



Nasdaq Calypso

Corporate Cash Management

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Approved

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Document History

Revision	Published	Summary of Changes
1.0	February 2024	First revision for version 18

This guide gives instructions and provides examples of how to configure and use the corporate cash management module in Calypso It covers the following features:

- Integration and processing of incoming MT940, including Automatic Cash Pooling process
- Automatic generation of FX and MM consolidation deals
- Cash Position, Bank Account Activity, Proof of Cash and Process Status Reports
- Active and passive bank account sweeping
- Subsidiary internal messages
- MT101
- Forecasts and In-house Transactions (payment on behalf of, intercompany transactions – single currency or cross-currency - intracompany transactions – s single currency or cross-currency, market transactions, subsidiary interest bearing, etc.)

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Processing of Incoming Swift MT940

1.1 Static Data Configuration

To be able to integrate and process incoming MT940, you must initially configure the appropriate bank accounts and settlement instructions.

1.1.1 Processing Organization Bank Account and Related SDI

Define a SETTLE Account

Bank Account for which the processing organization receives and processes MT940 must be configured in Calypso as a standard SETTLE Account for that specific Processing Organization, Currency and Agent.

This type of account must then be attached to the related Processing Organization SDI.

The Account Name for this type of account is generic (for instance, as stated below, BARCLON-EUR for the EUR Account of the Processing Organization PARENT_COMPANY at Barclays Bank PLC Ldn).

Populate the Account Attribute XferAgentAccount

For this type of account, we store the value of **Tag 25** used by the Agent when sending a MT940 as an Account Attribute "XferAgentAccount".

To do so, once on the SETTLE Account window select the Properties/Attributes button and add the value of Tag25 as value of the account attribute XferAgentAccount (see below).

Populate the Account Attribute PaymentFactory

If the bank account is a Payment Factory account, there is no difference with a standard account except that we identify that type of account with a specific account attribute **PaymentFactory = true**.

For a standard bank account, this attribute is left blank. We only set the value to true to mark the account as a payment factory account.

Populate the Account Attribute GuaranteeFees

If the bank account is a Guarantee Fees account, there is no difference with a standard account except that we identify that type of account with a specific account attribute **GuaranteeFees = true**.

For a standard bank account, this attribute is left blank. We only set the value to true to mark the account as a guarantee fees account. When this is set to true, the SubStatement linked to such bank account will have a SubStatement.GuaranteeFee type. The attached trade, created automatically by the system, will be typed with a

keyword CashStatementProcess = Automatic Guarantee Fee. The related transfer will have a “GUARANTEE FEE” description instead of cash pooling.

Attach an Incoming Statement Configuration

These types of accounts are identified as ‘Account to reconcile’ based on their **Incoming Statement Configuration**.

Only SETTLE accounts defined with an incoming statement configuration are taken into account for the MT940 reconciliation process.

To add an Incoming Statement Configuration, go to the statement panel of the SETTLE Account, choose Statement type = Incoming, set an ‘active from’ date for that configuration (default is today) and select a date rule.

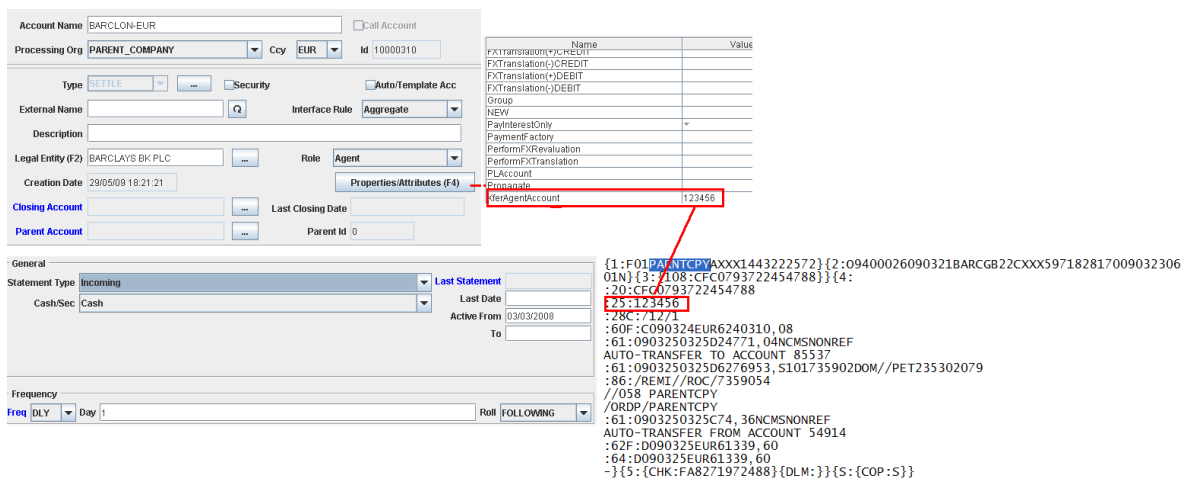
The Date Rule attached to the Incoming Statement Configuration in the Frequency panel is used to determine when we expect an Incoming MT940 for this specific account. We do not process an incoming MT940 if the date rule does not expect such a statement for a specific date; inversely, we raise an exception if a statement expected by the date rule is not received. See the Process Status Reporting section for more details.

Define the Processing Organization and Bank/Agent SWIFT Codes (LE Contact)

To be able to map an incoming MT940, you need to setup the related SWIFT Codes for the Processing Organization and Agent/Bank. As we integrate ‘outgoing’ SWIFT Messages, block 1 identifies the Receiver (Processing Organization) and block 2 the Sender (Bank/Agent). Thus, to be able to process the incoming MT940 you need to set in the LE Contact Window the SWIFT Address of the Processing Organization (to map block 1 swift address of the message receiver) and the SWIFT Address of the Agent (to map block 2 swift address of the message sender).

P.O. Bank Account to Reconcile - Setup Example

An example is presented below for a ‘standard’ bank account for the processing organization PARENT_COMPANY (Swift is PARNTCPY) with the agent BARCLAYS BANK PLC (BARCGB22) – second block displays the Account Statement Config:



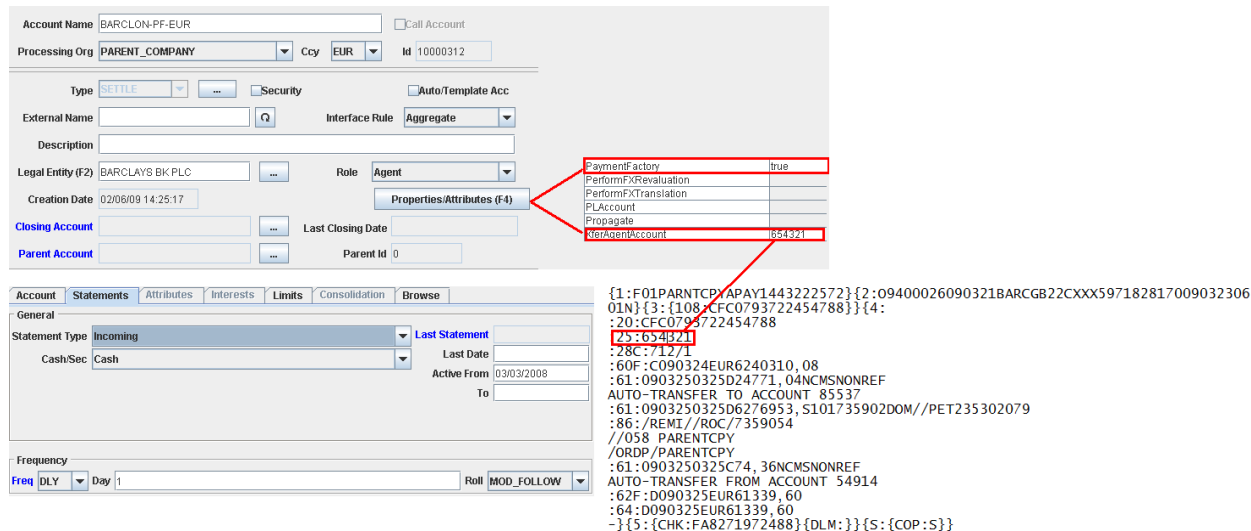
The screenshot shows the 'Account Name' field set to 'BARCLON-EUR' and the 'Processing Org' dropdown set to 'PARENT_COMPANY'. The 'Type' is 'SETTLE' and the 'Interface Rule' is 'Aggregate'. The 'Legal Entity (F2)' is 'BARCLAYS BK PLC' and the 'Role' is 'Agent'. The 'Creation Date' is '29/05/09 18:21:21'. The 'Closing Account' and 'Parent Account' fields are empty. The 'Last Closing Date' and 'Parent Id' fields are also empty.

The 'Properties/Attributes (F4)' section shows the 'ReferAgentAccount' field set to '123456'. The 'General' section shows the 'Statement Type' as 'Incoming' and the 'Cash/Sec' as 'Cash'. The 'Last Statement' section shows the 'Last Date' as '03/03/2008' and the 'Active From' as 'To'. The 'Frequency' section shows the 'Freq' as 'DLY' and the 'Day' as '1'. The 'Roll' is set to 'FOLLOWING'.

The 'SWIFT' section shows the following details:

- 1: F01PARNTCPYXXX1443222572
- 2: 09400026090321BARCGB22XXX5971828170090323601N
- 3: 108:CFC0793722454788
- 4: 20:CFC0793722454788
- 5: 25:123456
- 6: 28C:71271
- 60F: C090324EUR6240310, 08
- 61: 0903250325D24771, 04NCMSNONREF
- AUTO-TRANSFER TO ACCOUNT 85537
- 61: 0903250325D6276953, 5101735902DOM//PET235302079
- 86: /REMI//ROC/7359054
- //058 PARENTCPY
- /ORDP/PARENTCPY
- 61: 0903250325C74, 36NCMSNONREF
- AUTO-TRANSFER FROM ACCOUNT 54914
- 62F: D090325EUR61339, 60
- 64: D090325EUR61339, 60
- }{S:{CHK:FA8271972488}{DLM:}}{S:{COP:S}}

Another example is presented below for the payment factory account of the processing organization PARENT_COMPANY with the same agent BARCLAYS BANK PLC:



Same setup would be needed for a guarantee fees account, the only difference being to populate the GuaranteeFees account attribute to true to handle it properly.

Define the Related SDI

External PO SDI

Each processing organization bank account is attached to a SDI for the Role = Processing Organization and a SETTLE Method = SWIFT (for instance).

Below an example for the standard account of the processing organization PARENT_COMPANY with the agent BARCLAYS BANK PLC:

SDI Id	80543	Reference	80543	Cash/Security	BOTH
Role	ProcessingOrg	Contact	Default	Processing Org	ALL
Beneficiary	PARENT_COMPANY	Products	ANY	SD Filter	
Benef. Name	PARENT_COMPANY	Trade CounterParty	ALL	Pay/Rec	BOTH
Ccy	EUR	Description	SWIFT/BARCLAYS BK PLC/123456	<input checked="" type="checkbox"/> Preferred	Priority 0
Link SDI	<input type="checkbox"/>				
Method	SWIFT	Effective From	03/03/2008	Effective To	
Identifier		<input type="checkbox"/> by Trade Date			

Agent: BARCLAYS BK PLC	[intermediary]	[intermediary2]	Direct
Code	BARCLAYS BK PLC	A/C	123456
Contact	Default	GL A/C	BARCLON-EUR
Name	BARCLAYS BANK PLC	Sub A/C	
Identifier		R-Ship	

Below another example for the payment factory account of the processing organization PARENT_COMPANY with the same agent BARCLAYS BANK PLC:

SDI Id	80551	Reference	80551	Cash/Security	BOTH
Role	ProcessingOrg	Contact	Default	Processing Org	ALL
Beneficiary	PARENT_COMPANY	Products	ANY	SD Filter	
Benef. Name	PARENT_COMPANY	Trade CounterParty	ALL	Pay/Rec	BOTH
Ccy	EUR	Description	SWIFT/BARCLAYS BK PLC/654321	<input checked="" type="checkbox"/> Preferred	Priority 1
Link SDI	<input type="checkbox"/>				
Method	SWIFT	Effective From	03/03/2008	Effective To	
Identifier		<input type="checkbox"/> by Trade Date			

Agent: BARCLAYS BK PLC	[intermediary]	[intermediary2]	Direct
Code	BARCLAYS BK PLC	A/C	654321
Contact	Default	GL A/C	BARCLON-PF-EUR
Name	BARCLAYS BANK PLC	Sub A/C	
Identifier		R-Ship	

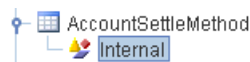
Internal PO SDI

In addition, we must define an internal processing organization SDI by currency.

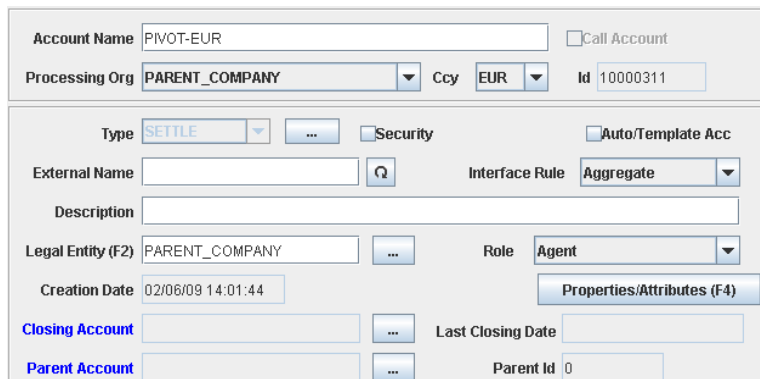
This SDI is only used for internal transactions: it is a 'technical' SDI picked by the system for cash pooling and inter-company transactions.

This SDI refers to a dummy ‘PIVOT-currency specific’ account previously defined with Agent = PO.

Before creating the ‘Internal’ SDI, go to **Configuration > System > Domain Values** – AccountSettleMethod and add the **Internal** settle method as shown below:



Then, create the PIVOT-“currency-specific” SETTLE Account with Agent = Processing Organization (example below with PIVOT-EUR):



Account Name: PIVOT-EUR ☐ Call Account

Processing Org: PARENT_COMPANY Ccy: EUR Id: 10000311

Type: SETTLE ☐ Security ☐ Auto/Template Acc

External Name: Interface Rule: Aggregate

Description:

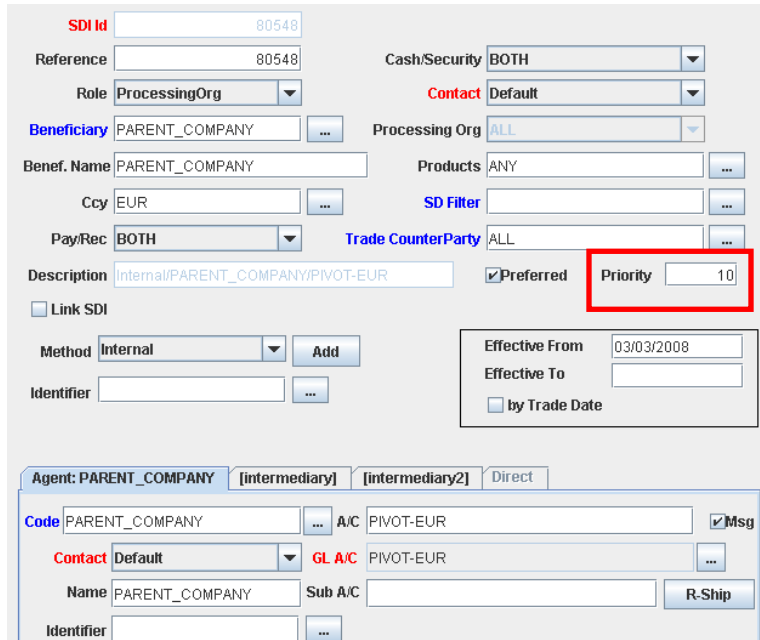
Legal Entity (F2): PARENT_COMPANY Role: Agent

Creation Date: 02/06/09 14:01:44 Properties/Attributes (F4)

Closing Account: Last Closing Date:

Parent Account: Parent Id: 0

Finally, add the internal processing organization SDI using that dummy ‘PIVOT-CCY’ account as shown below. Make sure to **assign a higher priority than the one set on the external SDIs**.



SDI Id: 80548 Reference: 80548 Cash/Security: BOTH

Role: ProcessingOrg Contact: Default

Beneficiary: PARENT_COMPANY Processing Org: ALL

Benef. Name: PARENT_COMPANY Products: ANY

Ccy: EUR SD Filter:

Pay/Rec: BOTH Trade CounterParty: ALL

Description: Internal/PARENT_COMPANY/PIVOT-EUR ☒ Preferred Priority: 10

☐ Link SDI

Method: Internal Add

Identifier:

Effective From: 03/03/2008 Effective To:

☐ by Trade Date

Agent: PARENT_COMPANY [intermediary] [intermediary2] Direct

Code: PARENT_COMPANY A/C: PIVOT-EUR ☒ Msg

Contact: Default GL A/C: PIVOT-EUR

Name: PARENT_COMPANY Sub A/C: R-Ship

Identifier:

1.1.2 Subsidiary Internal Account and Related SDI

Internal company accounts are configured as **Call Accounts** in Calypso.

Before creating a call account, add the following **Processing Organization** attributes:

- **CORPORATE_CASH_MANAGEMENT = true** (this will create the call account SDI for Role AccountHolder with **Product = ALL**). This is needed to be able to select the AccountHolder SDI for any product (FX, Cash...)
- **USE_NOSTRO_SDI = false** (this will only create call account SDI for Role AccountHolder)

Legal Entity	PARENT_COMPANY	...	Role	ALL
Processing Org	ALL			
Attribute Type	USE_NOSTRO_SDI	...	Value	false

Id	Processing Org	Legal Entity	Role	Attribute Type	Attribute Val...
80539	ALL	PARENT_COMPANY	ALL	DEFAULT_BOOK	BOOK1
80540	ALL	PARENT_COMPANY	ALL	DEFAULT_CPTY	CPTY_DUMMY
80556	ALL	PARENT_COMPANY	ALL	USE_NOSTRO_SDI	false
80537	ALL	PARENT_COMPANY	ALL	CORPORATE_CASH_MANAGEMENT	true

To activate the call account functions, go to the user environment, choose “add property” and add **USE_CALL_ACCOUNT = true**.

Please also add the **SetCallAccountId** trade workflow rule on a product-specific call account trade workflow to set a common reference (= CallAccountId) on call account related trade (customer transfer, interest bearing). For more information regarding call account statements, please refer to the Client Custody Management User Guide.

All ‘cash pooling’ movements from the subsidiary accounts which are confirmed by the MT940 will be mirrored on its related **call account**, defined by subsidiary, currency and processing organization.

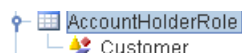
The processing organization reports the balance, produces bank account statements on a predefined frequency (or ad-hoc) and computes interest bearings for these internal accounts.

Each subsidiary has one **unique call account by currency**. Thus, movements in the same currency but reported by different incoming MT940 (different banks/different accounts) for the same subsidiary impact the same subsidiary call account.

Define Subsidiary as Internal ‘AccountHolder’

Subsidiaries must be defined in Calypso with the Role CounterParty and the **Role = AccountHolder**

To define the AccountHolder role, go to **Configuration > System > Domain Values** - AccountHolderRole and set the Role name. In our example below AccountHolder Role has been set as ‘Customer’, but it could be set to a different value (for instance **Subsidiary**):



Define the Subsidiary Call Account

A call account is linked to a Book. Before defining a call account, define a book related to your processing organization (BOOK1 in our case, linked to the processing organization PARENT_COMPANY).

