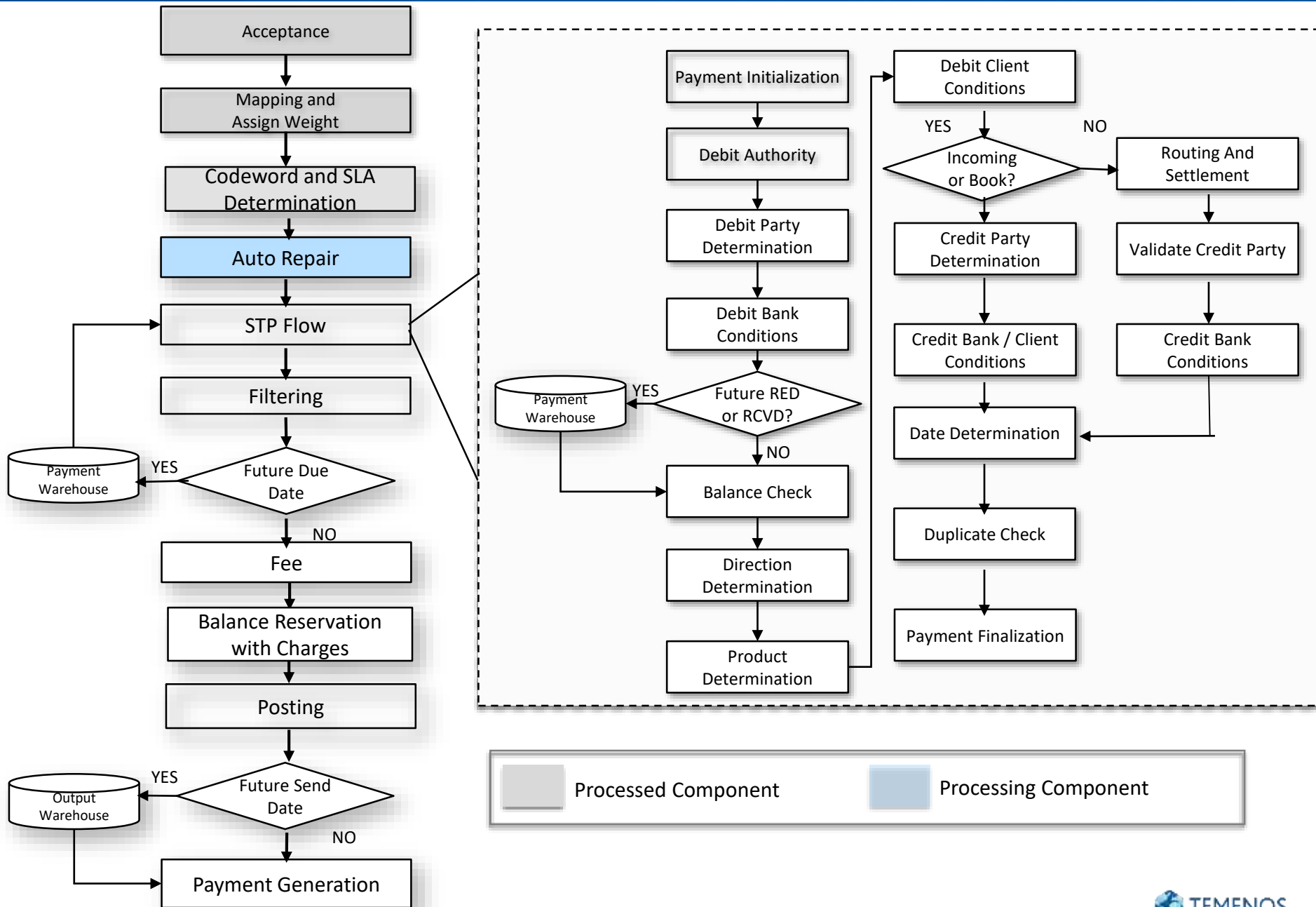
# SLA Determination

## Admin Menu > Payment Hub > SLA Per Codeword

Payment Hub	^
Static Data GUI	v
Authorization Principle	≡
Message Acceptance GUI	v
Payment Router GUI	≡
Message Mapping GUI	v
Batch Server GUI	≡
Local Clearing GUI	v
Trip Status Action	≡
Payment Workflow GUI	v
Weight Assignment	≡
Inbound CodeWords GUI	v
Outbound CodeWords GUI	v
SLA Per Codeword	≡

ID	BNK-20160101
Field Name	Field Value
Message Priority.1	*
CodeWord.1	*
CodeWord Tag.1	*
CodeWord Text.1	*
Ranking.1	4
SLAID.1	*
Start Date	1-Jan-16
End Date	DD MM YYYY

# How does TPH process a payment message?



# Auto repair and Enrichment

- ◆ Increasing the STP process
- ◆ Integrated with External Automated Repair Engine
- ◆ Nature of enrichment
- ◆ Reduce the manual interventions
- ◆ Apply Fees depends on enrichment nature
- ◆ Applicable for STP payments



# Erroneous Data in the Incoming Messages

- Take a look at the Tag 59 of Incoming MT101 Message having spaces in Beneficiary Account Line. This Transaction will Land in Repair due to Simple Reasons - TPH will fail to Identify the Account for Credit because in TPH we would have stored the IBAN without spaces which is the correct way of representing an Account / IBAN

```
{1:F01DEMOGBXAAXXX2769820912}{2:01011235041221ABNANL20XXXX03520236480411171235N}{3:{101:XXX}{108:ICM041222AIO}
:20:201506230001
:28D:00001/00001
:30:150617
:21:20150623000101
:32B:GBP99,00
:50H:/77488
A. Mike, Rotterdam
Edinburgh
United Kingdom
:57A:HSBCGB20
:59:/GB29 RBOS 6016 1331 9268 19
Ron Marcus
United Kingdom
:70:REMITTANCE INFORMATION
:71A:SHA
-}
```

# Erroneous Data in the Incoming Messages

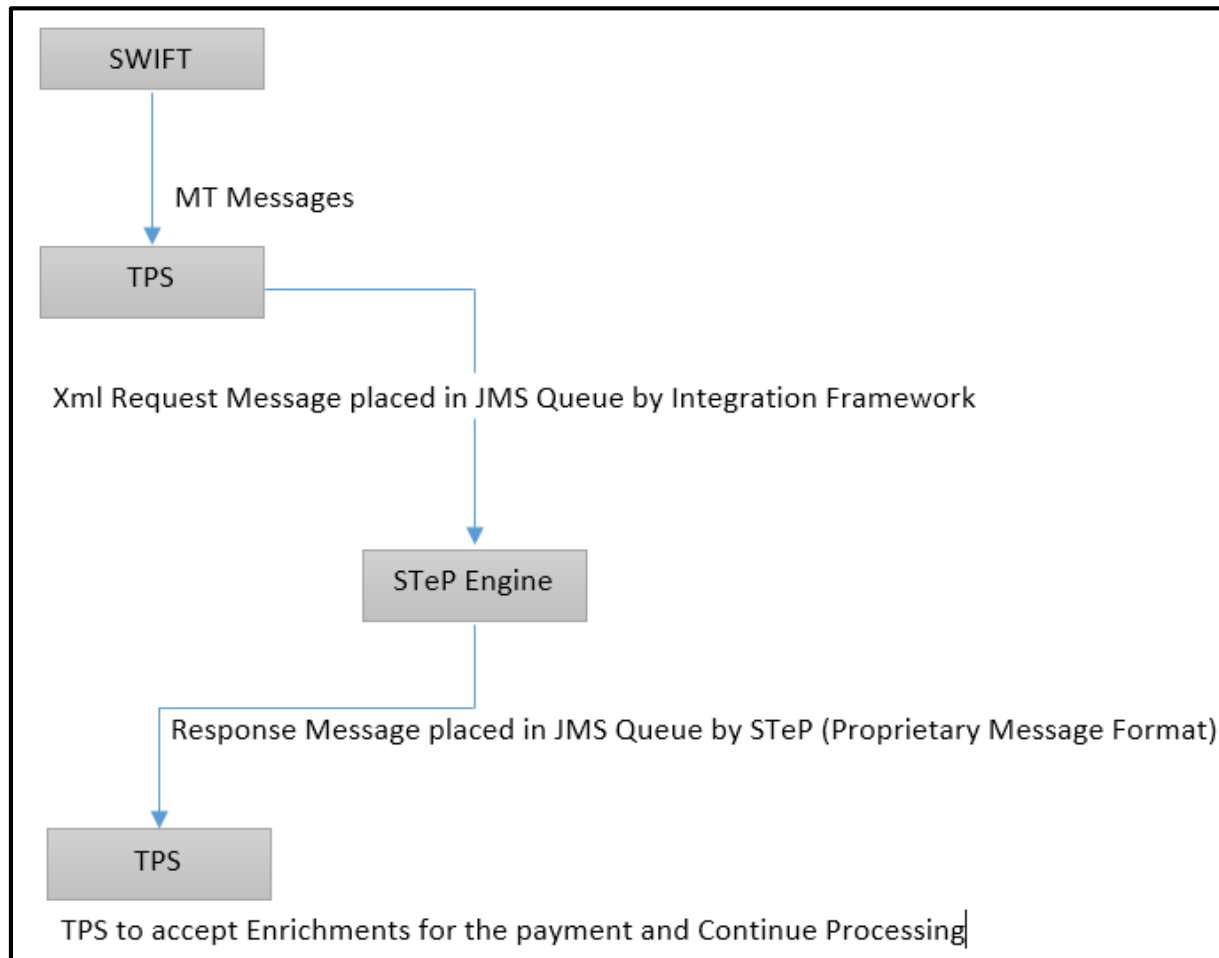
- Data for Beneficiary in the SWIFT Message Received. Observe that Account Number is in Free Line 4
  - PARTYROLE = "BENFCY"
  - PARTYFREELINE1 = "JOHAN SMITS"
  - PARTYFREELINE2 = "PARKSTRAAT 5"
  - PARTYFREELINE3 = "AMSTERDAM"
  - PARTYFREELINE4 = "ACC NO 12312312312"
- Image after Enrichment by Automated Repair Tool. Account Number is copied to the appropriate placeholder
  - PARTYROLE = "BENFCY"
  - PARTYACCOUNTLINE = "/12312312312"
  - PARTYFREELINE1 = "JOHAN SMITS"
  - PARTYFREELINE2 = "PARKSTRAAT 5"
  - PARTYFREELINE3 = "AMSTERDAM"
  - PARTYFREELINE4 = "ACC NO 12312312312"

# Erroneous Data in the Incoming Messages

- Data for ACWINS in the SWIFT Message Received. Observe that BIC is not Input
  - PARTYROLE = "ACWINS"
  - PARTYFREELINE1 = "RABO BANK"
  - PARTYFREELINE2 = "AMSTERDAM"
  - PARTYFREELINE3 = "NETHERLANDS"
- Image after Enrichment by Automated Repair Tool. BIC is auto-populated by Automated Repair Engine
  - PARTYROLE = "ACWINS"
  - PARTYIDENTIFIERCODE = "RABONL2AXXX"
  - PARTYFREELINE1 = "RABO BANK"
  - PARTYFREELINE2 = "AMSTERDAM"
  - PARTYFREELINE3 = "NETHERLANDS"










































# TPH-STeP Flow



# Auto repair and Enrichment

## Admin Menu > Payment Hub > Static Data GUI > Programs Per Weight

ProgramsPerWeightList				
Component Name and Weight	Company Id	SW Code	Ranking	
AccountCashPosition.H	BNK	*	1	  
	BNK	ICD	1	  
AccountCashPosition.L	BNK	CDR	2	  
		CCR	3	
		*	10	
AccountCashPosition.M	BNK	CQE	3	  
		CQS	4	  
		*	5	
Autoform.H	BNK	*	10	  
Autoform.L	BNK	CDR	3	  
		STL	9	  
		ICD	10	
		CCR	11	
		*	20	
Autoform.M	BNK	CQE	29	  
		CQS	30	  
		*	31	
AutomatedRepairTool.H	BNK	*	10	  
AutomatedRepairTool.L	BNK	CDR	4	  
		STL	9	  
		ICD	10	
		CCR	11	
		*	40	