Book Id	80538
Name	BOOK1
Activity	TREASURY
Accounting Book	TRADING1
Legal Entity	PARENT_COMPANY
Location	Europe/Paris
End Of Day	23 Hour 59 Min
Base Ccy	EUR
Holidays	TGT

Then, to define a call account, go to **Configuration > Accounting > Accounts**, flag 'call account' and configure a subsidiary internal account as shown below for PAR_SUB1-EUR:

Account Name: PAR_SUB1-EUR		<input checked="" type="checkbox"/> Call Account	Call Type: Subsidiary
Book: BOOK1	Ccy: EUR	Id: 10000313	SubType:
Legal Entity (F2): PAR_SUB1	Role: Customer		
Type: SETTLE			
External Name:			
Description:			
Creation Date: 02/06/09 16:06:56	Properties/Attributes (F4)		
<input checked="" type="checkbox"/> Balance	Freq: DLY	Day: 1	Rule: Roll: NO_CHANGE
Status: Pending	Last Mnt Date:	Retroactivity:	
Active From: 03/03/2008	Dormant Date:	<input checked="" type="checkbox"/> Interest Bearing	
Active To:	Reactivation Date:	<input type="checkbox"/> Billing	
Trade Status: VERIFIED			

Subsidiary call accounts **must** be defined with statement configurations (at least one/usually more than one). An example is shown below:

- one to produce daily internal Swift MT940
- one to produce monthly bank account statement (HTML)

<table border="1"> <tr> <td>Account</td> <td>Statements</td> <td>Attributes</td> <td>Interests</td> <td>Limits</td> <td>Consolidation</td> <td>Browse</td> </tr> <tr> <td colspan="7">General</td> </tr> <tr> <td>Statement Type</td> <td>Default</td> <td colspan="2">Last Statement</td> <td colspan="3"></td> </tr> <tr> <td>Numbering</td> <td>DDD</td> <td colspan="2">Last Date</td> <td colspan="3"></td> </tr> <tr> <td>Zero Balance</td> <td><input checked="" type="checkbox"/></td> <td colspan="2">Active From</td> <td colspan="3">03/03/2008</td> </tr> <tr> <td>No Movement</td> <td><input checked="" type="checkbox"/></td> <td colspan="2">To</td> <td colspan="3"></td> </tr> <tr> <td colspan="7">Position</td> </tr> <tr> <td>Cash/Sec</td> <td>Cash</td> <td colspan="2">Config</td> <td colspan="3">76154</td> </tr> <tr> <td>Class</td> <td>Client</td> <td colspan="2">Message Type</td> <td colspan="3">ACC_STATEMENT</td> </tr> <tr> <td>Type</td> <td>Actual</td> <td colspan="2">Template</td> <td colspan="3">Subsidiary(CStatement.html)</td> </tr> <tr> <td>Date</td> <td>Settle</td> <td colspan="2">Format</td> <td colspan="3">HTML</td> </tr> <tr> <td>Value</td> <td>Quantity</td> <td colspan="2">Gateway</td> <td colspan="3">PRINTER</td> </tr> <tr> <td colspan="7">Payment Based <input checked="" type="checkbox"/></td> </tr> <tr> <td colspan="7">Frequency</td> </tr> <tr> <td>Rule</td> <td>FirstBusMonth</td> <td colspan="2">Freq</td> <td colspan="2">DLY</td> <td>Day 1</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">Roll</td> <td colspan="3">END_MONTH</td> </tr> </table>		Account	Statements	Attributes	Interests	Limits	Consolidation	Browse	General							Statement Type	Default	Last Statement					Numbering	DDD	Last Date					Zero Balance	<input checked="" type="checkbox"/>	Active From		03/03/2008			No Movement	<input checked="" type="checkbox"/>	To					Position							Cash/Sec	Cash	Config		76154			Class	Client	Message Type		ACC_STATEMENT			Type	Actual	Template		Subsidiary(CStatement.html)			Date	Settle	Format		HTML			Value	Quantity	Gateway		PRINTER			Payment Based <input checked="" type="checkbox"/>							Frequency							Rule	FirstBusMonth	Freq		DLY		Day 1			Roll		END_MONTH			<table border="1"> <tr> <td>Account</td> <td>Statements</td> <td>Attributes</td> <td>Interests</td> <td>Limits</td> <td>Consolidation</td> <td>Browse</td> </tr> <tr> <td colspan="7">General</td> </tr> <tr> <td>Statement Type</td> <td>Default</td> <td colspan="2">Last Statement</td> <td colspan="3"></td> </tr> <tr> <td>Numbering</td> <td>DDD</td> <td colspan="2">Last Date</td> <td colspan="3"></td> </tr> <tr> <td>Zero Balance</td> <td><input checked="" type="checkbox"/></td> <td colspan="2">Active From</td> <td colspan="3">03/03/2008</td> </tr> <tr> <td>No Movement</td> <td><input checked="" type="checkbox"/></td> <td colspan="2">To</td> <td colspan="3"></td> </tr> <tr> <td colspan="7">Position</td> </tr> <tr> <td>Cash/Sec</td> <td>Cash</td> <td colspan="2">Config</td> <td colspan="3">76513</td> </tr> <tr> <td>Class</td> <td>Client</td> <td colspan="2">Message Type</td> <td colspan="3">ACC_STATEMENT</td> </tr> <tr> <td>Type</td> <td>Actual</td> <td colspan="2">Template</td> <td colspan="3">MT940</td> </tr> <tr> <td>Date</td> <td>Settle</td> <td colspan="2">Format</td> <td colspan="3">SWIFT</td> </tr> <tr> <td>Value</td> <td>Quantity</td> <td colspan="2">Gateway</td> <td colspan="3">SWIFT</td> </tr> <tr> <td colspan="7">Payment Based <input checked="" type="checkbox"/></td> </tr> <tr> <td colspan="7">Frequency</td> </tr> <tr> <td>Rule</td> <td>FirstBusMonth</td> <td colspan="2">Freq</td> <td colspan="2">DLY</td> <td>Day 1</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">Roll</td> <td colspan="3">END_MONTH</td> </tr> </table>		Account	Statements	Attributes	Interests	Limits	Consolidation	Browse	General							Statement Type	Default	Last Statement					Numbering	DDD	Last Date					Zero Balance	<input checked="" type="checkbox"/>	Active From		03/03/2008			No Movement	<input checked="" type="checkbox"/>	To					Position							Cash/Sec	Cash	Config		76513			Class	Client	Message Type		ACC_STATEMENT			Type	Actual	Template		MT940			Date	Settle	Format		SWIFT			Value	Quantity	Gateway		SWIFT			Payment Based <input checked="" type="checkbox"/>							Frequency							Rule	FirstBusMonth	Freq		DLY		Day 1			Roll		END_MONTH		
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Cash/Sec	Cash	Config		76513																																																																																																																																																																																																																															
Class	Client	Message Type		ACC_STATEMENT																																																																																																																																																																																																																															
Type	Actual	Template		MT940																																																																																																																																																																																																																															
Date	Settle	Format		SWIFT																																																																																																																																																																																																																															
Value	Quantity	Gateway		SWIFT																																																																																																																																																																																																																															
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		Roll		END_MONTH																																																																																																																																																																																																																															

Calypso provides out-of-the-box different HTML Statement Templates:

- SubsidiaryICStatement.html provides an HTML Internal Bank Account Statement in Value Date
- SubsidiaryICStatementBookingDate provides an HTML Internal Bank Account Statement in Booking Date

The Swift Template MT940 is based on Trade or Transfer Booking Date, depending on your trade workflow setup (usage or not of the “SetBOValidationDate” trade workflow rule).

Subsidiary call accounts must also be defined with an interest bearing configuration (and limit information when a limit check must apply). An example is presented below:

Account	Statements	Attributes	Interests	Limits	Consolidation	Browse														
<div> <div>Process Interest</div> <div> <input type="checkbox"/> Master Account </div> <div> <div>Aggregation</div> <div>Individual</div> </div> <div> <input type="checkbox"/> Quick Entry </div> </div>																				
Destination Acc...		...		Id 0																
Master Account		...		Id 0																
Valid from 03/03/2008		To		Add																
Type Interest		<input type="checkbox"/> Penalty		Remove																
Config Name Fixed 5%		...		Show																
				Update																
<table border="1"> <thead> <tr> <th>Id</th> <th>Config Id</th> <th>Config Name</th> <th>Type</th> <th>Is Penalty</th> <th>Active From</th> <th>Active To</th> </tr> </thead> <tbody> <tr> <td>80558</td> <td>75719</td> <td>Fixed 5%</td> <td>Interest</td> <td><input type="checkbox"/></td> <td>03/03/2008</td> <td></td> </tr> </tbody> </table>							Id	Config Id	Config Name	Type	Is Penalty	Active From	Active To	80558	75719	Fixed 5%	Interest	<input type="checkbox"/>	03/03/2008	
Id	Config Id	Config Name	Type	Is Penalty	Active From	Active To														
80558	75719	Fixed 5%	Interest	<input type="checkbox"/>	03/03/2008															

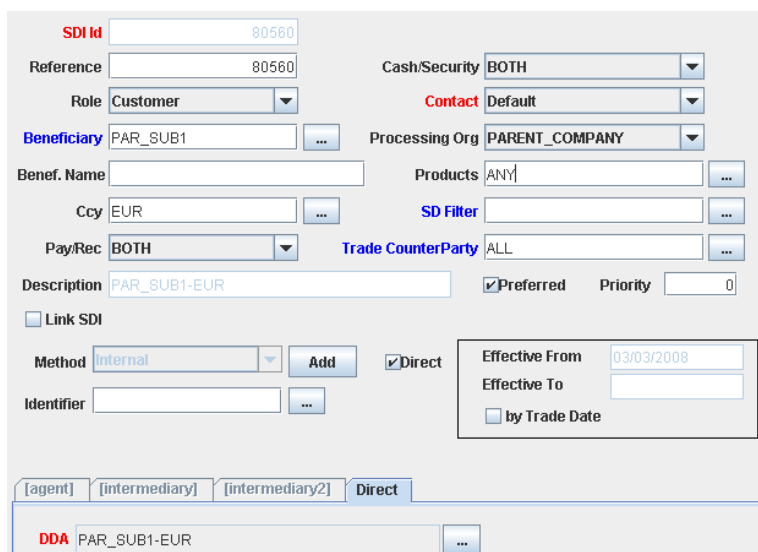
Account	Statements	Attributes	Interests	Limits	Consolidation	Browse
Minimum 0				Limit Review		...
Overdraft Limit 1,000,000						Add
Active From 03/03/2008						Update
To						Remove
Minimum Balance 0		Overdraft Limit 1,000,000		Valid From 03/03/2008		Valid To

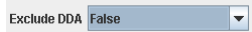
Subsidiary Automatic Call Account SDI

As soon as a subsidiary call account is saved, the system automatically generates the related ‘internal’ SDI.

When the attributes USE_NOSTRO_SDI = false and CORPORATE_CASH_MANAGEMENT = true for your processing organization(s), only **one** automatic SDI is created for call accounts linked to that processing organization.

This SDI is created for the Role Customer (or role set in the domain ‘AccountHolderRole’) and product = ANY, as shown below:



From the SDI browser, you need to set the ExcludeDDA to false  to be able to display that SDI. That SDI will be used for cash pooling (including guarantee fees accounts) deals and all in-house transactions.

1.1.3 Account Mapping

A new table 'Account Mapping' has been added to store the Bank Account Relationships and map the Incoming Statement Information.

Thus:

- To map the information contained in Tags 61 and/or 86;
- To define the dependencies between the processing organization bank accounts (and so the received MT940) and the related internal subsidiaries accounts,

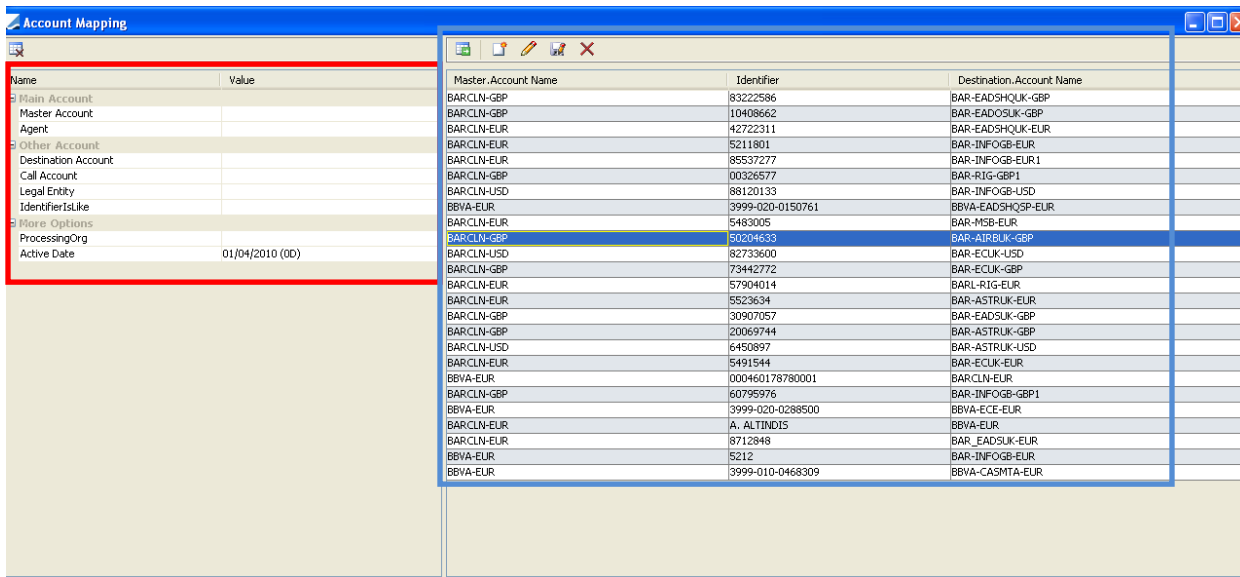
You need to define a mapping:

- Between the processing organization accounts (the so-called 'Master Account') and the internal subsidiaries (call) accounts
- Between two processing organization bank accounts (for automatic processing organization bank accounts sweeping)

This table also allows configuring automatic bank fees booking.

Account Mapping Overview

To access the Account Mapping, go to [Configuration > Accounting > Mapping](#).








Master Account Name	Identifier	Destination Account Name
BARCLN-GBP	83222586	BAR-EADSHQUK-GBP
BARCLN-GBP	10408662	BAR-EADSHQUK-GBP
BARCLN-EUR	42722311	BAR-EADSHQUK-EUR
BARCLN-EUR	5211801	BAR-INFOGB-EUR
BARCLN-EUR	85537277	BAR-INFOGB-EUR1
BARCLN-GBP	00326577	BAR-RIG-GBP1
BARCLN-USD	88120133	BAR-INFOGB-USD
BBVA-EUR	3999-020-0150761	BBVA-EADSHQSP-EUR
BARCLN-EUR	5483005	BAR-MSB-EUR
BARCLN-GBP	50204633	BAR-AIRBUK-GBP
BARCLN-USD	82733600	BAR-ECUK-USD
BARCLN-GBP	73442772	BAR-ECUK-GBP
BARCLN-EUR	57904014	BAR-RIG-EUR
BARCLN-EUR	5523634	BAR-ASTRUK-EUR
BARCLN-GBP	30907057	BAR-EADSHQ-GBP
BARCLN-GBP	20069744	BAR-ASTRUK-GBP
BARCLN-USD	6450897	BAR-ASTRUK-USD
BARCLN-EUR	5491544	BAR-ECUK-EUR
BBVA-EUR	000460178780001	BARCLN-EUR
BARCLN-GBP	60795976	BAR-INFOGB-GBP1
BBVA-EUR	3999-020-0288500	BBVA-ECE-EUR
BARCLN-EUR	A. ALTINDIS	BBVA-EUR
BARCLN-EUR	8712848	BAR-EADSHQ-EUR
BBVA-EUR	5212	BAR-INFOGB-EUR
BBVA-EUR	3999-010-0468309	BBVA-CASMTA-EUR

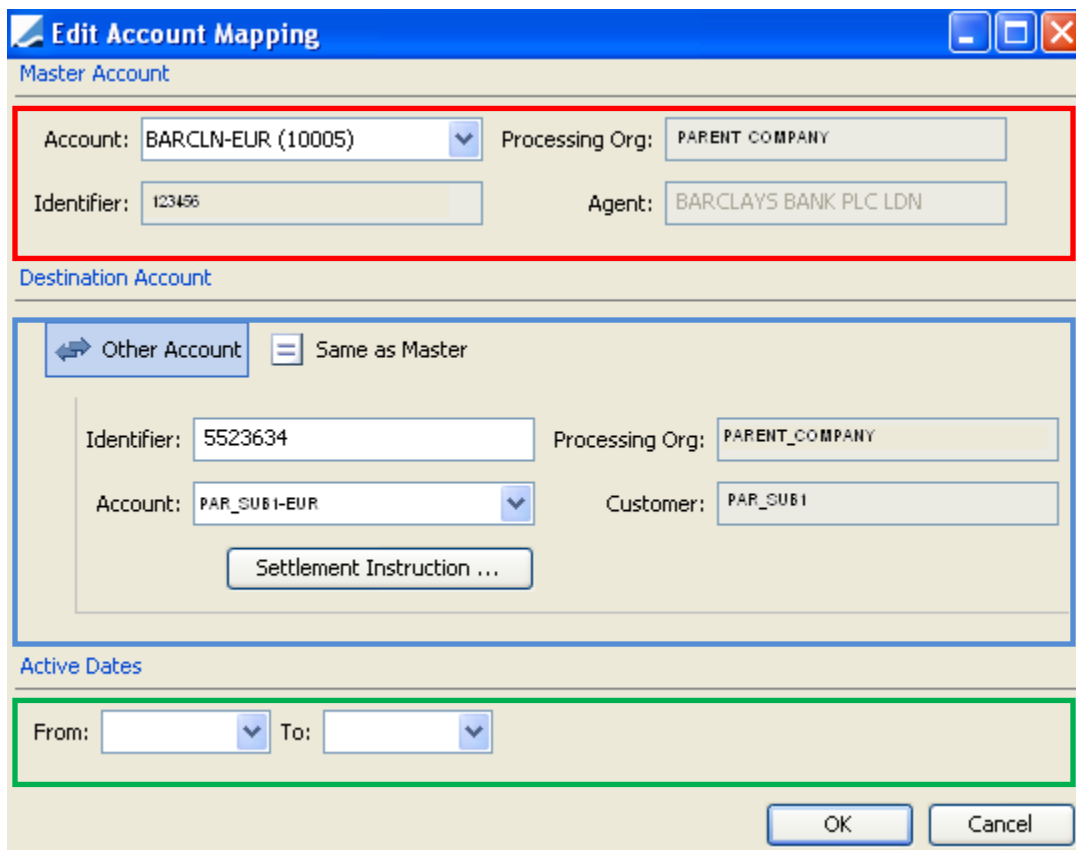
In red above, the Browser part of the Account Mapping Window. Selection criteria include:

- Master (P.O.) Account (= Statement Receiver) = to load only mapping rules for that specific P.O. Account
- Agent (= Statement Sender) = to load mapping rules involving only that Bank
- Destination Account = to load mapping rules for a specific destination account (either another or the same P.O. Account or a Subsidiary Call Account)
- Call Account = false to load Call Accounts and SETTLE Accounts - true to limit the load to call account mapping rules only
- Legal Entity = to load mapping rules for a specific Account Holder
- IdentifierLike = to load mapping rules based on one part of the identifier value (from the statement)
- Processing Organization = to load only mapping lines involving a specific processing organization
- Active Date = to load only active mapping rules based on tenor

In blue above, the Details part for the mapping rules defined. Options for that panel include:

-  Load
-  New mapping
-  Edit (to show a mapping rule or modify an existing one)
-  Duplicate
-  Delete

Mapping for Automatic Cash Pooling



The above setup allows the automatic creation of customer transfer deals for the internal cash pooling movements impacting both the processing organization settle account (either standard, payment factory or guarantee fees) and the subsidiary internal account.

Step 1 "Master Account"

In red above, you must select the processing organization account for which you receive an incoming statement to process.