# Programs Per Weight Table

ProgramsPerWeight AutomatedRepairTool.L

Amend

Audit

Company ID

BNK



Specific Weight Code.1 \*

CDR

Ranking.1 \*

4.00

Program Name.1

AutomatedRepairToolService.repairPayment

ProgramsPerWeight Description.1

EN

Program SkipIndicator.1 \*

☒ Y ☐ N



Specific Weight Code.2 \*

STL

Ranking.2 \*

9.00

Program Name.2

AutomatedRepairToolService.repairPayment

ProgramsPerWeight Description.2

EN Skip Program

Program SkipIndicator.2 \*

☒ Y ☐ N



Specific Weight Code.3 \*

ICD

Ranking.3 \*

10.00

Program Name.3

AutomatedRepairToolService.repairPayment

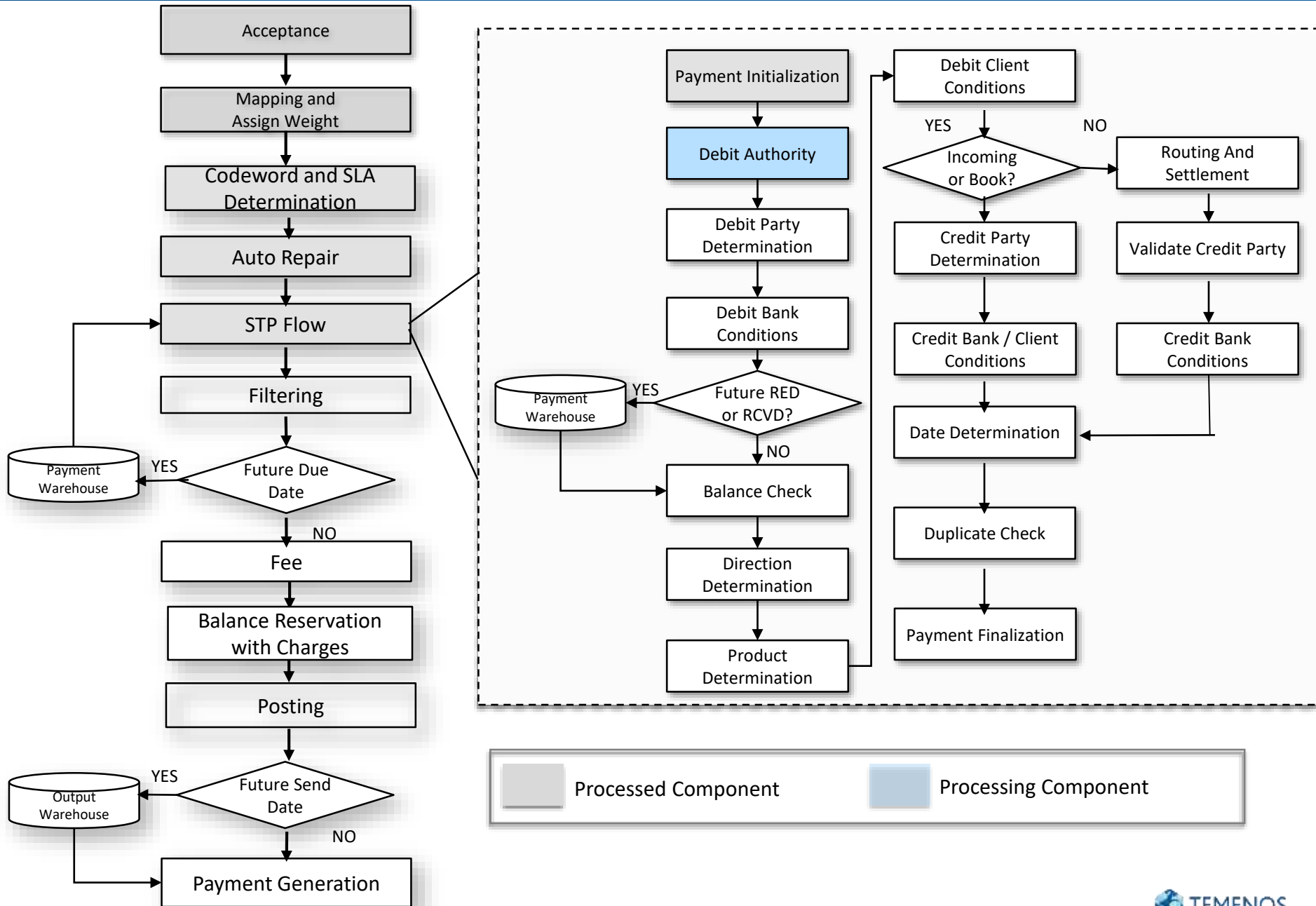
ProgramsPerWeight Description.3

EN

Program SkipIndicator.3 \*

☒ Y ☐ N

# Debit Authority



# Debit Authority

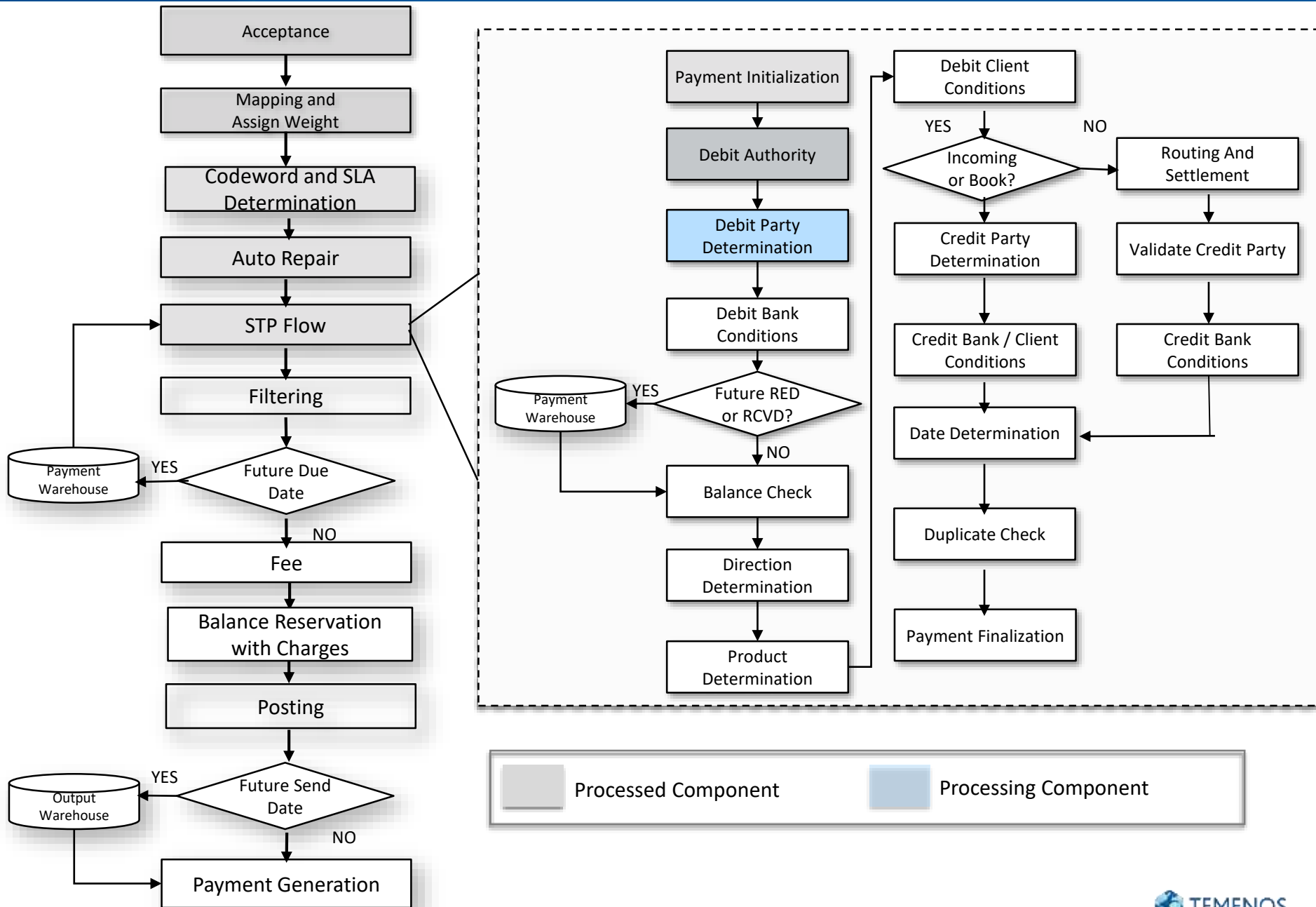
## Admin Menu > Payment Hub > Debit Authority GUI > Netting Agreement / No DA List

Payment Hub	^
Static Data GUI	v
Authorization Principle	≡
Message Acceptance GUI	v
Payment Router GUI	≡
Message Mapping GUI	v
Batch Server GUI	≡
Local Clearing GUI	v
Trip Status Action	≡
Payment Workflow GUI	v
Weight Assignment	≡
Inbound CodeWords GUI	v
Outbound CodeWords GUI	v
SLA Per Codeword	≡
Bank Conditions GUI	≡
Debit Authority GUI	^
Netting Agreement	≡
No DA List	≡