The selection is done by clicking on the Account field that pops-up the Account Selector window. The 'Master Account' is the processing organization SETTLE Account for which we receive an incoming statement (MT940).

By selecting the account, the system defaults the grey fields (Processing Org Name, Identifier = Account Attribute XferAgentAccount, Account Agent Name) from the account static data.

Step 2 "Destination Account"

In blue above, you must select the 'OtherAccount' button, enter the identifier from Tag 61 or 86 of your incoming statement (MT940) then select the **subsidiary call account** by clicking on the Account fields. The system then pops-up the Account Selector window. Once the subsidiary call account selected, the system defaults the grey fields (Processing Org and Customer from the Account Static Data).

From the call account, we also allow automatic creation of the CounterParty External SDI (the so-called subsidiary not managed account/SDI). To do so, once the call account is selected you just have to press the “Settlement Instruction” button. If no SDI exists for the ‘MasterAccount’ Agent and the ‘Destination Identifier’ Identifier, then the system automatically creates that external SDI for the Call Account Holder with Role = CounterParty, Currency = Call Account Currency and Product = ALL. This external SDI is used to populate the cash pooling transfer description with the Bank and Subsidiary External Account Number. That information is then displayed on the subsidiary internal bank account statement. See SDI Section below for details.

Please note that for standard cash pooling (not involving a Payment Factory Account) we advise to create the related Counterparty external SDI from the Account Mapping using the Settlement Instruction button.

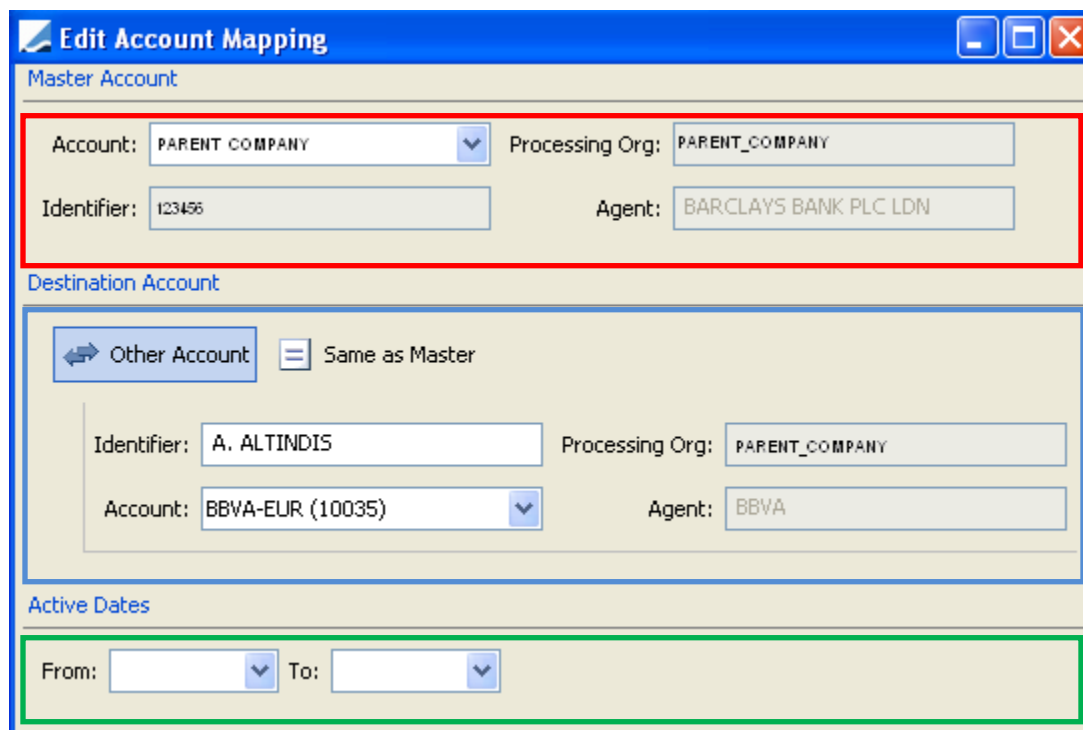
For Payment Factory Cash Pooling, we do not advise to create the related Counterparty external SDI from the Account Mapping using the Settlement Instruction button. Indeed, the identifier being a specific code (e.g. Subsidiary Kapis) we do not need a CounterParty SDI. Instead, a generic SDI, manually defined for the processing organization with the Role CounterParty, Agent = Processing Organization, Currency = Payment Factory Account Currency, will be picked by the system when it does not find an external CounterParty SDI with A/C field = Destination Account Mapping Identifier.

Step 3 “Active Dates”

In green above, you need to populate the “Active From/To” mapping Dates.

Default is blank but as mapping rules can evolve these fields allow putting a “To” and “From” Dates to the mapping rules.

Mapping for Automatic P.O. Bank Account Sweeping



Edit Account Mapping

Master Account

Account: PARENT_COMPANY Processing Org: PARENT_COMPANY

Identifier: 123456 Agent: BARCLAYS BANK PLC LDN

Destination Account

☒ Other Account ☐ Same as Master

Identifier: A. ALTINDIS Processing Org: PARENT_COMPANY

Account: BBVA-EUR (10035) Agent: BBVA

Active Dates

From: To:

The above setup allows the automatic creation of transfer agent deals for the processing organization bank accounts sweeping, when bank account are automatically swept by the bank on behalf of the processing organization. This movement is created in the system once we receive and process the incoming statement (MT940).

Step 1 "Master Account"

In red above, you must select the processing organization account for which you receive an incoming statement to process.

The selection is done by clicking on the Account field that pops-up the Account Selector window. The 'Master Account' is the processing organization SETTLE Account for which we receive an incoming statement (MT940).

By selecting the account, the system defaults the grey fields (Processing Org Name, Identifier = Account Attribute XferAgentAccount, Account Agent Name) from the account static data.

Step 2 "Destination Account"

In blue above, you must select the 'OtherAccount' button, enter the identifier from Tag 61 or 86 of your incoming statement MT940 then select the **processing organization account** by clicking on the Account fields. The system then pops-up the Account Selector window. Once the processing organization account selected, the system defaults the grey fields (Processing Org and Agent from the Account Static Data).

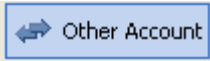
Step 3 "Active Dates"

In green above, you need to populate the "Active From/To" mapping Dates.

Default is blank but as mapping rules can evolve these fields allow putting a "To" and "From" Dates to the mapping rules.

Automatic Sweeping between two Accounts belonging to two different Processing Organizations.

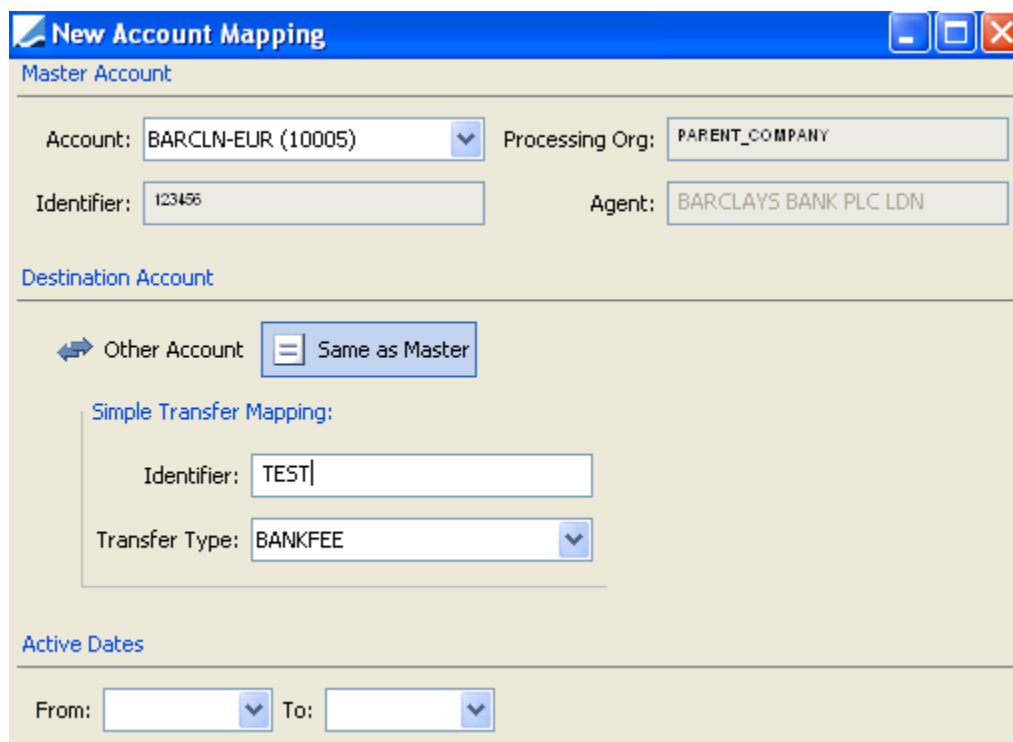
It is possible to automatically sweep funds from a bank account belonging to a PO to a bank account belonging to another PO (member of the group).

To do so, in the Destination field of the mapping table, press  and select – from the Account Browser – an account belonging to another PO than the 'Master Account'. Fill the identifier field and Save.

Once receiving the MT940s, the system will create two Simple Transfer trades, saved between the DEFAULT_BOOK set on each PO as LE Attribute and the other PO with the Role CounterParty.

To enable that process, the PO attributes and CounterParty SDIs for each processing organization must be set in your system.

Mapping for Automatic Bank Fee Booking



New Account Mapping

Master Account

Account: Processing Org:

Identifier: Agent:

Destination Account

Other Account

Simple Transfer Mapping:

Identifier:

Transfer Type:

Active Dates

From: To:

The above setup allows the automatic creation of simple transfer deals (type BANKFEE) for the processing organization bank account, when this fee is confirmed by the bank statement (MT940) and not pre-booked.

Step 1 "Master Account"

In red above, you must select the processing organization account for which you receive an incoming statement to process.

The selection is done by clicking on the Account field that pops up the Account Selector window. The 'Master Account' is the processing organization SETTLE Account for which we receive an incoming statement (MT940).

By selecting the account, the system defaults the grey fields (Processing Org Name, Identifier = Account Attribute XferAgentAccount, Account Agent Name) from the account static data.

Step 2 "Destination Account"

In blue above, you must select the '**SameAccount**' button, enter the identifier from Tag 61 or 86 of your incoming statement MT940 then select the Transfer Type to create. The system will therefore create a simple transfer impacting that processing organization bank account each time it will find that specific identifier value.

Step 3 "Active Dates"

In green above, you need to populate the "Active From/To" mapping Dates.

Default is blank but as mapping rules can evolve these fields allow putting a "To" and "From" Dates to the mapping rules.

1.1.4 Subsidiary Not Managed Account and Related SDI

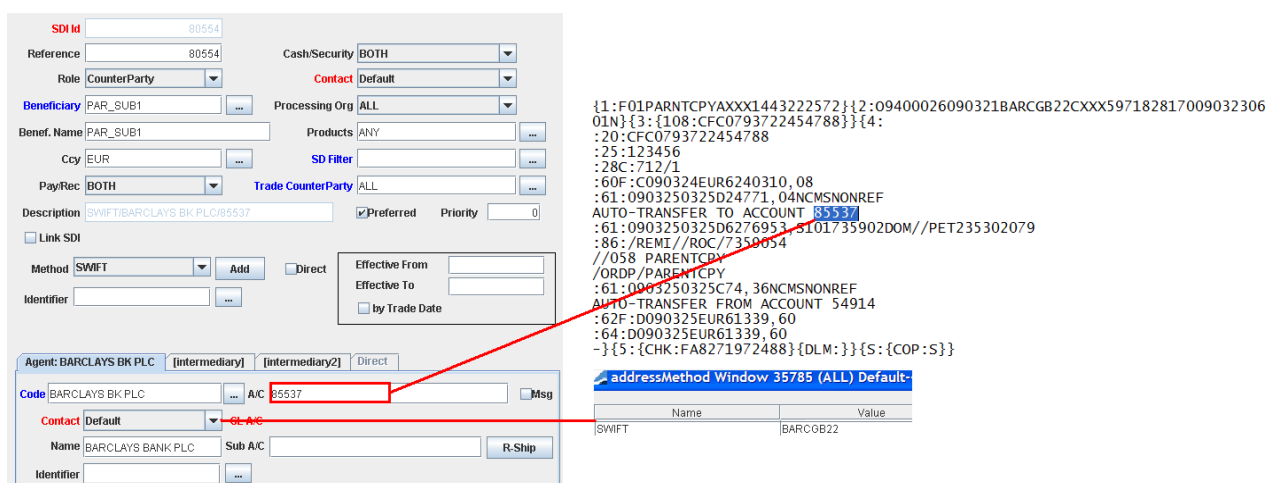
Each subsidiary must be defined with the Role = CounterParty.

CounterParty SDI can be defined for each subsidiary and sub-account. The information stored on this type of SDI can be used to map what is confirmed by the incoming MT940, provided the SDI is ticked as Preferred.

More precisely, the subsidiary not managed (sub-) account, as confirmed in Tag 61 and/or 86 of the incoming MT940, is mapped with the value saved in the field **A/C** of the CounterParty SDI for the MT940 sender (agent).

This SDI is usually automatically created from the Account Mapping window using the “Settlement Instruction” button.

An example is presented below for the subsidiary PAR_SUB1, EUR Not Managed Account at BARCLAYS BANK PLC (The Identifier from the incoming statement MT940 is “85537” which is the value set in the mapping rules for the Destination Account Identifier and the CounterParty SDI A/C field):



SDI Id: 80554
Reference: 80554
Cash/Security: BOTH
Role: CounterParty
Contact: Default
Beneficiary: PAR_SUB1
Processing Org: ALL
Benef. Name: PAR_SUB1
Products: ANY
Ccy: EUR
SD Filter:
Pay/Rec: BOTH
Trade CounterParty: ALL
Description: SWIFT/BARCLAYS BK PLC/85537
Preferred: ☒ Priority: 0
Link SDI: ☐
Method: SWIFT
Identifier:
Effective From:
Effective To:
by Trade Date: ☐
Agent: BARCLAYS BK PLC [Intermediary] [Intermediary2] Direct
Code: BARCLAYS BK PLC A/C: 85537
Contact: Default
Name: BARCLAYS BANK PLC Sub A/C:
Identifier:
R-Ship:
addressMethod Window 35785 (ALL) Default-
Name Value
SWIFT BARCGB22

```
{1:F01PARNTCPYAXXX144322572}12:09400026090321BARCGB22CXXX597182817009032306
01N}{3:{108:CFC0793722454788}}{4:
:20:CFC0793722454788
:25:123456
:28C:712/1
:60F:C090324EUR6240310,08
:61:0903250325D24771,04NCMSNONREF
AUTO-TRANSFER TO ACCOUNT 85537
:61:0903250325D6276953,5101735902DOM//PET235302079
:86:/REMI//ROC/7358054
//058 PARENTCPY
/ORDP/PARENTCPY
:61:0903250325C74,36NCMSNONREF
AUTO-TRANSFER FROM ACCOUNT 54914
:62F:D090325EUR61339,60
:64:D090325EUR61339,60
-}{5:{CHK:FA8271972488}}{DLM:}}{S:{COP:S}}
```

1.1.5 Subsidiary Payment Factory SDI

When a payment factory is used, subsidiary is not identified by its sub-account but by a specific code (eg. Kapis).

We can store that identifier in the field **A/C** of the CounterParty SDI but this information (only used for statements) is not really useful.

That's why, for Payment Factory Cash Pooling, we do not advise to create the related Counterparty external SDI.

Instead, a generic SDI manually defined for the processing organization with the Role CounterParty, Agent = Processing Organization, Currency = Payment Factory Account Currency, will be picked by the system to create the automatic cash pooling deals for payment factory accounts.

This generic SDI could also be used for standard cash pooling if you do not require the not managed accounts to be saved in the Calypso Static Data Referential.

1.1.6 SetBOValidationDate Trade Workflow Rule

The booking date confirmed by the statement for cash pooling entries is automatically populated as the transfer booking date.

For other internal transactions (intercompany settlements and in-house market transactions), the booking date to confirm on the internal account statement is set – on DDA/Client transfers only – by the transfer engine with today's date for back value movements.

The user can still change that 'default' booking date using the trade workflow rule **SetBOValidationDate**.

This rule compares the 'validation date' (= action date when we apply the SetBOValidationDate rule) stored as a trade keyword with the value date of all related cash flows for that trade:

- If cash flow value date \geq validation date (action) then transfer booking date = value date
- If cash flow value date $<$ validation then booking date = validation (action) date

1.1.7 Additional Static Data

The additional following static data are used for the reconciliation process and are populated by the default upgrade script provided by Calypso. If the script has not been executed, you will need to add them to use the reconciliation process.

Message Attribute

CashStatementProcess which indicates the type of "substatement" for the sub-MT940 message automatically split from the global MT940.

Trade Keywords

- CashStatementProcess which indicates the type of trade created automatically from the statement;
- CrossCheck (TransferAgent only) which indicates that both legs of the trade (two incoming swifts) have been received;
- TradeSource (SimpleTransfer only) populated to CashStatement and used in SimpleTransfer SDI selection to select the correct processing organization SDI from the statement;
- TargetAccountId (SimpleTransfer only) indicating the GL Account Id for the processing organization, derived from the statement and used in SimpleTransfer SDI selection to retrieve the correct processing organization SDI.

Transfer Attribute

ExpectedStatus which is checked by the rule CheckToBeSettled to move the transfers marked with that attribute automatically to SETTLED. This status identifies the reconciled movements and automatically updates the settled/reconciled cash position.

1.2 Matching Framework

The reconciliation process relies on the Calypso Matching Framework.

The Matching Framework being part of a module, you'll first need to build and deploy that module.

To do so,

- Get the matchingrel.jar (or build it: type `ant matching` or `bld matching` from you calypso directory). You will create a matching.jar and a matchingx.jar in the main calypso jars directory. The matching.jar contains the core Matching Framework. The matchingx.jar contains the calypsox part (sample of rules to create a workflow and sample of SwiftFormatter to generate Chaser).

These jars need to be added, if not already, in your classpath for the functionality to be accessible.

- If matching windows are not defaulted in **Configuration > Message & Matching**, add the windows linked to the matching process through **Utilities > Main Entry Customizer** thanks to the following actions:
 - Matching Alias Definition: `refdata.MatchingAliasWindow`
 - Matching Context Definition: `refdata.MatchingContextConfigurationWindow`
 - Matching Window: `reporting.MatchingUILauncher` `Matchable`

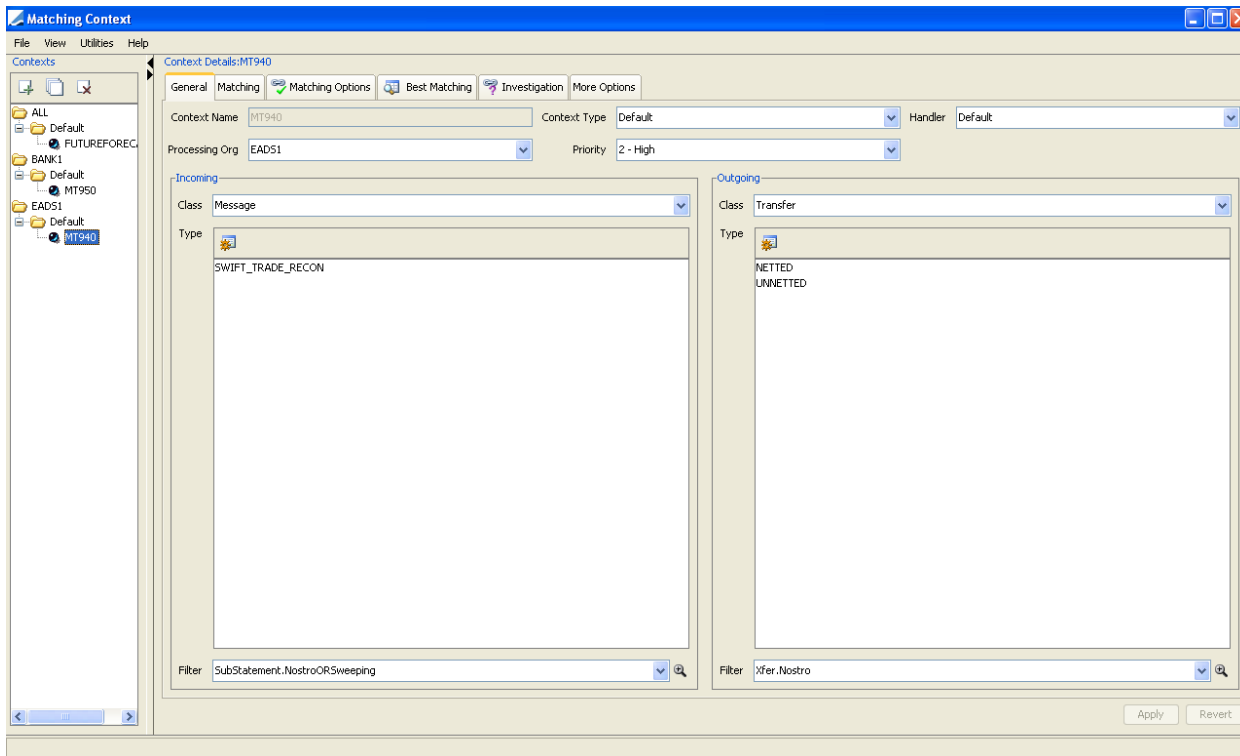
To use a specific template, you can use the following action: `reporting.MatchingUILauncher` `Matchable` `<template name>`.
- Add the necessary Engines:
 - MatchableBuilderEngine: `apps.startup.StartMatchableBuilderEngine`
 - MatchingEngine: `apps.startup.StartMatchingEngine`

1.2.1 Matching Context for Cash Management

Matching Context MT940 versus Transfers

To handle the matching between the 'incoming' MT940 sub-statement and the 'outgoing' transfer, we need to add a new context type 'MT940'.

To do so, go to **Configuration > Message & Matching > Matching Context** and, in the General panel, add a new context named (for instance) MT940 as shown below:



Set the General context elements as follows:

- Context Type = Default;
- Handler = Default;
- Processing Org. = ALL (Context can also be defined by Processing Organization for complex organizations);
- Priority = High;
- **Incoming Class = Message** (we want to match incoming MT940 sub-statements saved into Calypso as BO_MESSAGE Type = SWIFT_TRADE_RECON);
 - **Type** = choose the sub-statement message type **SWIFT_TRADE_RECON**;
 - **Filter** = define a Static Data Filter to only select sub-statement marked with **CashStatementProcess = Statement.Nostro or SubStatement.CashSweeping**, as shown below:

Name:	SubStatement.NostroORSweeping			Attributes...	Simulate...
Comment:				Pending Modifs	
Groups:	ANY			...	
Attribute	Criteria		Filter Value(s)		
IN Static Data Filter	IN	Add	SubStatement.CashSweeping,SubStatement.Nostro		

Name: SubStatement.Nostro

Comment:

Groups: ANY

Attributes... Simulate... Pending Modifs

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	IN	SubStatement.Nostro

Name: SubStatement.CashSweeping

Comment:

Groups: ANY

Attributes... Simulate... Pending Modifs

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	IN	SubStatement.CashSweeping

- **Outgoing Class = Transfer** (we want to match incoming MT940 sub-statements saved into Calypso with the Calypso "Nostro" Transfers, including CASH SWEEPING transfers);
 - **Type** = choose the transfer types; the transfer types are derived from your transfer workflow subtypes. By default, Calypso proposes NETTED/UNNETTED but there is the possibility through SD Filters to add new workflow transfer types. Please make sure to select the appropriate ones.
 - **Filter** = define a Static Data Filter to only select transfers which are not client, forecasts and/or cash pooling; the system must only perform automatic matching for 'nostro' transfers versus incoming sub-messages and must exclude subsidiary internal transfers impacting the subsidiary call account. You must also exclude from the matching the transfers type FORECAST which impact the nostro but that must be reconciled through another context with CASHPOOLING. No need to reconcile them with sub-message. You must also exclude transfers associated to the 'BOCashSettlement' technical deal (see 1.3).

Name: Xfer.Nostro

Comment:

Groups: ANY

Attributes... Simulate... Pending Modifs

Attribute	Criteria	Filter Value(s)
Xfer Is DDA	IS	false
Xfer Is Payment	IS	true
Xfer Product Type	NOT_IN	BOCashSettlement
Xfer Type	NOT_IN	CASHPOOLING,FORECAST

Set the Matching panel as follows:

Context Details: MT940

General Matching Matching Options Best Matching Investigation More Options

Workflow

Auto Match AUTOMATCH Unmatch UNMATCH Less <<

Manual Match MANUALMATCH

MisMatch MISMATCH

Skip Save Rules

Incoming Outgoing

Keys

Name	Type	Weight	Alias	Cumulative	Usage
GL Account	Other	10			All
PO Agent Code	Instruction	4	Alias...		All
ProcessingOrg	Role	3	Alias...		All
Ccy	Other	9			All
Settlement Amount	Amount	8			All
Settle Date	Date	5			All
Description	Other	1			None
Trade Date	Date	2			None

- » Define the underlying message (type SWIFT_TRADE_RECON) and transfer (nostro) workflow **actions** that the system will apply on these objects when matching automatically (AUTOMATCH), manually (MANUALMATCH), de-matching (UNMATCH) or mismatching (MISMATCH). These **actions must be available as message and transfer actions**.

Below an example of the related SWIFT_TRADE_RECON Message Workflow:

Processing Org ALL

Event Class PSEventMessage Subtype SWIFT_TRADE_R... Product ALL

Orig Status PROCESSED Action UNMATCH Result Status UNPROCESSED

☐ Different User ☐ Create Task ☐ Use STP ☐ Use KickOff/Cut Off

☐ Log Completed ☐ Preferred Action ☐ Update Only ☐ Generate Intermediary E... ☐ Needs manual Authorization

Rules

Filter SubStatementNostro Custom Rules Definition

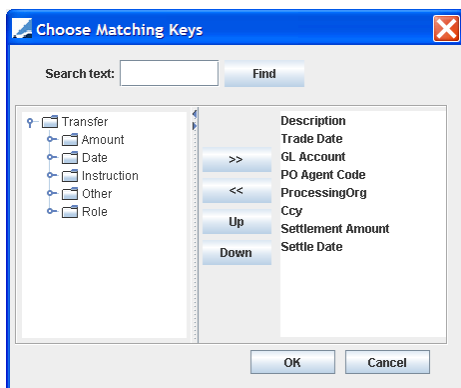
Comment

ID	Orig Status /	Action	Resulting Status	Different User	Use STP	Log	Subtype	Product Type	Rules	Processing Org	Kick Off	Cut Off	Create Task	Comment	Filter
79725	NONE	NEW	PENDING				SWIFT_TRADE_RECON	ALL		ALL					Statement
79396	NONE	NEW	UNPROCESSED				SWIFT_TRADE_RECON	ALL		ALL					NotStatement
79865	NOT_PROCESSED	REPROCESS	PENDING				SWIFT_TRADE_RECON	ALL		ALL					Statement
79726	PENDING	AUTHORIZE	PROCESSED				SWIFT_TRADE_RECON	ALL		ALL					Statement
79718	PENDING	BLOCK	NOT_PROCESSED				SWIFT_TRADE_RECON	ALL		ALL					Statement
79729	PENDING	CANCEL	CANCELED				SWIFT_TRADE_RECON	ALL		ALL					Statement
79580	PROCESSED	CANCEL	CANCELED				SWIFT_TRADE_RECON	ALL		ALL					SubStatement Nostro
79582	PROCESSED	UNMATCH	UNPROCESSED				SWIFT_TRADE_RECON	ALL		ALL					SubStatement Nostro
79210	UNPROCESSED	AUTOMATCH	PROCESSED				SWIFT_TRADE_RECON	ALL		ALL					SubStatement Nostro
79218	UNPROCESSED	EXCLUDE	EXCLUDED				SWIFT_TRADE_RECON	ALL		ALL					SubStatement Nostro
79212	UNPROCESSED	MANUALMATCH	PROCESSED				SWIFT_TRADE_RECON	ALL		ALL					SubStatement Nostro
79155	UNPROCESSED	PROCESS	PROCESSED				SWIFT_TRADE_RECON	ALL	HandleCashPooling	ALL					SubStatement Nostro
79213	UNPROCESSED	UNMATCH	UNMATCHED				SWIFT_TRADE_RECON	ALL		ALL					SubStatement Nostro

And the same related actions to be available on the Transfer Workflow:

79585	CANCELED	UNMATCH	CANCELED				ALL	ALL		TEST_EADS					
79444	MATCHED	UNMATCH	UNMATCHED				ALL	ALL		TEST_EADS					
79584	SETTLED	UNMATCH	VERIFIED				ALL	ALL		TEST_EADS					
79466	UNMATCHED	UNMATCH	UNMATCHED				ALL	ALL		TEST_EADS					
79583	VERIFIED	UNMATCH	VERIFIED				ALL	ALL		TEST_EADS					
79471	VERIFIED	MANUALMATCH	SETTLED				ALL	ALL		TEST_EADS					
79453	VERIFIED	AUTOMATCH	SETTLED				ALL	ALL		TEST_EADS					

- » Then define the matching Keys clicking on the Keys icon; this opens the following selection window:



- » Then, for each key define their type, weigh (this also defines the order of the columns of each key in the matching monitor), alias (only available for some key such as Processing Org., Agent and must be set to true/false), cumulative aspect (only available for some keys such as Settlement Amount) and the usage (All, Auto, Manual, None);
- » For some keys, we also allow the definition of Tolerance for Automatic and/or Manual Matching;

A proposed setup for the matching keys is presented below (this setup must be defined and adjusted in terms of keys, usage and tolerance rules for each implementation):

Name	Type	Weight	Alias	Cumulative	Usage
Description	Other	1			None
Trade Date	Date	1			None
GL Account	Other	10			All
PO Agent Code	Instruction	4	<input checked="" type="checkbox"/> Alias...		All
ProcessingOrg	Role	3	<input checked="" type="checkbox"/> Alias...		All
Ccy	Other	9			All
Settlement Amount	Amount	8		<input checked="" type="checkbox"/>	All
Settle Date	Date	5			Auto

Auto Tolerance					
Type					

Manual Tolerance					
Type	UnitAmount	Min	0	Max	50

Settle Date	Date	5			Auto
-------------	------	---	--	--	------

Settle Date	Date	5			Auto
-------------	------	---	--	--	------

Auto Tolerance					
Type					

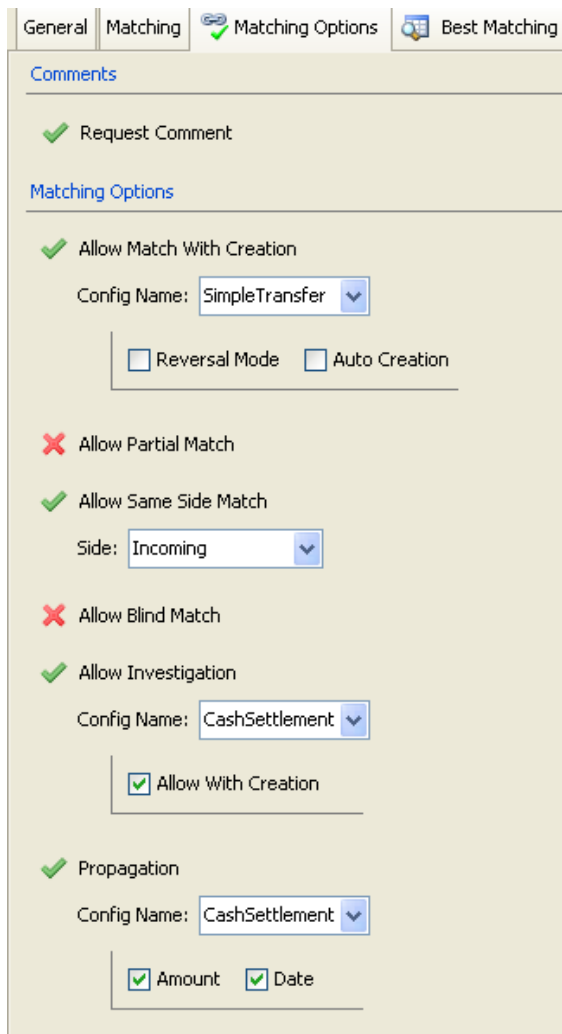
In that example:

- Description and Trade Date have been defined with Usage = None; this means these keys are there for information purpose only but are not used for matching check;
- GL Account and Ccy have been defined with Usage All meaning that we do not allow to match (automatically or manually) a sub-message and a transfer having different GL Account or Ccy;
- PO Agent Code and Processing Org. are by default aliasable and are also defined as mandatory matching keys through Usage = All. This means we do not allow to match (automatically or manually) a sub-message and a transfer having different processing organizations and agents;
- Settlement Amount is defined as Cumulative as we allow matching n sub-messages with m transfers, the cumulative sum of settlement amount being computed automatically by the system. Settlement amount is a key which also allows applying tolerance types (% , Amount, UnitPer...) that could be different for Auto or Manual Matching. In the example above, we do not allow tolerance for

automatic matching (= strict match) but we allow a 50 UnitAmount in the transfer currency when matching manually;

- Settle Date is defined with Usage = Auto. This means settle date is only checked for automatic matching. We allow, for manual matching, a difference between the sub-message date and the transfer.
- All these keys are user-configurable and the setup presented above is only an example.

Set the Manual Matching panel as follows:



General | Matching | Matching Options | Best Matching

Comments

✓ Request Comment

Matching Options

✓ Allow Match With Creation
Config Name: SimpleTransfer
☐ Reversal Mode ☐ Auto Creation

✗ Allow Partial Match

✓ Allow Same Side Match
Side: Incoming

✗ Allow Blind Match

✓ Allow Investigation
Config Name: CashSettlement
☒ Allow With Creation

✓ Propagation
Config Name: CashSettlement
☒ Amount ☒ Date

We allow the user to define the manual matching options that he can access when using the Matching Monitor to manually reconcile unmatched items:

Credit Facility / Additional Functions

Comments

Request Comment

If the user requests a comment to be added when manually matching an item, then he will have to select the Request Comment in that window.

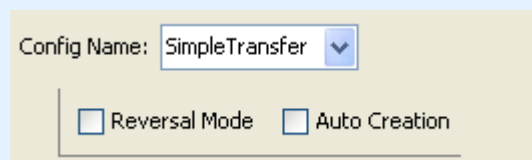
Calypso allows entering a text comment or attaching a file (any format) to the matching object.

The comment will be displayed on the matched object window column "user comment"; the file will be displayed on the matched object window through the Show File option (right-click).

Matching Options

Allow Match With Creation

If the user allows the manual creation of missing movement, he will have to tick the "Allow Match With Creation" in the Matching Options. This will activate a "Match With Creation" button in the Matching Monitor that will add the possibility to manually create and type a specific movement that is missing in the Nostro balance; the system will create a SimpleTransfer with Flow Type = "Type set from the Matching Monitor".



The system allows two additional modes for the 'Match With Creation':

Reversal Mode: this mode may be used to adjust the theoretical and actual balances when expected value dates differ from the statement/bank confirmed value date. When Reversal Mode is activated, the system will create one simple transfer per date to reverse your expected entry and a new one per date to pass that movement as confirmed by the bank.

Auto Creation: when activated, that mode allows the automatic creation of a missing entry which is confirmed by the bank account statement. The system initially tries to find a matching transfer based on the matching criteria; if it cannot find any the system automatically creates a Simple transfer to impact the balance with the missing movement coming from the statement.

Allow Partial Match

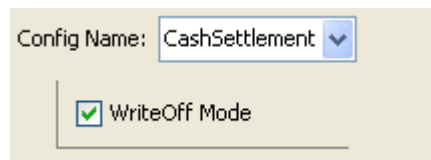
A Partial Match mode can also be used.

This mode allows doing a (manual) partial settlement of a transfer when only one part of the flow has been confirmed by the bank statement. The system, when manually choosing the 'Partial Match' function, will SPLIT the existing transfer and will create two new: one going to SETTLED for the part confirmed by the statement, another one going

Credit Facility / Additional Functions

to FAILED for the part remaining to be confirmed. The FAILED transfer will still appear in the pending items to reconcile in the Matching Monitor.

This is based on the transfer workflow setup. Please see the annex for more details.



WriteOff Mode: when activated, that mode allows automatic (or manual) booking of the difference between your transfer and your message which is within the tolerance as a writeoff. The write off mode will not impact your position but can trigger specific postings. When applying the write off logic (means the amount difference between your transfer and message is within the settlement amount tolerance), the system automatically SPLIT the existing transfer and will create two new: one going to SETTLED for the part confirmed by the statement, another one going to WRITEOFF for the difference. Globally with the SETTLED + WRITEOFF transfer, the position remains unchanged but the WRITEOFF transfer allows booking the difference in specific accounts.

This is based on the transfer setup. Please see the annex for more details.

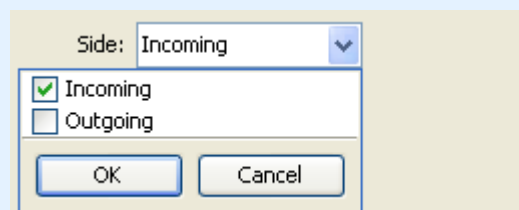
Allow Same Side Match

When activated, the system will allow matching n items within the same category (n incoming messages/n outgoing transfers) to remove them from the list of items to reconcile (with a comment).

We usually apply the Same Side Matching only on Incoming (Messages) to remove some of them from the list of items to reconcile.

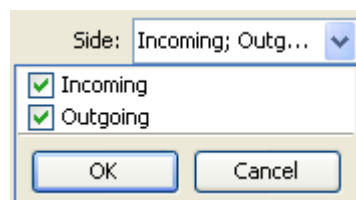
This function will check that the sum of amount = 0 and will only allow the matching when that condition is verified.

It is allowed only within the same category.



Allow Blind Match

This function should not be activated for cash management. It is designed for confirmation matching and allows matching without any control.



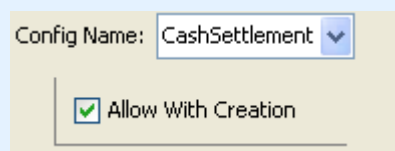
Credit Facility / Additional Functions

Allow Investigation

Some items, needing additional investigation and/or action from a third party, cannot be reconciled quickly. In some cases, these items (either incoming message and/or outgoing transfer) need to be identified as items under investigation and users must be able to store and consult the audit/history of actions/documents...associated to them.

When the mode 'Allow Investigation' is activated, the user has the possibility to link and mark these items with a specific status (eg. Investigate). He can perform action such as adding a comment, a file and keep the complete 'reconciliation' history on it. The items marked with the 'Investigate' status will still be eligible to automatic matching.

It is possible to mark as Investigate (to link them) several incomings together, several outgoings together, n to m incoming/outgoing



Allow With Creation

Some unmatched items are due to our errors. When a back-office user cannot receive a correction on time, he/she has the possibility to use an 'Investigate with creation' function that will impact the theoretical position only (no postings/no actual position).

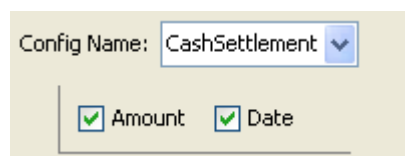
When activating that option in the matching context, the user will have to select the default Xfer Type that will be used on the Simple Transfer for the impact on the theoretical position only (eg. POSITION_ADJUSTMENT in the following of that document).