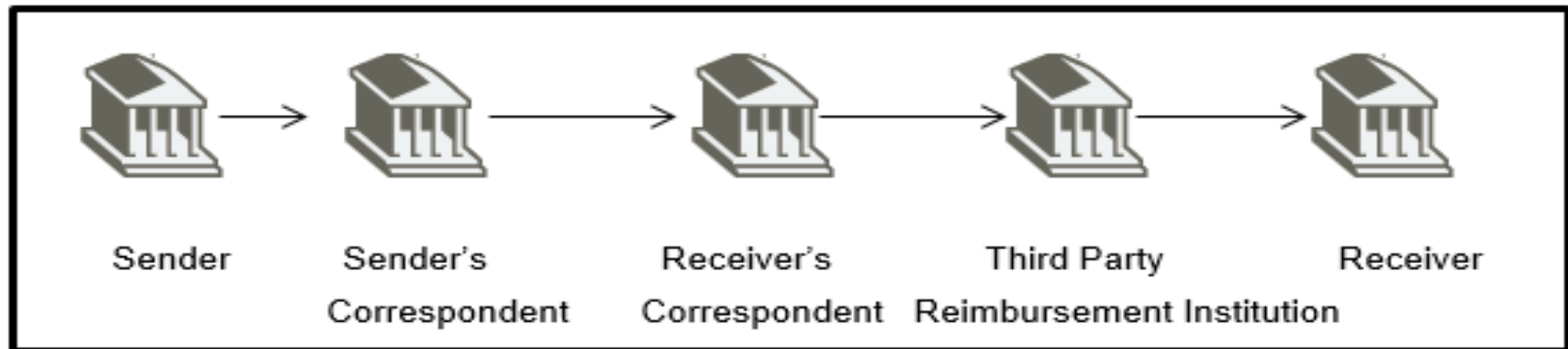
ID	101BOFAUS33-20180316
Field Name	Field Value
Company	BNK
Message Type	101
Sending Bank	BOFAUS33
Debit Account	*
First Name/Address Line	*
LinkID	101BOFAUS33*-20180316
Start Date	16-Mar-18
End Date	31-Dec-99

Table	No DA List
ID	101-20160101
Field Name	Field Value
Company Code	BNK
Start Date	16-Mar-18
End Date	31-Dec-99

# Debit Party Determination



# Determining Debit Party



- ◆ Determine the debit party, determine and validate account
- ◆ Implied Debit – Validate account

# Defining the LORO/NOSTRO Accounts

## Admin Menu > Payment Hub > Routing and Settlement GUI > Loro Nostro Account

**Loro Nostro Account** 21-20180316

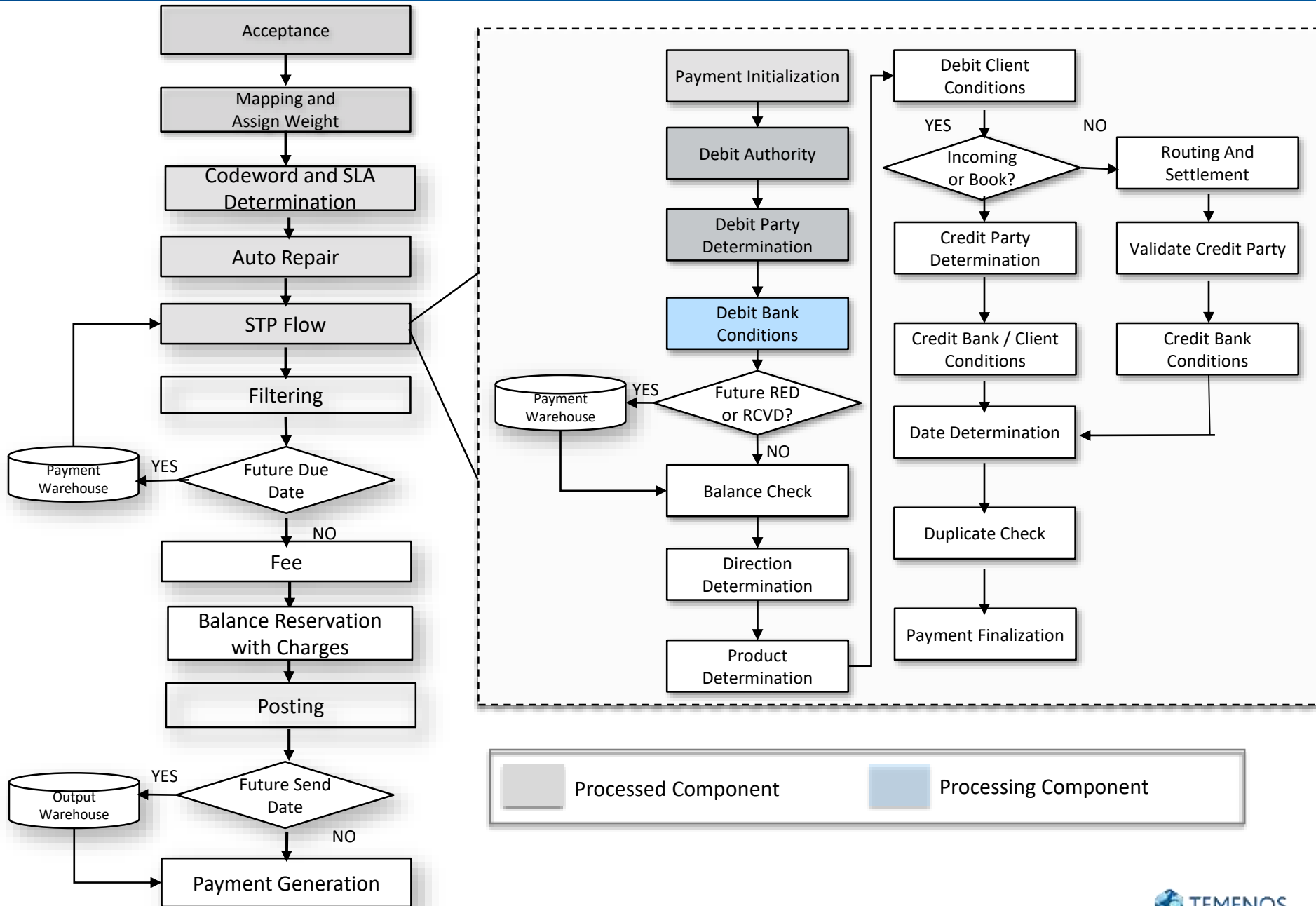
Company ID	BNK		
Party BIC	HSBCSGSG		
Type of Account Number	N	Account Currency	SGD
Start Date	16 MAR 2018	End Date	31 DEC 2099
LinkID	HSBCSGSGSDN-20180316		

**Account Details** Audit

AccountNumberCompanyID	AccountNumber*	OwningBIC*	PreferredDebitAccountNumber*	PreferredCreditAcctNumber*	ChargesIndicator*
<input type="text" value="BNK"/>	<input type="text" value="20796"/>	<input type="text" value="HSBCSGSG"/>	<input checked="" type="radio"/> Y <input type="radio"/> N	<input checked="" type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input checked="" type="radio"/> N



# Bank Conditions



# Bank Conditions

## Admin Menu > Payment Hub > Bank Conditions GUI

- Payment Hub ^
- Static Data GUI v
- Authorization Principle ㊄
- Message Acceptance GUI v
- Payment Router GUI ㊄
- Message Mapping GUI v
- Batch Server GUI ㊄
- Local Clearing GUI v
- Trip Status Action ㊄
- Payment Workflow GUI v
- Weight Assignment ㊄
- Inbound CodeWords GUI v
- Outbound CodeWords GUI v
- SLA Per Codeword ㊄
- Bank Conditions GUI ㊄