The Investigate with creation will follow the same rules as the Match with Creation but will only be used when we are waiting for a correction from our side but need to impact the theoretical position before receiving the correction for timing issues.

Allow Propagation

This mode cannot be activated in conjunction with 'Match With Creation / Reversal Mode'.

When selected (Amount and Date are ticked) the system – when automatically or manually matching message and transfer which have a difference of amount and/or date within the tolerance – will propagate as Real Settle Amount of the transfer the amount as confirmed by the bank statement and as Settle Date of the transfer the value date as confirmed by the bank statement.



Set the Best Matching panel as follows:

Context Details: MT940

General | Matching | Manual Matching | **Best Matching** | Investigation | More Options

Rating

★★★★★	if score >=	95.00
★★★★☆	if score >=	85.00%
★★★☆☆	if score >=	75.00%
★★☆☆☆	if score >=	50.00%
★☆☆☆☆	if score >=	30.00%

Constraint

☐ Limit to 0 matchables, selected by: Highest Rating

Column	Operator	Value

- The Best Matching part is only used for information
- No specific constraint is necessary

Set the Investigation Matching panel as follows:

Context Details: MT940

General | Matching | Manual Matching | Best Matching | **Investigation** | More Options

Dynamic Filter Options

☒ Show One to One Filter Button

☒ Show Alias Filter Button




Dynamic Filter Initialization

Column	Operator	Value
Is AutoMatch	Is	True

- One to One Filter button and Show Alias Filter is not needed for Cash Management
- May be activated later based on end-user business practice
- Dynamic Filter must be set to IsAutoMatch Is True to select only automatchable items, as shown above

Set the More Options panel as follows:

Context Details: MT940

General Matching  Manual Matching  Best Matching  Investigation More Options


Cut Off

Hide Matched items after: business days

Holidays:

Calculator:

Chaser

 Allow Chasing

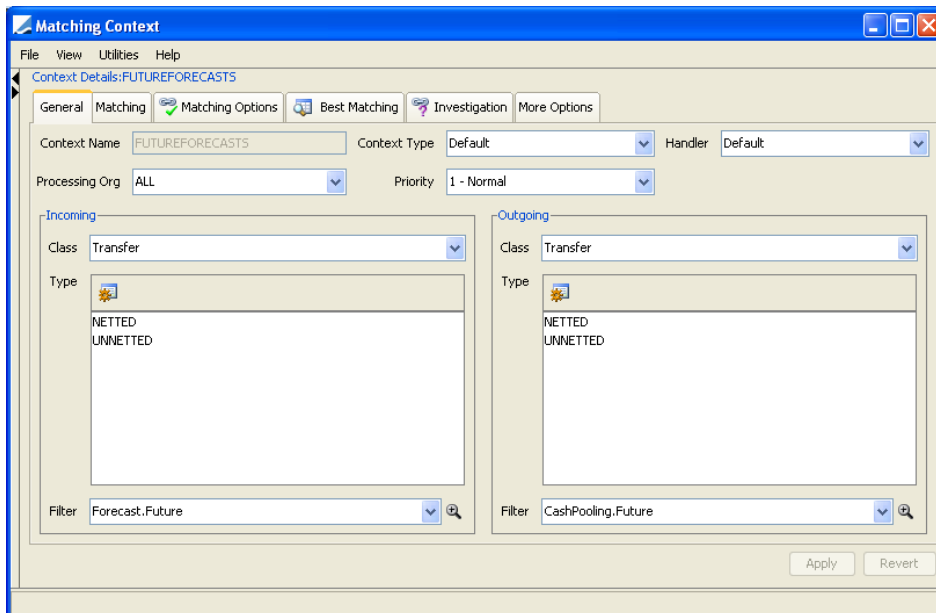
- Hide Matched Items after = number of business days to hide the matched items from the matched panel of the Matching Monitor
- The Matched panel is used to Unmatch Items
- We propose a default value of 1 to avoid polluting the matched panel with automatic or manual old matched items. This is subject to change based on end-user business practice
- Holidays = Add a calendar based on business dates to define into the system the + 1 business days to hide matched items
- Calculator must be Default
- Chaser = not activated for now for cash management

Matching Context Future Forecast (Substitution)

Some agents are confirming future cash pooling movements in their MT940.

We have therefore added the possibility to automatically (if 1 to 1) or manually (n to m) remove the related future dated forecasts based on the result of the matching of the future dated cash pooling entries with the forecast.

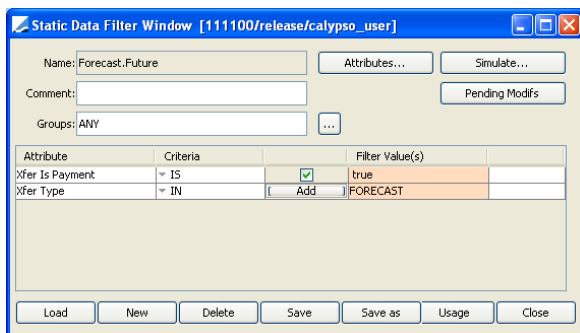
To do so, you need to configure a new matching context as shown below:



The Matching Context dialog box is shown with the following settings:

- Context Name: FUTUREFORECASTS
- Context Type: Default
- Handler: Default
- Processing Org: ALL
- Priority: 1 - Normal
- Incoming Class: Transfer
- Incoming Type: NETTED, UNNETTED
- Incoming Filter: Forecast.Future
- Outgoing Class: Transfer
- Outgoing Type: NETTED, UNNETTED
- Outgoing Filter: CashPooling.Future

- **Incoming Class = Transfer type FORECAST** (we want to match transfer type FORECAST with transfer type CASHPOOLING);
 - **Type** = choose the transfer types; the transfer types are derived from your transfer workflow subtypes. By default, Calypso proposes NETTED/UNNETTED but there is the possibility through SD Filters to add new workflow transfer types. Please make sure to select the appropriate ones.
 - **Filter** = define a Static Data Filter to only select transfer type FORECAST, as shown below:

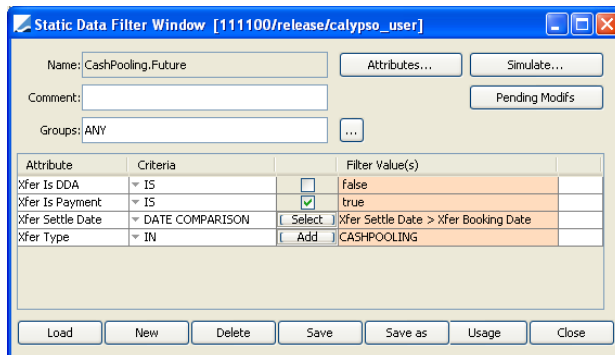


The Static Data Filter Window shows the following configuration:

- Name: Forecast.Future
- Comment:
- Groups: ANY
- Criteria:

Attribute	Criteria	Filter Value(s)
Xfer Is Payment	IS	true
Xfer Type	IN	FORECAST

- **Outgoing Class = Transfer** (we want to match transfer type FORECAST with transfer type CASHPOOLING);
 - **Type** = choose the transfer types; the transfer types are derived from your transfer workflow subtypes. By default, Calypso proposes NETTED/UNNETTED but there is the possibility through SD Filters to add new workflow transfer types. Please make sure to select the appropriate ones.
 - **Filter** = define a Static Data Filter to only select CASHPOOLING transfer, nostro side (exclude the DDA/Client which does not need to be reconciled) and which are future dated (Xfer Settle Date > Xfer Booking Date), as shown below:



Static Data Filter Window [111100/release/calypso_user]

Name: CashPooling.Future Attributes... Simulate...

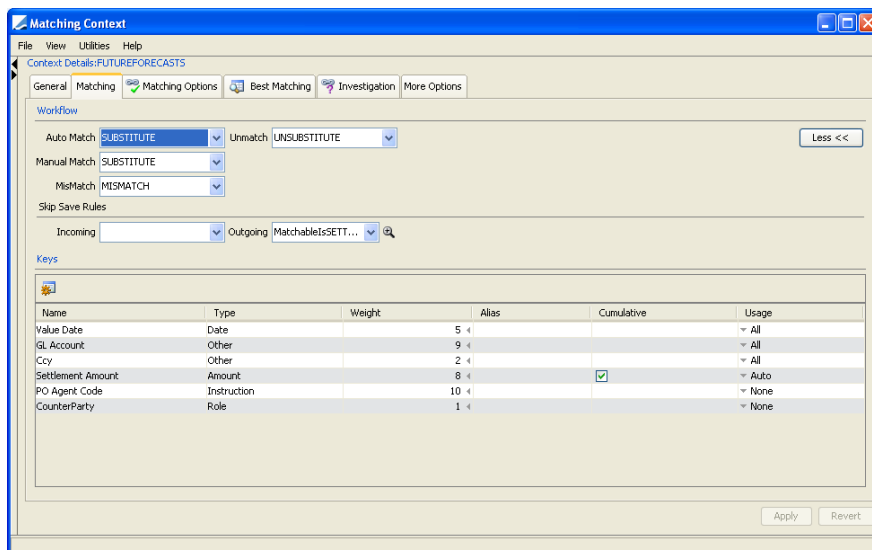
Comment: Pending Modifs

Groups: ANY

Attribute	Criteria	Filter Value(s)
Xfer Is DDA	IS	False
Xfer Is Payment	IS	true
Xfer Settle Date	DATE COMPARISON (Select)	Xfer Settle Date > Xfer Booking Date
Xfer Type	IN (Add)	CASHPooling

Load New Delete Save Save as Usage Close

Then define the Matching actions and keys for that specific context, as shown below:



Matching Context

File View Utilities Help

Context Details: FUTUREFORECASTS

General Matching Matching Options Best Matching Investigation More Options

Workflow

Auto Match SUBSTITUTE Unmatch UNSUBSTITUTE Less <<

Manual Match SUBSTITUTE

MisMatch MISMATCH

Skip Save Rules

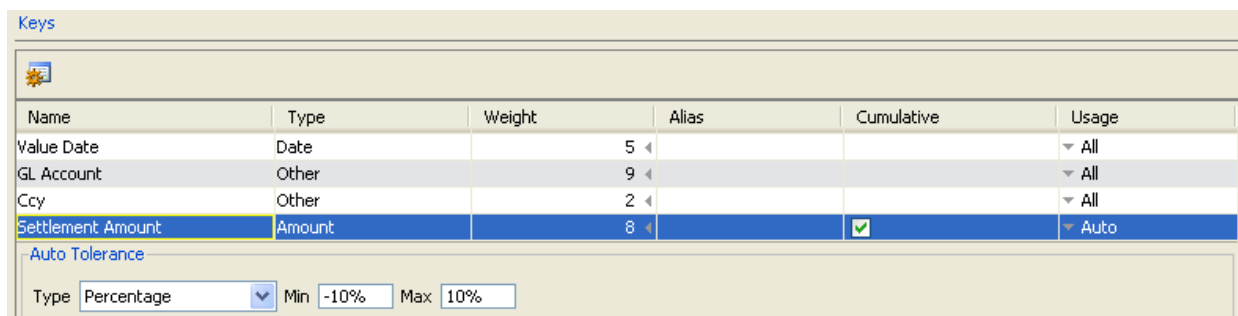
Incoming Outgoing MatchableIsSETT...

Keys

Name	Type	Weight	Alias	Cumulative	Usage
Value Date	Date	5			All
GL Account	Other	9			All
Ccy	Other	2			All
Settlement Amount	Amount	8		<input checked="" type="checkbox"/>	Auto
PO Agent Code	Instruction	10			None
CounterParty	Role	1			None

Apply Revert

As forecast never matches the cash pooling amount strictly, we advise to apply a large tolerance for the automatic matching, as shown below:



Keys

Name	Type	Weight	Alias	Cumulative	Usage
Value Date	Date	5			All
GL Account	Other	9			All
Ccy	Other	2			All
Settlement Amount	Amount	8		<input checked="" type="checkbox"/>	Auto

Auto Tolerance

Type Percentage Min -10% Max 10%

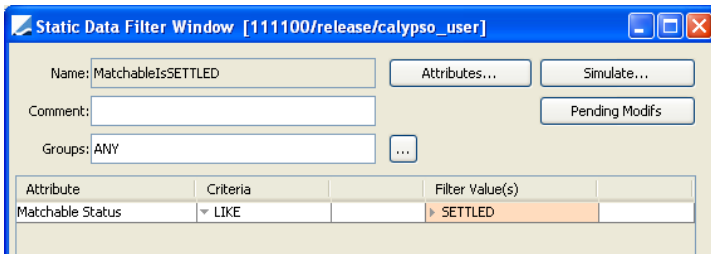
Settlement Amount is only used for Usage = Auto with a tolerance of +/- 10%. For manual matching, we do not apply any check on the amount (with that configuration).

Note that:

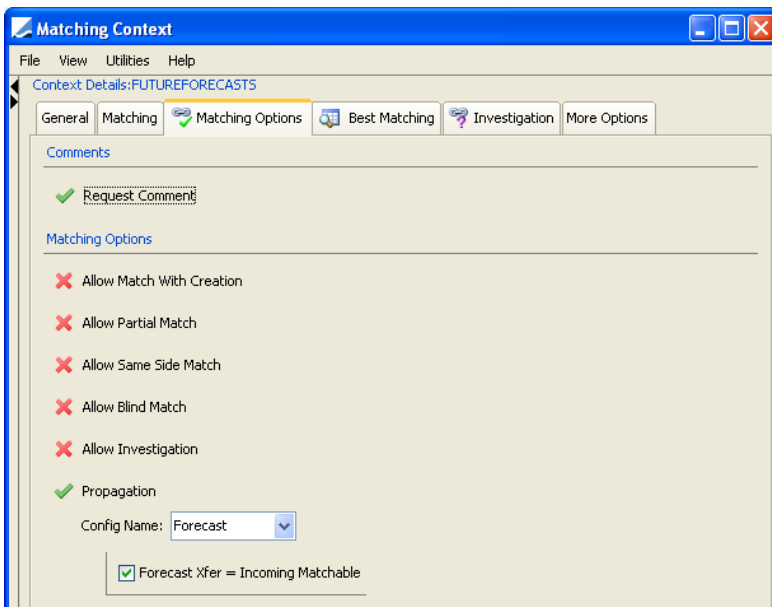
CASHPOOLING transfers, created from the incoming MT940, are automatically SETTLED.

When reconciling a SETTLED CASHPOOLING transfer with a 'not settled' FORECAST transfer, we will apply the automatch or manual match actions only on the FORECAST transfer and will skip saving that action on the CASHPOOLING transfer (the outgoing object in our example).

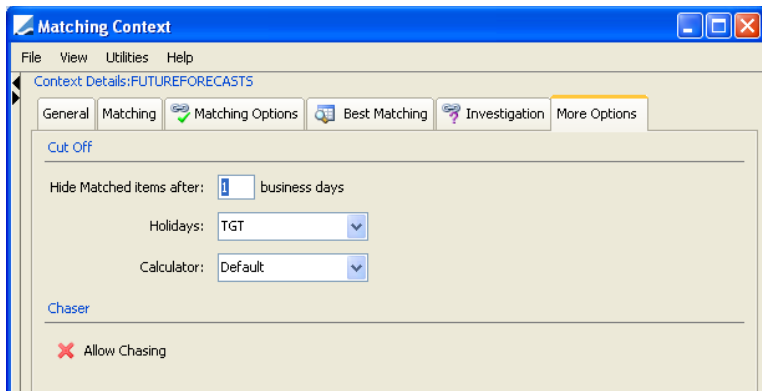
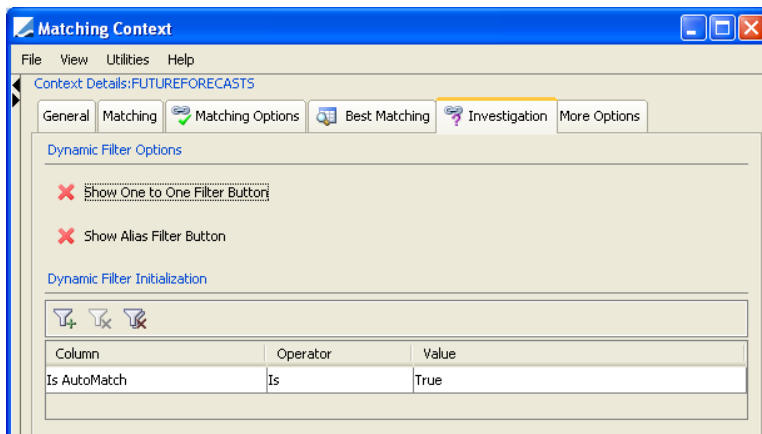
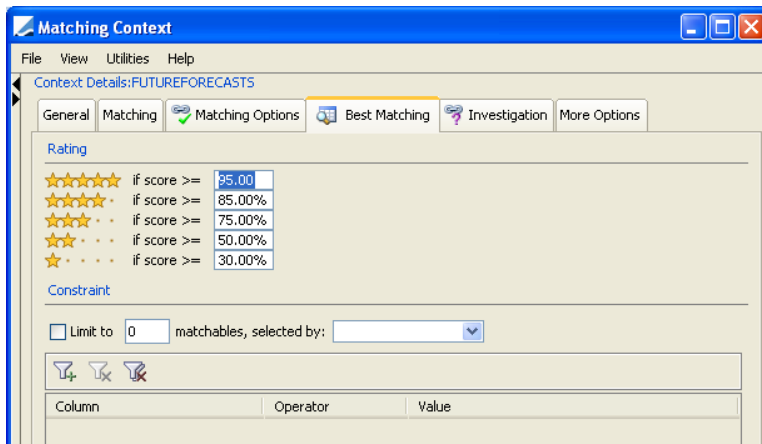
This is why you need to set – for the outgoing (=CASHPOOLING) in our example – the **Skip Save Rules** based on the below static data filter.



Then, define the matching options as shown below. Only Request Comment and Propagation should be activated to ensure the user enters a comment when manually matching a forecast with a cash pooling, and to propagate as real settle amount of the forecast which is reconciled with a future dated cash pooling the amount of the cash pooling transfer.



Then set the Best Matching, Investigation and More Options panel as shown below and choose Apply to save your context.