Bank Conditions Amend DEFAULT-20160101

BankConditions

BankCondChargeAccount

BankConditionsAdvice

Audit

Company

BNK

Correspondent BIC/NCC \*

\*

SLA ID \*

\*

Currency \*

\*

Start Date

01 JAN 2016

End Date

31 DEC 2099

31

Non STP for CTR \*

☐ Y

☒ N

Credit Special Instruction

Non STP for BTR \*

☐ Y

☒ N

Debit Special Instruction

WareHouse Indicator \*

☐ Y

☐ N

☒ J

Language

Debit Statement Format

Credit Statement Format

FX Spread

LinkID

\*\*\*-20160101

AllowSpecialCharacterSet

☐ Y

☐ N

CodePageSet

Tran Ack Nack Indicator

☐ Ack

☐ Nack

☐ Both

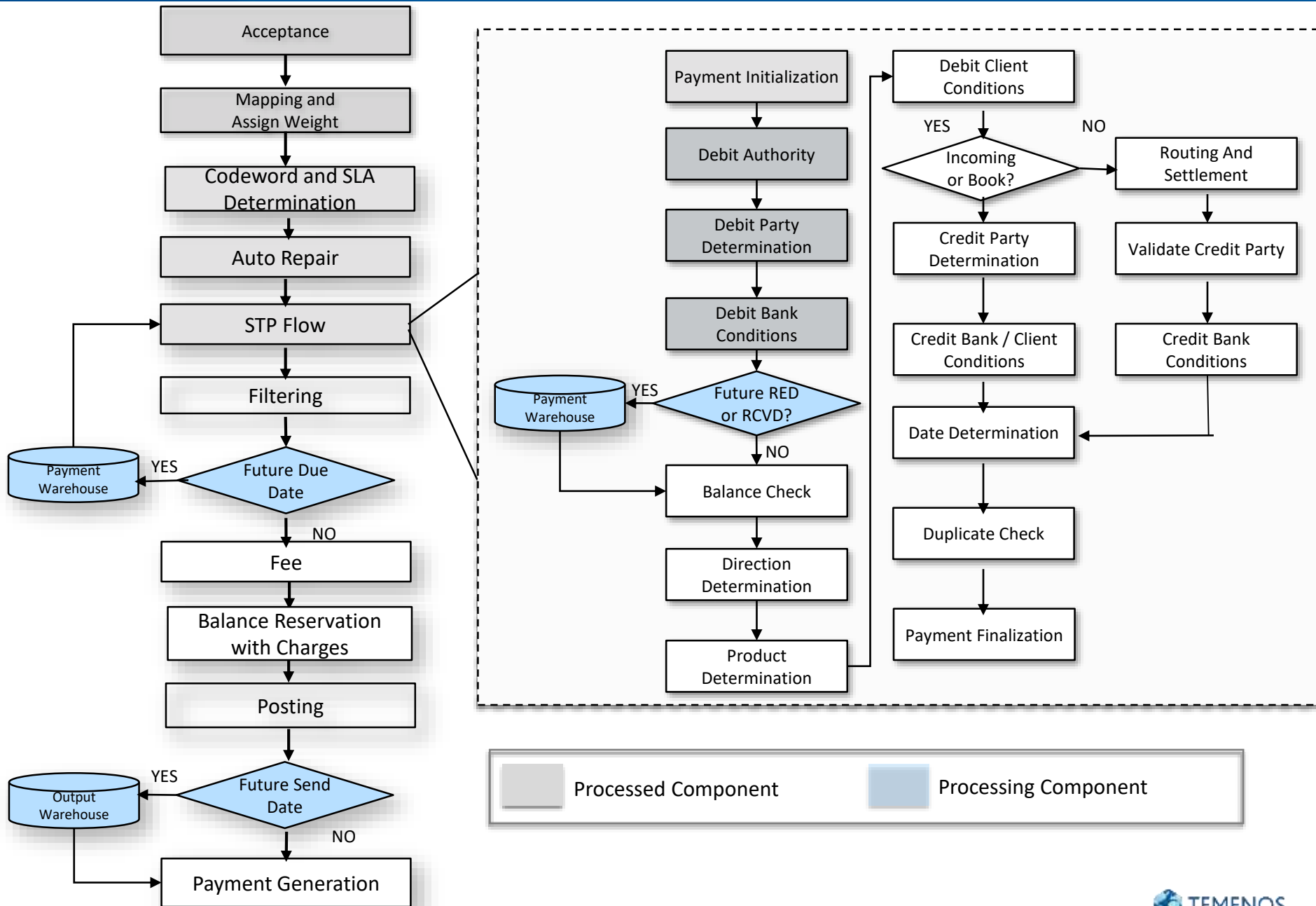
Interim Status Indicator

☐ Y

☐ N

Customer Status Msg Type

# Warehouse



# Types of Warehouse

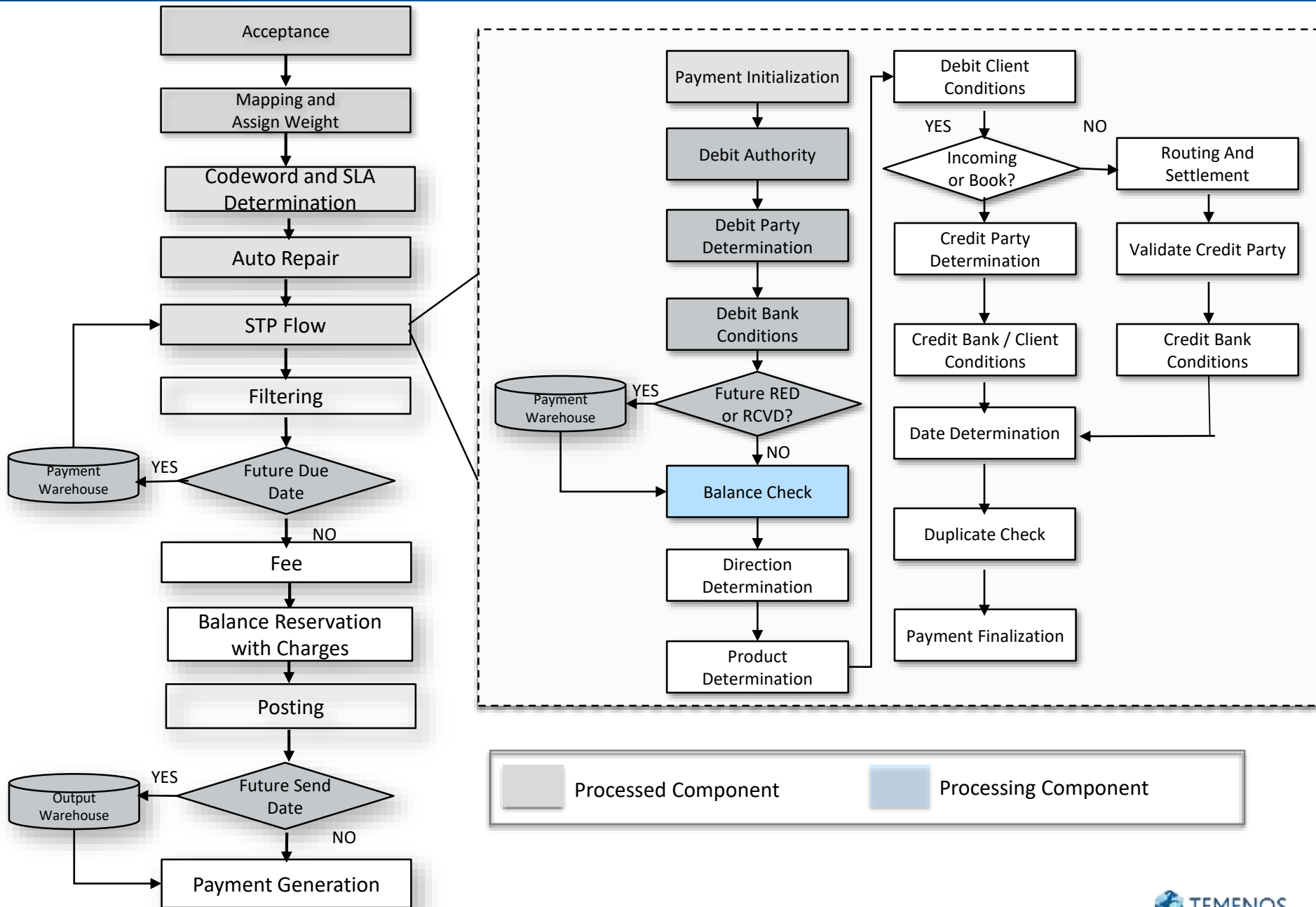


- Payment warehouse – When Requested Execution Date or Requested Credit Value Date is in future, payments are warehoused at the start of STP flow based on Bank Conditions
- Future due date warehouse – When calculated Credit Value date is in future and processing date is also pushed to future to meet the credit value date
- Send date warehouse – When Send date is in future

# Release from Warehouse

- ◆ Moves Payments from Warehouse to STP, Filter and Payment Generation based on different Payment status
- ◆ Triggered during Start of Day (SOD)
- ◆ Release from warehouse – Normal and force release
- ◆ A warehoused payment can be cancelled except when it has been booked (A payment in output warehouse cannot be cancelled)
- ◆ The below menu option is used to release payments from the warehouse. User Menu > Payment Hub > Payment Exceptions > Warehouse and Parked Payments > Warehouse Payments List> Warehouse Payments List