1.2.2 Matching Monitor for Cash Management

From the context “sub-MT940 versus transfer”, the **Investigate** panel gives a summary view of:

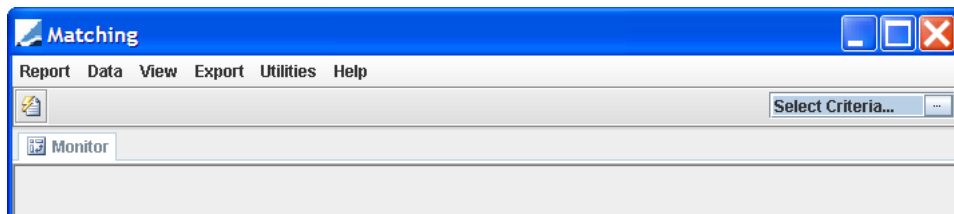
- Un-reconciled incoming sub-statements in the top-part
- Un-reconciled calypso transfers in the bottom-part


From the context “FUTUREFORECAST”, the **Investigate** panel gives a summary view of:

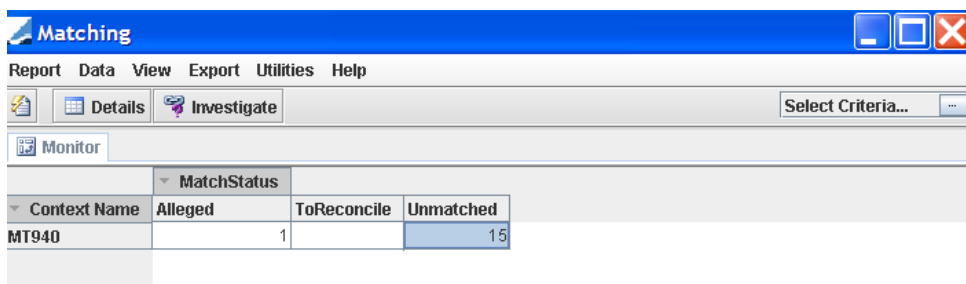
- Un-reconciled incoming Forecasts in the top-part
- Un-reconciled future Cash Pooling in the bottom-part

Matching Monitor Layout Configuration

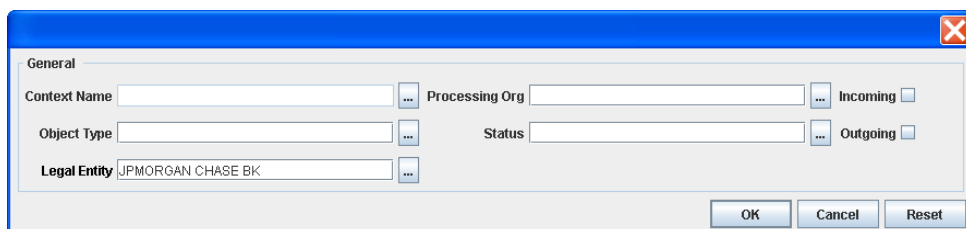
To configure the **Investigate** view, go to **Configuration > Message & Matching > Matching Window**. This opens the Matching Monitor as shown below:



Then press the  button on the left-hand side of the screen to load the “matchable” objects, as shown below:

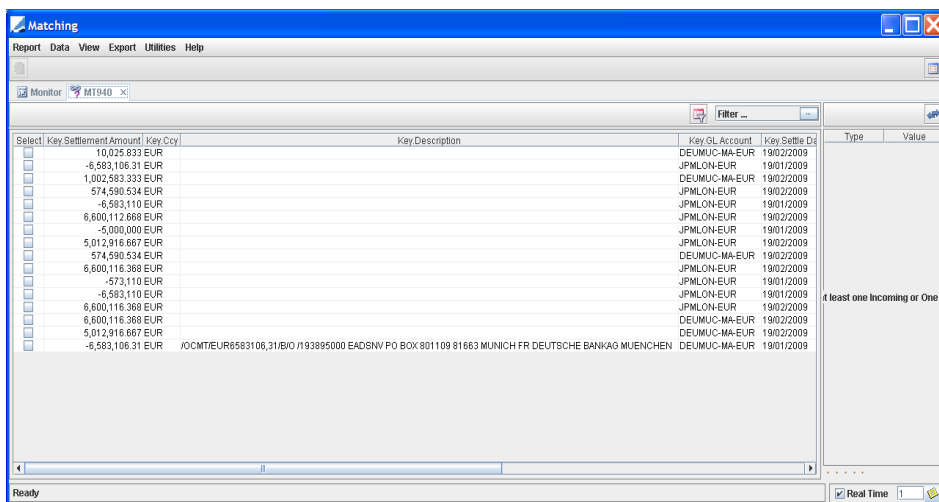



In addition, you can use the ‘Select Criteria’ to get a synthetic view of un-reconciled objects for specific criteria (e.g. one specific Agent only).




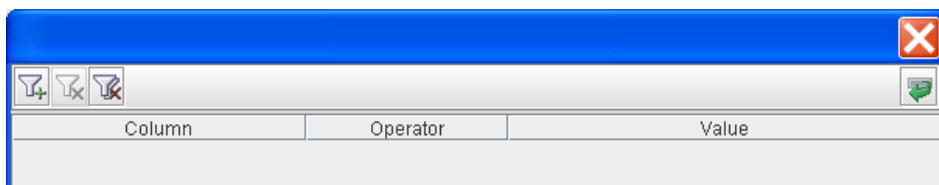
Click the **Investigate** button for a specific context to get the default view of **all** ‘packed’ un-reconciled items. Then, split and filter your table using the **Split** and **Filter** functions available in that panel.


Without panel split and filter all unmatched items are mixed as shown below:

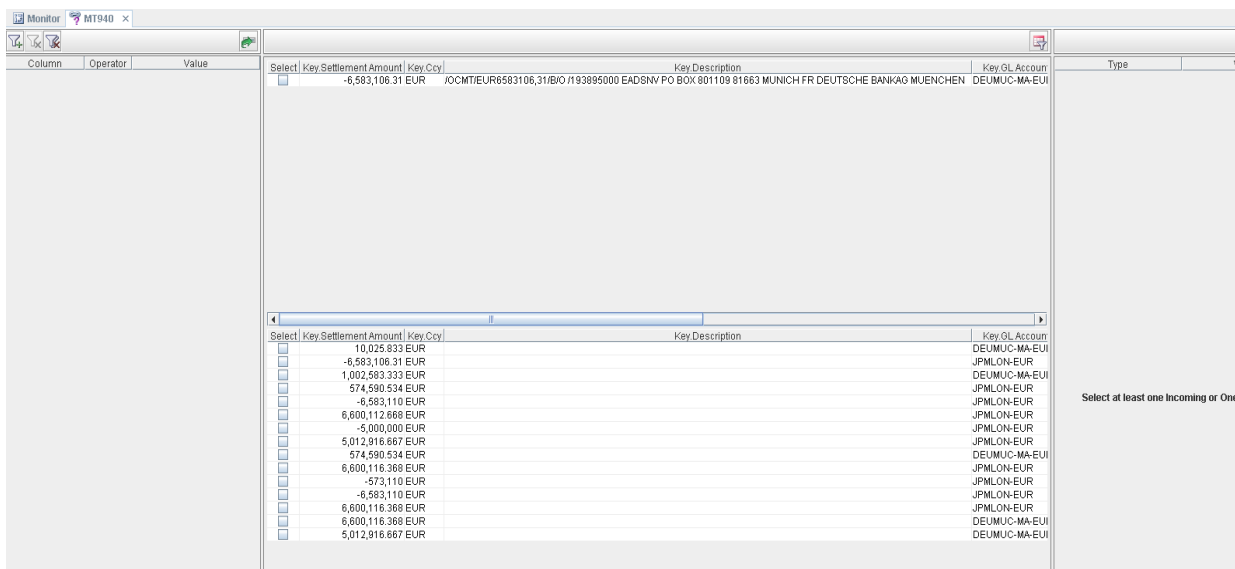


To configure the default layout of that screen, press the split panel icon . This will display the 'incoming' un-reconciled items at the top and the 'outgoing' un-reconciled items at the bottom (as shown below).


Then select the filtering icon . This pops-up the following window:



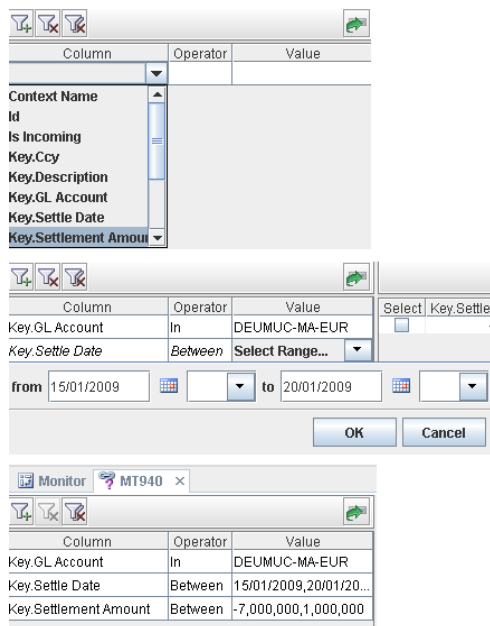
Press the  icon to move the filtering capabilities as a permanent element of the Investigate panel, as shown below:



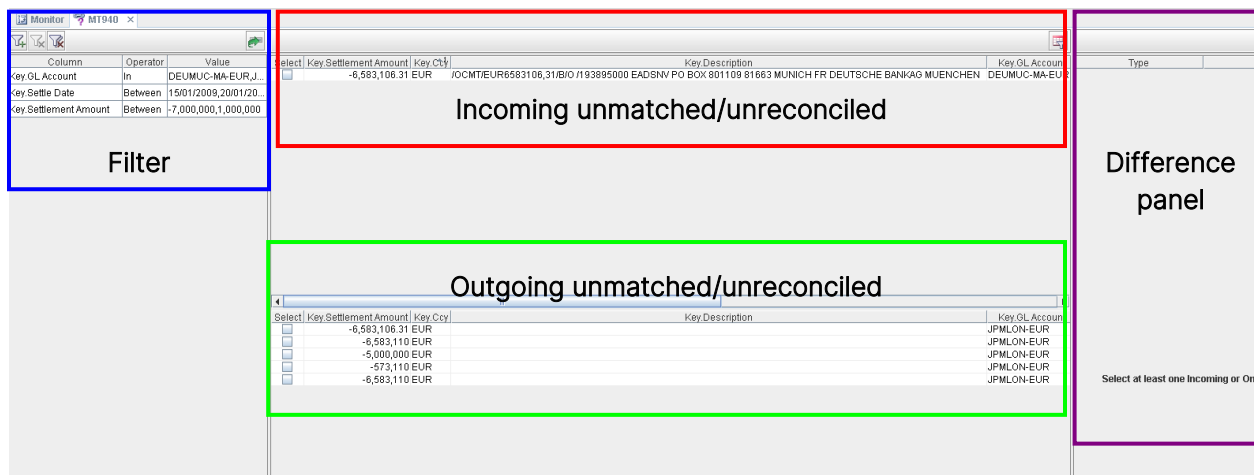
Once done, the user must **save that layout for that context** going to **Report > Save As Template** and then **define that template as the default** view using **Report > Set Default Template**.

Then, pressing the    icons (green to add a filter, red to remove a filter), the user can add its own filters picking among the matching keys defined in the related matching context to limit the selection of un-reconciled items on which he has to work.

An example of filter definition is presented below:




An example of the final 'proposed' view to monitor un-reconciled items is presented below. Please note that this configuration of the investigate panel view has to be done for each context:



Same Investigate panel layout should be defined for the "FUTUREFORECAST" matching context.

Contextual Matching Actions for sub-MT940 versus transfer

From the investigate panel, the user can select and match one or n incoming sub-MT940(s) (the system compute the sum of settlement amount for the appropriate keys) versus one or m outgoing transfer(s);

The system will display all or only difference keys in the right panel (depending if the user has selected the  icon which determines if we only show the difference or all keys);

Actions proposed are contextual and based on the Manual Tolerance and Usage Set defined for each key in the matching context;

Thus, if you have set a Tolerance for Manual Matching the system allows the user the **Match** (the system does not impact the difference) or **Match with Creation** (the system impacts the difference) when one or n incoming sub-MT940(s) versus one or m outgoing transfer(s) are selected:

- When choosing **Match**, the system asks for a comment to be added on the Manual Match (if requested in the context), applies the MANUALMATCH workflow action on the underlying message(s) and transfer(s) but does not impact the difference on the Cash Balance;
- When choosing **Match With Creation**, the system asks for a comment to be added on the Manual Match (if requested in the context), applies the MANUALMATCH workflow action on the underlying message(s) and transfer(s) and creates an additional deal type **SimpleTransfer** to impact the difference to the Cash Balance;
- When creating the difference, the system asks the user to choose the Transfer Type (eg. BANKFEE, INTEREST, CASH_ADJUSTMENT. This is extensible by the user);
- The **Match With Creation** is also available when one or n incoming **only** is(are) selected. In this case - where the flow is missing in the system but is confirmed by the statement line - the system allows creating and 'typing' the missing movement from the manual matcher, attaching a comment or file on that object.

If you have also, for instance, allow a Partial Match and Investigate Function, then the system will propose these actions when possible in the matching monitor.

Examples of layout & functions are presented below.

Example 1

In the example below, the difference exceeds the tolerance set on the settlement amount key and, as such, appears in red. In addition the GL Account shows 'Multiple Values', meaning different bank accounts have been selected by the user. The system does not allow matching different accounts and therefore only proposes a **Force Match** action. Please note that the Force Match can be de-activated through access permission.

Matching

Report Data View Export Utilities Help

Clear Force match

Monitor MT940 x

Column	Operator	Value	Select: Key Settlement Amount Key Ccy	Key Description	Key GL Account	Type	Value
			-6,583,106.31 EUR JOCMTEUR6583106,31BIO / 193895000 EADSNV PO BOX 801109 81663 MUNICH FR DEUTSCHE BANKAG MUENCHEN DEUMUC-MA-EUR				
							Key Settlement Amount
							Incoming
							-6,583,106.31
							Outgoing
							-6,573,080.477
							Key Settle Date
							Incoming
							19/01/2009
							Outgoing
							19/02/2009
							Key Trade Date
							Incoming
							19/01/2009
							Outgoing
							19/01/2009
							Key GL Account
							Incoming
							DEUMUC-MA-EUR
							Outgoing
							Multiple Values
							Key PO Agent Code
							Incoming
							DEUTDEFF
							Outgoing
							Multiple Values
							Key Description
							Incoming
							JOCMTEUR6583106,31BIO
							Outgoing
							Key Ccy
							Matched
							EUR
							Key ProcessingOrg
							Matched
							EADSDMM

Select: Key Settlement Amount Key Ccy Key Description	Key GL Account	Key Settle Date	Content Name	ProcessingOrg	LegalEntity	Id	Type	Match
10,025,833 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87412	NETTED	Unmatch
-6,583,106.31 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87334	NETTED	Unmatch
1,002,593.333 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87407	NETTED	Unmatch
574,590.534 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87345	NETTED	Unmatch
-6,583,110 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87354	NETTED	Unmatch
6,600,112.666 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87335	NETTED	Unmatch
-5,000,000 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87339	NETTED	Unmatch
5,012,916.667 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87340	NETTED	Unmatch
574,590.534 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87370	NETTED	Unmatch
6,600,116.368 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87355	NETTED	Unmatch
-573,110 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87344	NETTED	Unmatch
-6,583,110 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87349	NETTED	Unmatch
6,600,116.368 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87350	NETTED	Unmatch
6,600,116.368 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87360	NETTED	Unmatch
5,012,916.667 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87365	NETTED	Unmatch

Example 2

In the example presented below, the amount matches but the GL Account and Agent are different. There again, the system does not allow matching different accounts/banks and therefore only proposes a **Force Match** action. Force Match action is subject to an access permission as only few persons in the organization should be allowed to process a ForceMatch.

Matching

ReportDataViewExportUtilitiesHelp

ClearForce match

MonitorMT940

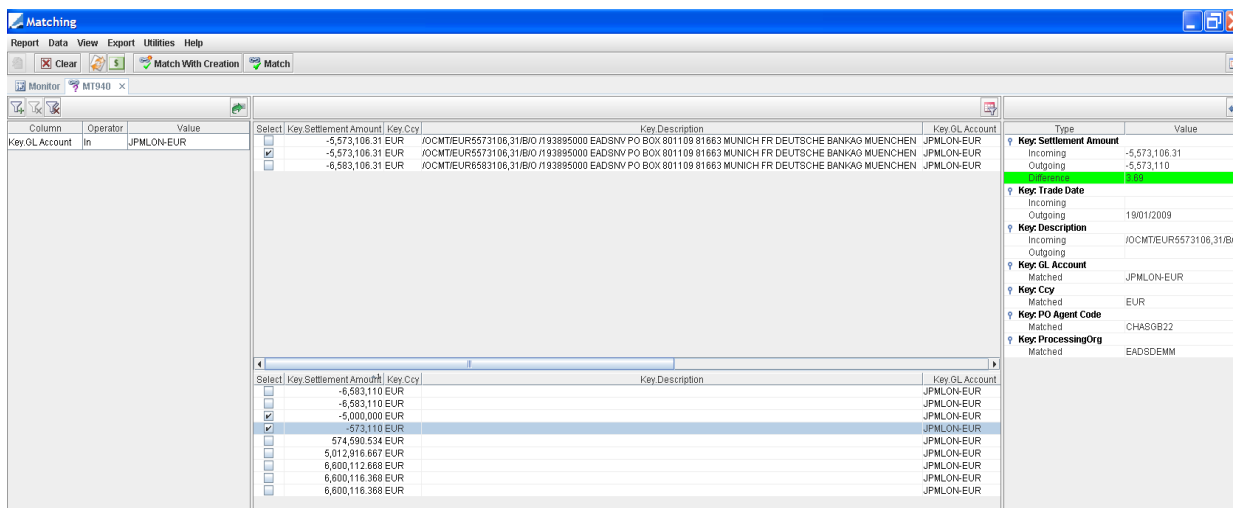
Column	Operator	Value	Key Description					Key GL Account	Type	Value
Search: Key Settlement Amount Key Ccy			-6,583,106.31 EUR JOCMTEUR6583106,31BIO / 193895000 EADSNV PO BOX 801109 81663 MUNICH FR DEUTSCHE BANKAG MUENCHEN					DEUMUC-MA-EUR		
<div><div>Key Trade Date</div><div>Incoming19/01/2009</div><div>Outgoing</div></div> <div><div>Key GL Account</div><div>IncomingDEUMUC-MA-EUR</div><div>OutgoingJPMLOH-EUR</div></div> <div><div>Key PO Agent Code</div><div>IncomingDEUTDEFF</div><div>OutgoingCHASOB22</div></div> <div><div>Key Description</div><div>IncomingJOCMTEUR6583106,31BIO</div><div>Outgoing</div></div> <div><div>Key Ccy</div><div>MatchedEUR</div></div> <div><div>Key Settlement Amount</div><div>Matched-6,583,106.31</div></div> <div><div>Key ProcessingOrg</div><div>MatchedEADSDMM</div></div>										
Search: Key Settlement Amount Key Ccy Key Description Key GL Account Key Settle Date Content Name ProcessingOrg LegalEntity Id Type Matched										
<input type="checkbox"/>		-6,583,106.31 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87334	NETTED	Unmatch
<input type="checkbox"/>		10,025,833 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87412	NETTED	Unmatch
<input type="checkbox"/>		1,002,593.333 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87407	NETTED	Unmatch
<input type="checkbox"/>		574,590.534 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87345	NETTED	Unmatch
<input type="checkbox"/>		-6,583,110 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87354	NETTED	Unmatch
<input type="checkbox"/>		6,600,112.666 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87335	NETTED	Unmatch
<input type="checkbox"/>		-5,000,000 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87339	NETTED	Unmatch
<input type="checkbox"/>		5,012,916.667 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87340	NETTED	Unmatch
<input type="checkbox"/>		574,590.534 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87370	NETTED	Unmatch
<input type="checkbox"/>		6,600,116.368 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87355	NETTED	Unmatch
<input type="checkbox"/>		-573,110 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87344	NETTED	Unmatch
<input type="checkbox"/>		-6,583,110 EUR	JPMLOH-EUR	19/01/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87349	NETTED	Unmatch
<input type="checkbox"/>		6,600,116.368 EUR	JPMLOH-EUR	19/02/2009	MT940	TEST_EADS	JP MOROAN CHASE LON	87350	NETTED	Unmatch
<input type="checkbox"/>		6,600,116.368 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87360	NETTED	Unmatch
<input type="checkbox"/>		5,012,916.667 EUR	DEUMUC-MA-EUR	19/02/2009	MT940	TEST_EADS	DEUTSCHE BANK MUNICH	87365	NETTED	Unmatch

Unmatched (58.82%) - 1 to 1

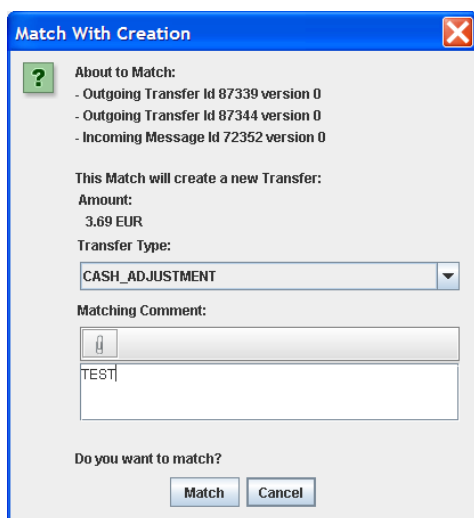
Real Time

Example 3

In the example presented below, the user has activated the filter to only display un-reconciled items for a specific Bank (GL) Account thanks to the filter functions available/displayed on the left-hand side of the panel. For the selected items (incoming versus outgoing) the system computes and shows the amount difference for the selected items. As it falls within the tolerance set in the context for the Settlement Amount key, the system proposes a **Match** or **Match With Creation** functions.