# Do we have sufficient balance on the debit account?



# Balance Check

- Check for balance on debit account and debit charge account
- When reserving balance, a record in AC.LOCKED.EVENTS is created
- During posting, the reserved amount is utilised and hence the lock is removed.
- Pre-authorisation is possible. This would block funds on an account.
  - Pre-auth key this created, to be linked to the payment
- Credit Transfers
  - When a credit transfer is to be sent out, check if the debit account has sufficient balance to cover transaction amount or transaction amount plus charges
- Direct Debits
  - When a direct debit is received, check if the debit account has sufficient balance to cover the transaction amount or transaction amount plus charges

# Balance Check

## AC.LOCKED.EVENTS

Repair View Screen OE18107NNWMS

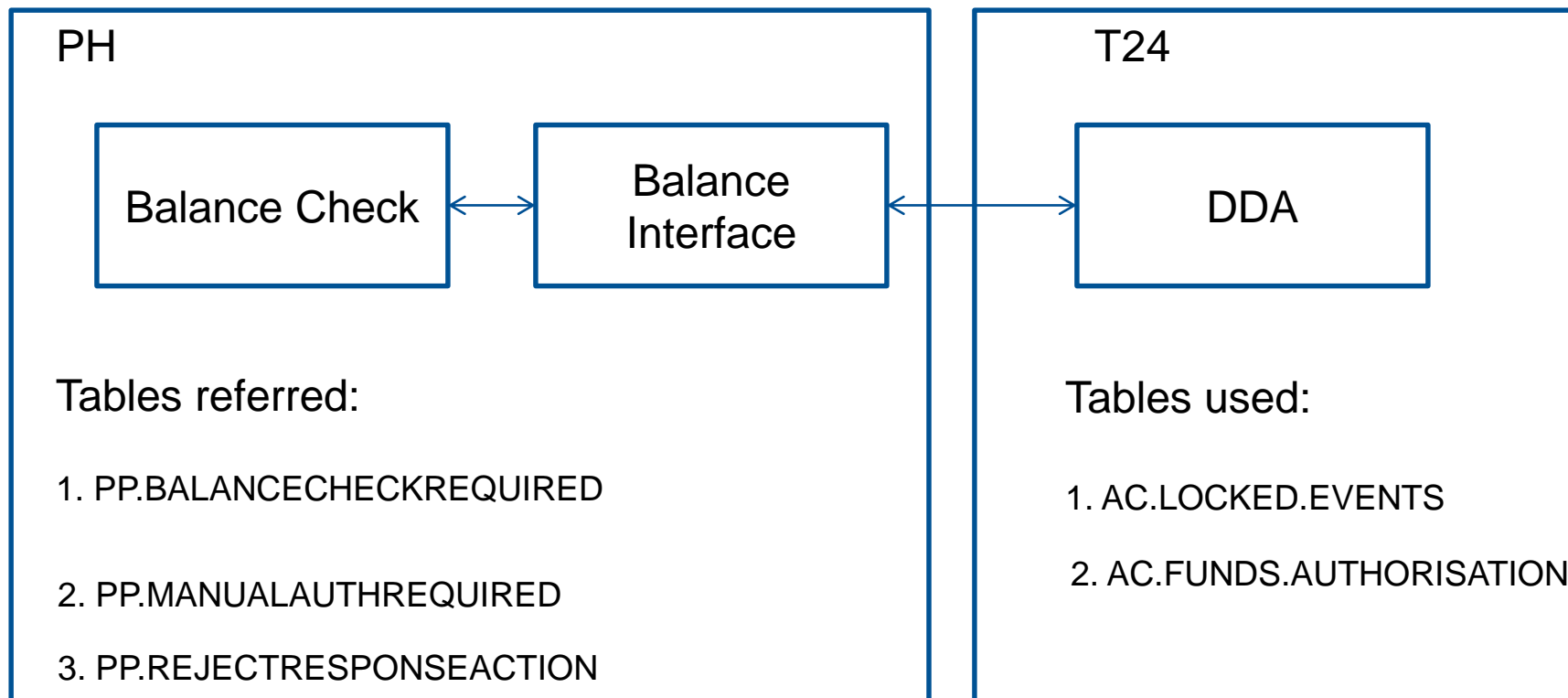
<b>Payment Processing Information</b>		<b>Processing Company</b>	BNK
Status	687	<b>Processing Date</b>	17 APR 2018 17 APR 2018
Transaction Reference Number	BNK18107KJFCCDLF		
Sender's Reference Number	T24034490		
Priority	1		
Source	SWIFT		
Output Channel	LORO		
Direction	O		
Transaction Currency	USD		
Transfer Type	C	<b>Transaction Amount</b>	3,500.00
Incoming Message Type	101	<b>Charge Option</b>	Sha
Balance	A		
<b>Balance Reservation Number</b>	ACLK1810766478		
		<b>Sender Institution</b>	BOFAUS33
		<b>Receiver Institution</b>	CRESCHZZ

AC.LOCKED.EVENTS ACLK1810766478

Account Number	11193	NIKE
From Date	17 APR 2018	17 APR 2018
Locked Amount	3,500.18	
<b>Transaction No</b>	BNK18107KJFCCDLF	
Payment Amount	3,500.18	
Payment Currency	USD	US Dollar
Record Status	REVE	REVERSE Reversed
Cur No	1	
Inputter.1	47_INPUTTER	
Date time.1	21 JUN 18 18:50	
Authoriser	47_INPUTTER	
Company	G80010001	Model Bank