If the user chooses the Match With Creation, the system pops-up the following window to enter a comment (if requested), and/or attach a file and define the Transfer Type to create to impact the balance (CASH_ADJUSTMENT in our example):



In this example, when clicking **Match With Creation**, the system links the incoming message with the two outgoing transfers selected + the new transfer associated with the Simple Transfer trade created to impact the difference. Thus, in that example matching is done between 1 incoming sub-message and 3 outgoing transfers.

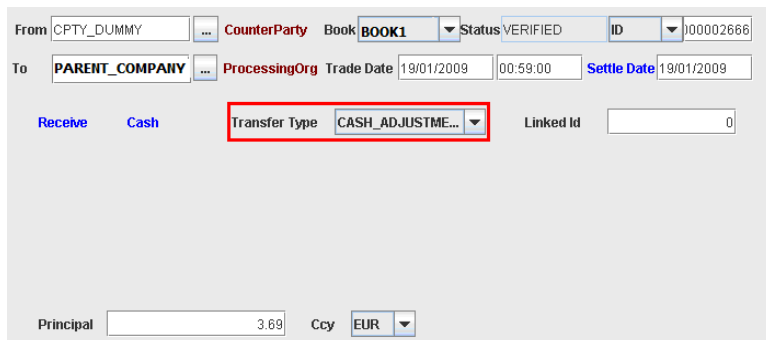
The simple transfer is created as follows:

- Transfer Type = CASH_ADJUSTMENT (selected by the user)

- Specific Trade Keyword are automatically set by the system to select the right SDI and Account, and filters that types of 'adjustment' trades

Name	Value
TargetAccountid	10000210
TradeSource	SimpleTransferMatchWithCreationHandler

- Transfers associated to the trade go directly to SETTLED to impact both the theoretical and actual positions



The system refers to specific processing organization **attributes** to create this type of SimpleTransfer:

- **DEFAULT_BOOK** = "YourDefaultBook" for that processing organization (BOOK1 in our example);
- **DEFAULT_COUNTERPARTY** = "YourDefaultCounterParty" for that processing organization (CPTY_DUMMY in our example).

Please define these attributes on your processing organization.

Depending on the matching actions and tolerance on matching keys set in the Matching Context, other actions will be **contextually** proposed by the system. These actions are:

- Match
- Match With Creation
- Partial Match
- Investigate
- Investigate With Creation
- Same Side Matching

Drilldown Functions

From the Investigate panel, the user can always drill-down:

- For incoming messages to the underlying BO_MESSAGE and Advice Document;
- For outgoing transfers to the underlying trade and related transfers.

When a file is attached, we store the file as a Generic Comment accessible from the trades(s) and matchable object.

Matching Information


Matching information is also available from the **BO Trade Window**, where we have added a **Matching panel**.

This panel displays the matching information with the same level of details as what is available in the matching monitor.

This information is available for a 1 to 1, 1 to n, n to 1, n to m matching. For n to m matching, all BO Windows for transfers (& related trades) involved in matching display the same global matching information for the matching group.

Unlink Wrong Reconciliations

This layout is also available in the **Linked** Panel of the Matching Monitor to be able to check the matched objects. The user will have to go to the Linked panel of the Matching Monitor to un-link wrong matching.

- The Linked panel is accessible from the Monitor panel;
- From a specific context, right-click the “Linked” function;
- This pops-up the following layout with the possibility, using the  icon, to un-match wrongly matched items.
- There again, the same drill-down functions exist and a specific default template must be defined to get the best possible view.

Matching								
Report Data View Export Utilities Help								
Monitor MT940 Matched MT940								
Key:GL Account	Key:Ccy	Key:Settlement Amount	Key:Settle Date	Key:PO Agent Code	Key:ProcessingOrg	Key:Trade Date	Type	Value
Automatically Matched (2 matchables)							Key: Trade Date	
JPMLON-EUR	EUR	-6,583,106.31	19/01/2009	CHASGB22	EADSDMM	19/01/2009	Incoming	
JPMLON-EUR	EUR	-6,583,106.31	19/01/2009	CHASGB22	EADSDMM	19/01/2009	Outgoing	19/01/2009
Matched With Creation (4 matchables)							Key: Description	
JPMLON-EUR	EUR	-5,000,000	19/01/2009	CHASGB22	EADSDMM	19/01/2009	Incoming	/OCMT/EUR6583106,31/B/...
JPMLON-EUR	EUR	-5,73,110	19/01/2009	CHASGB22	EADSDMM	19/01/2009	Outgoing	/OCMT/EUR6583106,31/B/...
JPMLON-EUR	EUR	-5,73,106.31	19/01/2009	CHASGB22	EADSDMM	19/01/2009	Key: GL Account	
JPMLON-EUR	EUR	3.69	19/01/2009	CHASGB22	EADSDMM	19/01/2009	Matched	JPMLON-EUR
							Key: Ccy	
							Matched	EUR
							Key: Settlement Amount	
							Matched	-6,583,106.31
							Key: Settle Date	
							Matched	19/01/2009
							Key: PO Agent Code	
							Matched	CHASGB22
							Key: ProcessingOrg	
							Matched	EADSDMM

Unlinking matched objects is allowed if you have set the UNMATCH action in your Transfer and Message workflow, behind the SETTLED (transfer) and MATCHED (Message) status. If you want to unlink a Match With Creation (for which a Simple Transfer would have been created), you would also need to CANCEL to transfer (settled) associated to that simple transfer. This could be done by adding the CANCEL action on your transfer workflow after the SETTLED status, but limiting that CANCEL to that type of Simple Transfer (marked with a specific keyword) with a static data filter.

1.3 BO Cash Settlement trade and Automatic Cash Posting from Bank Account Statement (MT940)

We have added the possibility to automatically book the cash settlement postings from the bank account statement (MT940) regardless of the reconciliation status.

This allows having a cash account in our books matching what the bank has confirmed.

A specific Suspense Account – per Agent or Agent/Account – would be also fed by this posting to isolate the differences between my expected cash and my confirmed cash.

This type of accounting event is only **optional**. Depending on your business practice you may or may not use it.

The process is the following:

- The Scheduled INC_CASH_STATEMENT – in addition to perform consistency checks, create automatic deals (cash pooling, cash sweeping, etc.) also creates a technical deal in the system on a product named BOCashSettlement.
- There is one BOCashSettlement trade per statement.
- The trade on BOCashSettlement saves, from a MT940, all individual movement as confirmed by the statement for the statement booking date. Potentially, a statement will confirm movements back-value or future-dated. In that case, the transfer engine will create one transfer per value date of the statement, all attached to the BOCashSettlement trade created for that specific statement/booking date.
- These transfers are created to impact an EXTERNAL – ACTUAL – SETTLE inventory cash position (only).
- This EXTERNAL – ACTUAL –SETTLE position can be used to generate the Interest Bearing Trades for Nostro Account and compare – using the daily balance as confirmed by the bank – if the expected interests match the figures confirmed by the bank.
- The BOCashSettlement trade can also trigger a BD_CST accounting event that will post the cash settlement entries as confirmed by the bank versus a suspense account (by bank account) triggered on its side by the expected cash entries from our trades/transfers. This setup is not mandatory but could be used in the case where you do not want to wait for the reconciliation to be performed before booking your cash entries, as confirmed by the bank.

Example of BOCashSettlement Trade

CashSettlement (BARCLN-GBP (10006)) -PO is EADS1 (10012210) - Version : 0 Mod User :(null) Cur User :(calyp...

Trade Back Office BOCashSettlement View Utilities Help

Trade Details Fees

Cpty: CPTY_DUMMY CounterParty: CPTY_DUMMY
Book: PARENT_COMPANY Status: VERIFIED ID: 10012210

General Information

Booking Date: 09/10/2009 Currency: GBP
Account: AGT-GBP (10006)
Statement: 1989

Settlement Detail

Amount	Value Date
-8,513.52	09/10/2009
-33,720.83	09/10/2009
-60,467.28	09/10/2009
-1,309,599.43	09/10/2009
-4,353,686.74	09/10/2009
27,296.08	09/10/2009
68,285.1	09/10/2009
81,358.59	09/10/2009
-12,978,255	09/10/2009

- BOCashSettlement is done between the Processing Organization DEFAULT_BOOK (PO Attribute DEFAULT_BOOK) and the PO DEFAULT_CPTY (PO Attribute DEFAULT_CPTY).
- This trade is created from the statement and is marked with a keyword TradeSource = CashStatement.
- The General Information part shows the Account, the related Statement Id, the Currency and the Date (Booking or Settle).
- The Settlement Detail part shows all individual movements as confirmed by the MT940 for that specific booking (=statement booking date) or settle date (= statement value date)
- The menu BOCashSettlement/ShowStatement Messages allows displaying the related MT940 'sub-entries', as shown below:

Messages For Statement Id 1989

Report Data View Export Market Data Process Utilities Help

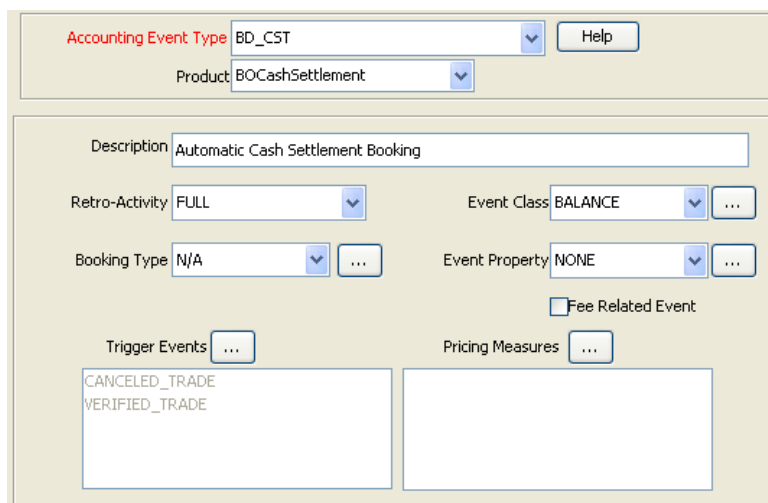
AccountName	MsgId	Msg LinkId	MsgCategory	Receiver	Bank	BankAccount#	Amount	Direction	Ccy	Booking Date	Settle Date	Description
AccountName: BARCLN-GBP												
BARCLN-GBP	6743		0 Statement	PRTPCYFR	AGTFRPP	20204670016918	-8,513.52	PAY	GBP	09/10/2009	09/10/2009	TRANSFER
BARCLN-GBP	6755	6743	SubStatement.CashPooling	PRTPCYFR	AGTFRPP	20204670016918	-8,513.52	PAY	GBP	09/10/2009	09/10/2009	TRANSFER
BARCLN-GBP	6756	6743	SubStatement.CashPooling	PRTPCYFR	AGTFRPP	20204670016918	-33,720.83	PAY	GBP	09/10/2009	09/10/2009	TRANSFER
BARCLN-GBP	6757	6743	SubStatement.CashPooling	PRTPCYFR	AGTFRPP	20204670016918	-60,467.28	PAY	GBP	09/10/2009	09/10/2009	TRANSFER
BARCLN-GBP	6758	6743	SubStatement.CashPooling	PRTPCYFR	AGTFRPP	20204670016918	-1,309,599.43	PAY	GBP	09/10/2009	09/10/2009	TRANSFER
BARCLN-GBP	6759	6743	SubStatement.CashPooling	PRTPCYFR	AGTFRPP	20204670016918	-4,353,686.74	PAY	GBP	09/10/2009	09/10/2009	TRANSFER
BARCLN-GBP	6760	6743	SubStatement.CashPooling	PRTPCYFR	AGTFRPP	20204670016918	27,296.08	REC	GBP	09/10/2009	09/10/2009	TRANSFER
BARCLN-GBP	6761	6743	SubStatement.CashPooling	PRTPCYFR	AGTFRPP	20204670016918	68,285.1	REC	GBP	09/10/2009	09/10/2009	TRANSFER
BARCLN-GBP	6762	6743	SubStatement.CashPooling	PRTPCYFR	AGTFRPP	20204670016918	81,358.59	REC	GBP	09/10/2009	09/10/2009	TRANSFER
BARCLN-GBP	6763	6743	SubStatement.Nostro	PRTPCYFR	AGTFRPP	20204670016918	-12,978,255	PAY	GBP	09/10/2009	09/10/2009	NWBKGB55 /

- BOCashSettlement trade triggers transfers which only impact the EXTERNAL – ACTUAL – SETTLE position.

- There is one BOCashSettlement per Bank Account Statement, potentially with movements at different settle date but same booking date (= statement booking date).
- When back-value (and/or future-dated value) movements are confirmed in the same statement, the system creates only one BOCashSettlement trade for that statement but n transfer per value date for that Statement/BOCashSettlement trade.
- Transfer linked to BOCashSettlement trade must be excluded from the Nostro matching. There is no need to reconcile this type of transfer which is only created to feed the EXTERNAL position (= bank confirmed position).

BOCashSettlement Accounting Event

To book automatically the cash settlement postings as confirmed by the bank, you can use the BD_CST accounting event, as shown below:



The screenshot shows the configuration for the BD_CST Accounting Event. The form includes the following fields and options:

- Accounting Event Type:** BD_CST (selected from a dropdown menu).
- Product:** BOCashSettlement (selected from a dropdown menu).
- Description:** Automatic Cash Settlement Booking (text input field).
- Retro-Activity:** FULL (selected from a dropdown menu).
- Event Class:** BALANCE (selected from a dropdown menu).
- Booking Type:** N/A (selected from a dropdown menu).
- Event Property:** NONE (selected from a dropdown menu).
- Fee Related Event:** ☐ (unchecked).
- Trigger Events:** CANCELED_TRADE, VERIFIED_TRADE (text input field).
- Pricing Measures:** (empty text input field).

- BD_CST is triggered by Trade events for the product BOCashSettlement.
- BD_CST will have a booking date = trade booking date and an effective date = trade settle date.
- BD_CST should impact an automatic and generic settle account created with the Attribute **SettleAccountName**.
- Thus, for each account/statement, BD_CST will debit or credit the related settle account for that SettleAccountName coming from the BOCashSettlement trade.

Account Name
SETTLE ACCOUNT FOR AUTO CASH BOOKING
☐ Call Account

Processing Org
ALL
Ccy
ANY
Id
10137

Type
SETTLE
...
☐ Security
☒ Auto/Template Acc

External Name
Interface Rule
Aggregate

Description

Legal Entity (F2)
Role
ALL

Creation Date
6/25/10 11:35:40 AM
☐ Create by Acc Engine only
Properties/Attributes (F4)

Closing Account
Last Closing Date

Parent Account
Parent Id
0

Account Utilities Reports Process Help

Account Statements **Attributes** Interests Limits Consolidation Browse

Order	Attribute	Value
1	SettleAccountName	

1.4 BO Position Update

1.4.1 Overview

BO Cash position is monitored through the BO Position:

- The Theoretical position type represents the Funded or Projected Cash Position;
- The Actual position type represents the Realized or Reconciled Cash Position;
- The Not Settled position type shows the difference between the two above-mentioned cash positions.

Theoretical Position takes FORECAST transfers into account until these transfers are excluded from that position and substituted by CASH POOLING deals. FORECAST transfer types never impact the Actual BO Position.

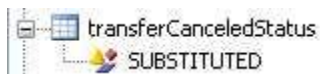
The general logic to substitute FORECAST with CASHPOOLING and update the BO Position accordingly is the following:

- As soon as a MT940 is processed for a specific Agent (Sender), Processing Org (Receiver) and Account (Tag25), the system cleans the related Theoretical Position for that Statement Date (Tag62F).
- This means that the system moves the FORECAST transfers having a Settle Date \leq Statement Date for that specific Agent/Account into a status which is excluded from the Theoretical (and, of course, Actual) Position.
- This is achieved applying a specific 'ForecastAction' on the Trade and related Transfer (eg. SUBSTITUTE) set on the INC_CASH_STATEMENT Scheduled Task.

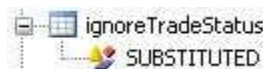
The FORECAST type Simple Transfer trades and related transfers are thus moved to a status (SUBSTITUTED) excluded from the Inventory Position.

1.4.2 Configuration

Go to **Configuration > System > Domain Values**, select the domain transferCanceledStatus and add the transfer status to be excluded from the Inventory Position.



Then select the domain ignoreTradeStatus and add the trade status to be ignored, as shown below:



Then make sure to add the SUBSTITUTE Action on both the trade (for Simple Transfer with Flow Type FORECAST) and transfer workflows to allow the system performing this action on both underlying objects.

1.5 Scheduled Task MESSAGE_MATCHING

The import of the MT940 files is done through the MESSAGE_MATCHING scheduled task.

This scheduled task must be linked (using the Next Id) to the INC_CASH_STATEMENT scheduled task that implements the consistency checks and MT940 split process.

Thus, the MT940 integration process is a two-step process:

- We first save the complete incoming statements MT940 (using the MESSAGE_MATCHING);
- We then check the consistency and completeness of these statements, split the MT940 into sub-statements by entry, create the cash pooling deals and exclude forecasts from the cash position (using the INC_CASH_STATEMENT).

1.5.1 Scheduled Task Attributes

The integration of incoming MT940 is performed by the scheduled task MESSAGE_MATCHING.

The scheduled task criteria are summarized below.

Attributes	
Attribute	Value
Swift Message Delimiter	
Swift File	20090325_BARC_EUR_0052.txt
InputDir	c:\temp
File Rename	False
Gateway	
ExternalMessageType	

- **Swift Message Delimiter:** Enter the delimiter between messages in the text file as specified in the environment property CALYPSO_SWIFT_LINE_SEPARATOR (should be blank if the property is not used)
- **Swift File:** Specify the Swift File Name (eg.20090325_BARC_0052.txt) to integrate one specific file. To integrate **all** incoming MT940, the user has to set the value ***.txt** on that field. The system will then try to save as 'bo_messages' all .txt files that are located under the InputDir
- **InputDir:** Specify the Swift File Path and Directory where MT940.txt files are saved
- **File Rename:** Select true/false. When set to true add a timestamp to the Swift File once processed

Gateway/ExternalMessageType: If the default implementation for processing MT940 is not satisfying, the CashStatementHandlerFactory tries to retrieve a Handler respecting the order Gateway – ExternalMessageType as specified in these attributes.

The MESSAGE_MATCHING Scheduled Task does not perform any validation; it only saves the incoming MT940 as a Calypso BO_MESSAGE type “**SWIFT_TRADE_RECON**”. If not already populated, this message type can be added through **Configuration > System > Domain Values** – messageType.

One can rename that BO_MESSAGE Type as ‘MT940’ using the domain name incomingType and specifying as value MT940 and as comment SWIFT_TRADE_RECON as shown below:

Name:	incomingType
Value:	MT940
Comment:	SWIFT_TRADE_RECON

The incoming SWIFT_TRADE_RECON message types saved by the MESSAGE_MATCHING Scheduled Task are marked with a specific message attribute “CashStatementProcess” = Statement.

This statement is a simple copy of each complete MT940 file text.

1.5.2 Message workflow SWIFT_TRADE_RECON

To be able to save the incoming MT940, one must define a Message Workflow for the message type SWIFT_TRADE_RECON.

If necessary, Calypso provides a workflow file that can be uploaded to create another default SWIFT_TRADE_RECON message workflow (actions, rules and static data filters listed below are created automatically).

Please note that you need to add in an STP message workflow transition the HandleCashPooling rule to generate automatically the cash pooling deals.