# Balance Check- Configuration Tables – Overview



# Balance Check- Configuration – Balance Check Required

- Check and reserve balance on debit account and debit charge account
- Admin Menu -> Balance Check GUI

**Balance Check Required** PPBCR17621163495872102

**Amend** **Audit**

Company

BNK

Rank \*

16

Source \*

\*

Account Type \*

C

Message Type \*

\*

Clearing Nature Code \*

\*

Settlement Transaction Indicator \*

☒ \* ☐ Y

Balance Check Required Flag \*

☒ Y ☐ N

Reserve With Charges

☒ Y ☐ N

OE Repair Reservation

☐ Submit ☒ Authorise ☐ Stp

Hold Bal For Future Processing Dt

☐ Y ☐ N

Approval Code.1

- Please Select

Action.1

☐ Retain ☐ Cancel

# Balance Check with/without charges

Without Charges	With Charges
<ul style="list-style-type: none"><li>Performed after debit bank Conditions</li></ul>	<ul style="list-style-type: none"><li>Performed after FX and before posting</li></ul>
<ul style="list-style-type: none"><li>If FX is involved, mid rate will be used to convert transaction amount from transaction currency to debit account currency</li></ul>	<ul style="list-style-type: none"><li>If FX is involved, actual FX rate will be derived and transaction amount will be converted to debit account currency. Reservation will be done only if funds are available</li></ul>
<ul style="list-style-type: none"><li>During FX calculation, once actual FX rate is derived, if account balance is insufficient to cover transaction amount, account will be overdrawn.</li></ul>	<ul style="list-style-type: none"><li>When there is a FX threshold breach, then, mid rate +/- premium/discount is applied and then, the rate is arrived at.</li></ul>
<ul style="list-style-type: none"><li>Post balance check, if actual FX rates are higher than the utilised FX rates and account is short of balance, account will be overdrawn.</li></ul>	<ul style="list-style-type: none"><li>Post balance check, if actual FX rates are higher than the utilised FX rates and account is short of balance, account will be overdrawn.</li></ul>

# Balance Check- Configuration – Client Conditions

Client Condition Amend SEPADD\_SET-20170213

ClientCondition

Client Cond Advice

Client Cond FXDiscount

Client Cond Charge Account

Audit

Separate charge Account Indicator \* ☐ Y ☒ N

Indicator For Charge Account.1 ☐ C ☐ D ☐ A

Transaction Currency.1

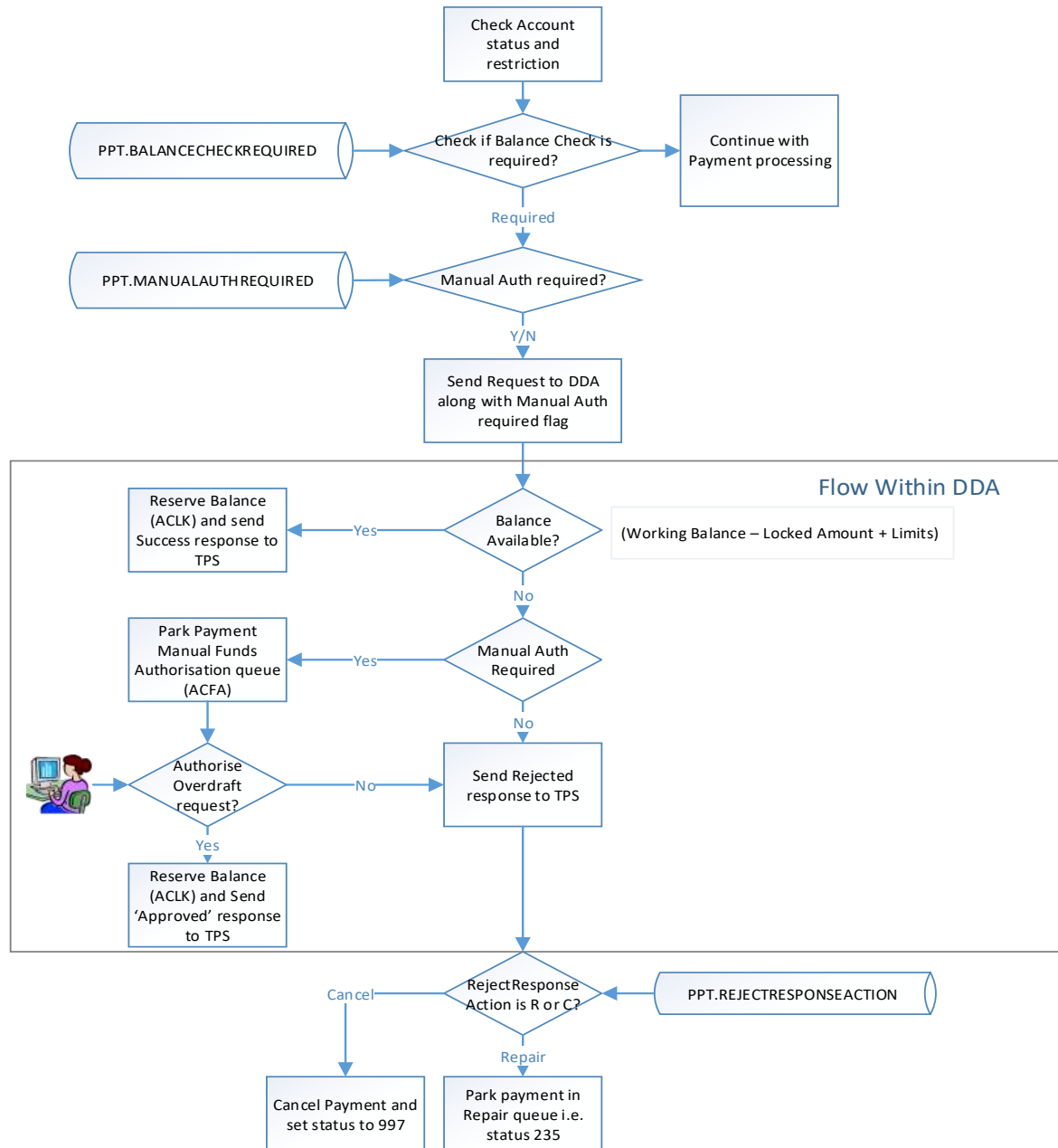
Charge Account Company ID.1

Charge Account Currency.1

Charge Account Number.1

Balance Check On Chg Act ☐ Y ☐ N

# Balance Check Process Flow



# Balance Check- Configuration - Manual Auth Required

Manual Auth Required

PPMAR17621163495872106



Amend

Audit

Company

BNK

Rank \*

40

Business Line \*

\*

Originating Work flow \*

\*



Source \*

\*



Message Priority \*

\*



Banking Priority \*

\*

Tran Amount Upper Limit \*

\*

Message Type \*

\*



Clearing Nature Code \*

\*



Auth Required Flag \*

☐ Y

☒ N

# Balance Check- Configuration -Reject Response Action

Reject Response Action PPRRA17621163495872200

Amend

Audit

Company

BNK

Rank \*

40

Business Line \*

\*

Originating Work flow \*

\*



Source \*

\*



Message Priority \*

\*



Banking Priority \*

\*

Tran Amount Upper Limit \*

999999999999

Message Type \*

\*



Clearing Nature Code \*

\*



Manual Reject Resposne Action \*



R



C

# Balance Check – Insufficient Funds – Manual Auth Required

User Menu > Payment Hub > New Payment Orders > Payment Approvals > Manual Funds Authorisation > Request for Pending Approval

**Unauthorised Manual Requests**Results 1 - 1 of 1

Account Number: 77097

Currency: EUR

Customer ID: 100160

Customer Name: Yhs

Available amount: 10,000.00

Working balance: 10,000.00

Reservation Key	Payment Currency	Payment Amount	Reserved Amount	Excess amount	Value date	Created Date and Time	Decision	Decision Reason	
BNK18107HDDDLMHM	USD	15,000.00	13,971.79	-3,971.79	17 APR 18	17 APR 18 101224446			- please select - ▾

**Unauthorised Manual Requests**Results 1 - 1 of 1

Account Number: 77097

Currency: EUR

Customer ID: 100160

Customer Name: Yhs

Available amount: -3,971.79

Working balance: 10,000.00

Reservation Key	Payment Currency	Payment Amount	Reservation Amount	Excess amount	Value date	Created Date and Time	Decision	Decision Reason	
BNK18107HDDDLMHM	USD	15,000.00	13,971.79	-3,971.79		17 APR 18 101224446	APPROVED	Funds expected to receive Overnight	🔄 ✓



# Pre-Authorisation Key

## Creation of preauthorisation key

**User Menu > Payment Hub > New Payment Orders > Payment Approvals > Manual Funds Authorisation > Request for Pending Approval**

Manual Requests Decision: ACFA1810700815

Account Number	77097	Currency	EUR
Payment Currency	USD	Payment Amount	15,000.00
Value Date	2 JAN 17 A	Init Req Date	2 JAN 04 J
Init Req Time	15:58:14	Created Date	17 APR 2018
Created Time	10:22:44	Transaction reference	BNCT18107000LHWA
Decision	Approved	Decision Reason 1	Funds expected to receive Overnight
Funds Auth Status	UNAUTHORISED	Reservation Key	ACFA1810700815
Request Source	pp	Reservation ID	ACLC1810703780
Request Code	01	Approval Code	<input type="radio"/> Manually authorised <input type="radio"/> RECYCLER
Request Desc	No Funds		

**Audit**

Override 1	Account 77097 unauthorised overdraft of 3971.79 available 10000 Requested 13971.79 EUR
Override 2	Ac 77097 Today's Balance EUR 10000 will fall below Locked 13971.79 from 17 APR 2018
Record Status	(NUL)
Current No.	1
Inputter 1	99954 INPUTTER_OPS_RESPA
Date / Time 1	04 JUL 18 16:00
Authoriser	
Company	GB8010001 Model Bank

Account 77097 unauthorised overdraft of 3971.79 available 10000 Requested 13971.79 EUR  
Ac 77097 Today's Balance EUR 10000 will fall below Locked 13971.79 from 2 JAN 17 A

ID=: RECORD WAS READ FROM HOLD FILE

**CANCEL** **ACCEPT**

# Using a Pre-Authorisation key






## OE screen with a Pre-auth key

Order Entry Book Transfer (CTR) OE18107N19G0 ✓ 📄 ⏸ ⬆ ℹ - Please Select 🔍

**Payment Processing Information**

Status	135	Processing Company	BNK	
Transaction Reference Number		Processing Date	17 APR 2018 17 APR 2018	Processing Date Imposed Flag <input type="radio"/> Yes
Sender's Reference Number		Priority	1	
Related Reference		Product		
Source	OE	Output Channel	LEDGER	Output Channel Imposed Flag
Direction	B	Transaction Currency	USD	Instructed Currency
Transfer Type	C	Transaction Amount	15,000.00	Instructed Amount
Incoming Message Type	RFCT	Charge Option	<input type="radio"/> Ben <input checked="" type="radio"/> Sha <input type="radio"/> Our	
Balance Reservation		Receiver Institution		Receiver Institution N C C
Balance Reservation Number	ACFA1810700815			
Balance Reservation Debit Chg Acct				
Pre-Authorization Number	ACFA1810700815			
Intra Company Payment	<input type="radio"/> Yes			
Store Template Values	B-C-RFCT-BNK-INPUTTER			
Select from Template				
Save As Template	<input type="radio"/> Yes			
Nick Name				

# AC.FUNDS.AUTHORISATION

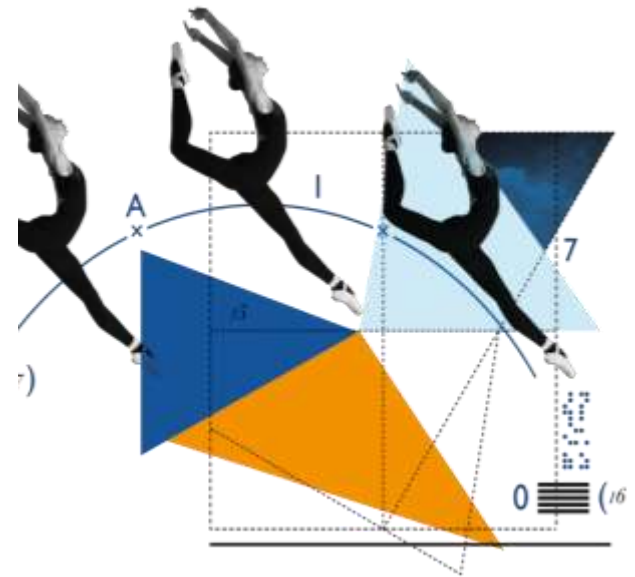
AC.FUNDS.AUTHORISATION		ACFA1810700815	  - Please Select
Debit account	77097	YHSSGD	
Account Ccy	EUR	Euro	
Requested Ccy	USD	US Dollar	
Requested Amt	15,000.00		
Request Date	2 JAN 17 J	2 JAN 17 J	
Dda Init Req Date	2 JAN 04 J	2 JAN 04 J	
Dda Init Req Time	15:58:14		
Orig Sys Date	17 APR 2018	17 APR 2018	
Orig Sys Time	101224446		
Orig Trans Ref	BNK18107H0DDLMHM		
Orig Trans Company	BNK		
Funds Decision	Approved		
Decision Reason.1	Funds expected to receive Overnight		
Funds Auth Status	AUTHORISED		
Reservation Id	ACLK1810703780		
Reservation Key	ACFA1810700815		
Request Source	PP		
Request Code	01		
Request Desc	No Funds		

Override.1	Account 77097 unauthorised overdraft of 3971.79 available 10000 Requested 13971.79 EUR	
Override.2	Ac 77097 Today's Balance EUR 10000 will fall below Locked 13971.79 from 17 JAN 2 JA	
Curr No	1	
Inputter.1	95954_INPUTTER_OFS_IRISPA	
Date time.1	04 JUL 18 16:09	
Authoriser	95954_AUTHORISER_OFS_IRISPA	
Company	GB0010001	Model Bank
Dept Code	1	Implementation

# What Did We Learn?

## Conclusion

- ◆ Overview of payment processing in Payment Hub
- ◆ Static configurations used in Payment processing
- ◆ Process Incoming MT103 till Balance Check component



# Thank You



# TEMENOS

The software specialist for banking and finance