SWIFT_TRADE_RECON Message Workflow

Id	Orig Status	Action	Resulting Status	Different User	Use STP	Log	Subtype	Rules	Processing Org	Kick Off/ Cut Off	Create Task	Filter
3237	IMPORTED	CANCEL	CANCELED	false	false	false	SWIFT_TRADE_RECON		ALL	false	false	
2817	NONE	NEW	PENDING	false	false	false	SWIFT_TRADE_RECON		ALL	false	true	Statement
12102	NONE	UNMATCHED	false	false	false	false	SWIFT_TRADE_RECON		ALL	false	true	SubStatement Nostro
2818	NONE	NEW	UNPROCESSED	false	false	false	SWIFT_TRADE_RECON		ALL	false	true	SubStatement<>Nostro
3229	NOT_PROCESSED	CANCEL	CANCELED	false	false	false	SWIFT_TRADE_RECON		ALL	false	false	Statement
2822	NOT_PROCESSED	REPROCESS	PENDING	false	false	false	SWIFT_TRADE_RECON		ALL	false	true	Statement
3206	PENDING	AUTHORIZE	IMPORTED	false	false	false	SWIFT_TRADE_RECON		ALL	false	true	Statement
2820	PENDING	BLOCK	NOT_PROCESSED	false	false	false	SWIFT_TRADE_RECON		ALL	false	true	Statement
2821	PENDING	CANCEL	CANCELED	false	false	false	SWIFT_TRADE_RECON		ALL	false	false	Statement
2823	PROCESSED	CANCEL	CANCELED	false	false	false	SWIFT_TRADE_RECON		ALL	false	false	Statement
13301	PROCESSED	REPROCESS	PROCESSEDAGAIN	false	false	false	SWIFT_TRADE_RECON	HandleCashPooling	ALL	false	true	
12107	PROCESSED	UNMATCH	UNMATCHED	false	false	false	SWIFT_TRADE_RECON		ALL	false	true	
12104	UNMATCHED	AUTOMATCH	PROCESSED	false	false	false	SWIFT_TRADE_RECON		ALL	false	true	
12105	UNMATCHED	CANCEL	CANCELED	false	false	false	SWIFT_TRADE_RECON		ALL	false	false	
12106	UNMATCHED	MANUALMATCH	PROCESSED	false	false	false	SWIFT_TRADE_RECON		ALL	false	true	
12108	UNPROCESSED	CANCEL	CANCELED	false	false	false	SWIFT_TRADE_RECON		ALL	false	false	
2828	UNPROCESSED	PROCESS	PROCESSED	false	true	false	SWIFT_TRADE_RECON	HandleCashPooling	ALL	false	true	SubStatement<>CashSweeping
12103	UNPROCESSED	PROCESS	UNMATCHED	false	true	false	SWIFT_TRADE_RECON	HandleCashPooling	ALL	false	true	SubStatement CashSweeping

Using the specific Static Data Filters defined below:

- Statement

Name: Statement Attributes... Simulate...

Comment:

Groups: ANY ...

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	IN	Statement

- Substatement.Nostro

Name: SubStatement.Nostro Attributes... Simulate...

Comment:

Groups: ANY ...

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	IN	SubStatement.Nostro

- SubStatement<>Nostro

Name: SubStatement<>Nostro Attributes... Simulate...

Comment:

Groups: ANY ...

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	NOT_IN	Statement, SubStatement.Nostro

- SubStatement.CashSweeping

Name: SubStatement.CashSweeping Attributes... Simulate...

Comment:

Groups: ANY ...

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	IN	SubStatement.CashSweeping

- SubStatement <> CashSweeping

Name: SubStatement<>CashSweeping Attributes... Simulate...

Comment:

Groups: ANY ...

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	NOT_IN	SubStatement.CashSweeping

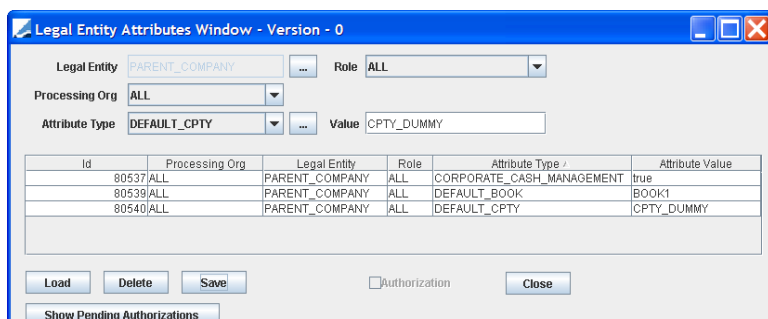
1.6 Scheduled Task INC_CASH_STATEMENT

Once the Scheduled Task MESSAGE_MATCHING is reported as successful, the system must run the INC_CASH_STATEMENT scheduled task to process the incoming MT940. This processing is only done for Processing Organizations marked with a specific attribute CORPORATE_CASH_MANAGEMENT = true.

1.6.1 Processing Organization Legal Entity Attributes

Define the following LE Attributes for your processing organizations:

- CORPORATE_CASH_MANAGEMENT = true
- DEFAULT_BOOK = "YourDefaultBook" for that processing organization
- DEFAULT_COUNTERPARTY = "YourDefaultCounterParty" for that processing organization



Legal Entity Attributes Window - Version - 0

Legal Entity: PARENT_COMPANY Role: ALL

Processing Org: ALL

Attribute Type: DEFAULT_CPTY Value: CPTY_DUMMY

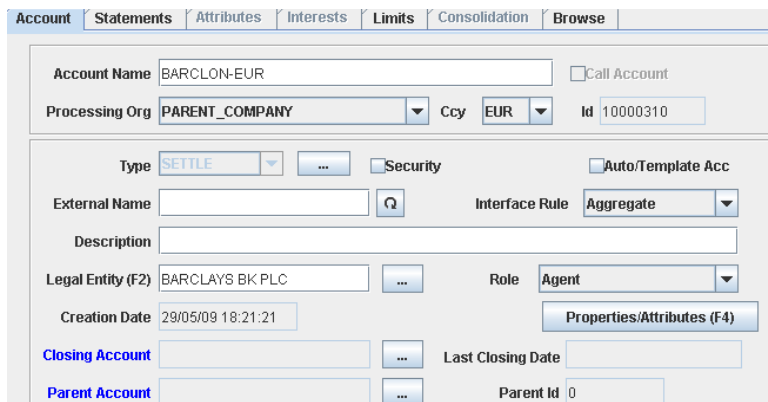
Id	Processing Org	Legal Entity	Role	Attribute Type	Attribute Value
80537/ALL	PARENT_COMPANY	ALL	CORPORATE_CASH_MANAGEMENT	true	
80539/ALL	PARENT_COMPANY	ALL	DEFAULT_BOOK	BOOK1	
80540/ALL	PARENT_COMPANY	ALL	DEFAULT_CPTY	CPTY_DUMMY	

Buttons: Load, Delete, Save, Authorization, Close, Show Pending Authorizations

The INC_CASH_STATEMENT process is only done for Processing Organizations marked with the attribute **CORPORATE_CASH_MANAGEMENT = true**.

Once the Scheduled Task MESSAGE_MATCHING is reported as successful, the system runs the 'linked' INC_CASH_STATEMENT scheduled task to process the incoming MT940.

To be able to save and split a MT940, one must attach an **Incoming Statement Configuration** to the SETTLE Account(s) for which the processing organization is expecting a MT940, as shown below for a EUR Bank Account at Barclays London:



Account Statements Attributes Interests Limits Consolidation Browse

Account Name: BARCLON-EUR Call Account: ☐

Processing Org: PARENT_COMPANY Ccy: EUR Id: 10000310

Type: SETTLE Security: ☐ Auto/Template Acc: ☐

External Name: Interface Rule: Aggregate

Description:

Legal Entity (F2): BARCLAYS BK PLC Role: Agent

Creation Date: 29/05/09 18:21:21 Properties/Attributes (F4)

Closing Account: Last Closing Date:

Parent Account: Parent Id: 0

Account	Statements	Attributes	Interests	Limits	Consolidation	Browse					
<div>General</div> <div> <div>Statement Type: Incoming</div> <div>Cash/Sec: Cash</div> <div> <div>Last Statement</div> <div>Last Date</div> <div>Active From: 03/03/2008</div> <div>To</div> </div> </div> <div> <div>Add</div> <div>Update</div> <div>Remove</div> </div>											
<div>Frequency</div> <div> <div>Freq: DLY</div> <div>Day: 1</div> <div>Roll: FOLLOWING</div> </div>											
Config Id	Statement Type	Numbering	Last Statement	Zero Bal	No Mvt	Active From	Active To	Position Cash/Sec	Position Class	Position Type	Position
80541	Incoming			<input type="checkbox"/>	<input type="checkbox"/>	03/03/2008		Cash			

The Date Rule attached to the Incoming Statement Configuration in the Frequency panel is used to determine **when** we expect an Incoming MT940 for this specific account:

- When missing, the scheduled task reports an exception;
- When a statement is received for an unexpected date (not part of the date rule), the scheduled task reports an exception.

1.6.2 Scheduled Task Attributes

The INC_CASH_STATEMENT is a two-step process:

Step 1: Process Incoming Cash Statements:

- Load all “statement” SWIFT_TRADE_RECON messages (initially saved by the MESSAGE_MATCHING) applying the “Statement statuses restriction” attribute for the Scheduled Task **Valuation Date** (= Tag62F statement date);
- Group the “Statement” SWIFT_TRADE_RECON messages by GL (SETTLE) Account;
- The correspondence between the MT940 Tag 25 for a specific Processing Organization (Receiver BIC) + Agent (Sender BIC) and the Calypso GL Account is done using the GL Account Attribute “**XferAgentAccount**” where we store the value of Tag 25;
- Check the Group consistency (Sequence Numbering/Intermediary Balances/Statement Opening Balance = Previous Statement Closing Balance, etc.);
- Create Account Statement summarizing the group information;
- Create Sub-Statement Messages (with specific types) and Cash Pooling Trades;
- Create BOCashSettlement Trade for each valid statement;
- Apply the “Valid/Invalid Statements Action” on Account Statement summarizing the group information:
 - SWIFT_TRADE_RECON Message Workflow Valid Action is applied on complete and consistent grouped statements
 - SWIFT_TRADE_RECON Message Workflow Invalid Action is applied on incomplete and/or inconsistent grouped statements

Step 2: Exclude FORECAST Transfer Types from the Cash Position for the Processing Organization Bank Accounts successfully processed in Step 1:

- Load all simple transfer trades with transfer type = FORECAST and related transfers type FORECAST having a Settle Date <= Scheduled Task Valuation Date for the GL Accounts in the group applying the “Forecast statuses restriction” attribute;

- Apply the “Forecast Action” set as attribute on the selected Simple Transfer trades type FORECAST and related transfers;
- The “Forecast Action” is an action that must be added to your trade and transfer workflows (for instance, VERIFIED – SUBSTITUTE – SUBSTITUTED);
- This resulting status (SUBSTITUTED in our example) must be set in the transferCanceledStatus and ignoreTradeStatus to make the system treat them as a CANCEL and exclude transfers with that specific status from the BO Position. This also allows building specific trade and transfer reports including or excluding these forecasts.

These ‘actions’ are driven by the attributes set on the INC_CASH_STATEMENT Scheduled Task.

INC_CASH_STATEMENT Attributes

Attributes	
Attribute	Value
GL Account Id	
Statements statuses restriction	PENDING
Valid Statements Action	▼ AUTHORIZE
Invalid Statements Action	▼ BLOCK
Check Statements Exhaustivity	▼ False
Forecast statuses restriction	
Forecast Action	▼ SUBSTITUTE
Exception Report Format	▼ Excel
Email Exception Report to	

- **GL Account Id:** Specify the Processing Organization SETTLE account for which you want to run the process. If left blank, the process is run for all the processing organization SETTLE accounts initially saved by the MESSAGE_MATCHING scheduled task.
- **Statement statuses restriction:** Specify the “SWIFT_TRADE_RECON” message status to take into account for the processing (in the above example, only SWIFT_TRADE_RECON statements in PENDING status are processed by that scheduled task) for the Scheduled Task **Valuation Date** (= Tag62F statement date);
- **Valid Statements Action:** Specify the SWIFT_TRADE_RECON workflow action to apply on complete and consistent grouped statements. In the above example, the system applies the AUTHORIZE action on complete and consistent incoming MT940.
- **Invalid Statements Action:** Specify the SWIFT_TRADE_RECON workflow action to apply on uncomplete and inconsistent grouped statements. In the above example, the system applies the BLOCK action on uncomplete and/or inconsistent incoming MT940.
- **Check Statements Exhaustivity:** true/false. When set to true, the system reports ‘missing statements’ as exceptions in the exception file (eg. a statement is expected for a specific bank account according to the incoming statement configuration date rule but the related MT940 is not received). When set to false, the system only reports ‘exceptions’ for received statements, without reporting missing statements (type missing page, wrong opening balance, etc.).
- **Forecast statuses restriction:** Specify the trade and transfer status to take into account to load the FORECAST trades/transfers. The system will load all Simple Transfer trades with type = FORECAST and related transfers type FORECAST which have a Settle Date <= Scheduled Task Valuation Date for that/these status(es) (eg. no restriction in the above example).
- **Forecast Action:** Specify the trade and transfer workflow action that the system must apply on the selected FORECAST trades and transfer (eg. SUBSTITUTE trade and transfer action will be applied on FORECAST

transfers and Simple Transfer Trades with Transfer Type = FORECAST in the above example). The “Forecast Action” is a trade and transfer action that must be added to your trade and transfer workflows (eg. VERIFIED – SUBSTITUTE – SUBSTITUTED for this type of trader/transfer using SD Filters or Trade and Xfer workflow types). Then, one must add the resulting status in **Configuration > System > Domain Values** – transferCanceledStatus and ignoreTradeStatus to make the system treat that status as a CANCEL and, as such, exclude transfers with that specific status from the BO Position:



- **Exception Report Format:** The Scheduled Task generates an Exception report which allows having a summary of all the issues encountered during the processing. Define the format of that exception file in the “Exception Report Format” attribute. Available format include: excel, html, csv, pdf.
- **Email Exception Report to:** This exception file can be sent by email. Specify the email address or alias using the “Email Exception Report to” attribute.

Consistency prerequisite checks performed by the INC_CASH_STATEMENT

The consistency checks performed by the INC_CASH_STATEMENT scheduled task are the following:

- Check if all start-balances match the previous end-balances;
- Check that all intermediate balances for an account are matching (Tag 60M/62M for a n-page statement);
- Check that opening + movements = closing balance;
- Check statement completeness and order (number of pages and existence of Tag 62F);
- Check if all accounts exist in MT940 and vice-versa;
- Check if date of end balance is not in the future;
- Check if there is only one end-balance (and so MT940) per day.

1.6.3 Automatic Cash Pooling Trades

The INC_CASH_STATEMENT scheduled task creates automatically cash pooling deals. These cash pooling deals are of different categories:

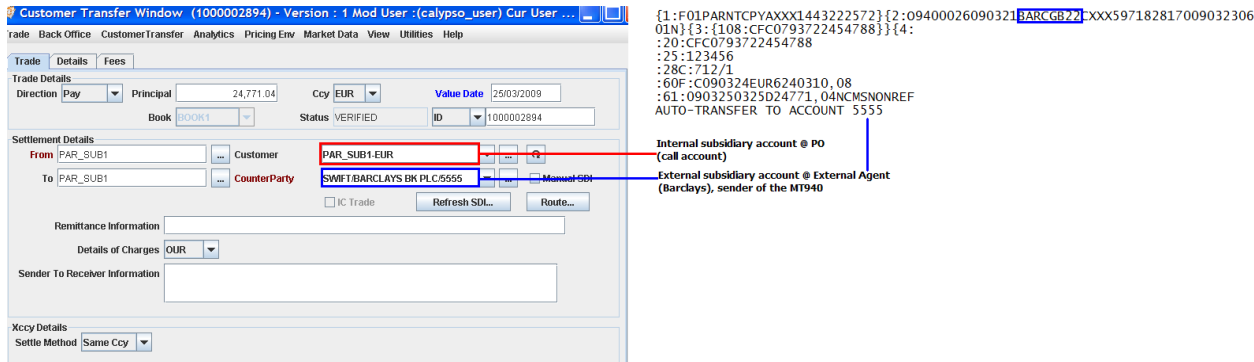
- Customer Transfer Trades
- Transfer Agent and Simple Transfer for cross-PO sweeping

Customer Transfer Trade

From the incoming MT940,

- When the processing organization bank account is a standard or guarantee fees account
- When the system can find a mapping rule (in the table Account Mapping) with Account Identifier confirmed in Tag 61 and/or 86 of the statement = CounterParty SDI A/C field or, if such an SDI does not exist or is not preferred, if the system can find a generic SDI for the statement agent/sender and with beneficiary = PO with Role = CounterParty.

Then, provided the related subsidiary has a call account SDI defined with Agent = processing organization (= MT940 Receiver), the system automatically creates a cash pooling deal on the product customer transfer, as shown below:



The screenshot shows the 'Customer Transfer Window' with the following details:

- Trade Details:** Direction: Pay, Principal: 24,771.04, Ccy: EUR, Value Date: 29/03/2009, Status: VERIFIED, ID: 100002894.
- Settlement Details:** From: PAR_SUB1, Customer: PAR_SUB1.EUR, CounterParty: SWIFT BARCLAYS BK PLC/5555.
- Remittance Information:** Details of Charges: OUR, Sender To Receiver Information: (empty).
- Xccy Details:** Settle Method: Same Ccy.

MT940 Data (Right):

```
{1:F01PARNTCPYAXXX1443222572}{2:09400026090321BARCGB22}XXX597182817009032306
01N}{3:{108:CFC0793722454788}}{4:
:20:CFC0793722454788
:25:123456
:28C:/12/1
:60F:C090324EUR6240310, 08
:61:0903250325D24771, 04NCMSNONREF
AUTO-TRANSFER TO ACCOUNT 5555
```

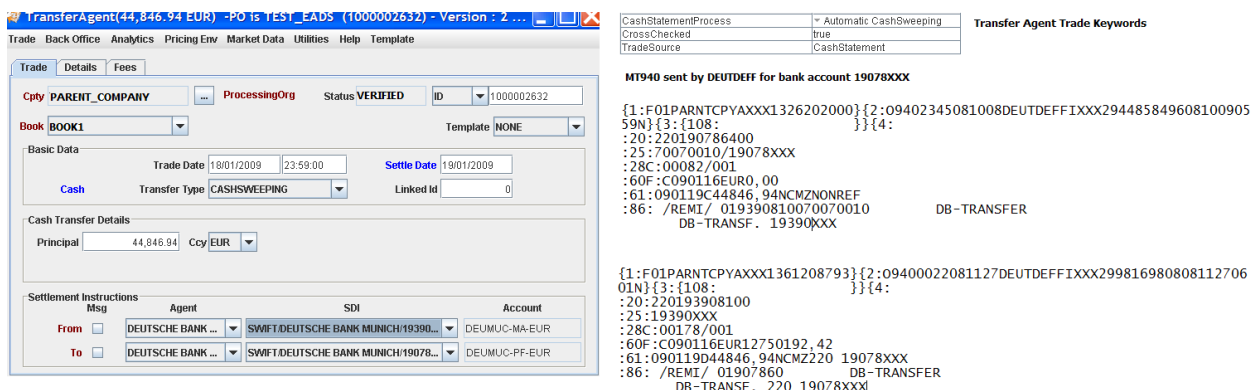
Annotations:

- Internal subsidiary account @ PO (call account) points to PAR_SUB1.EUR.
- External subsidiary account @ External Agent (Barclays, sender of the MT940) points to SWIFT BARCLAYS BK PLC/5555.

From the incoming MT940, when the processing organization bank account is a payment factory account, if the system finds an Account Mapping Rule but cannot map the account identifier confirmed in Tag 61 and/or 86 of the statement with the CounterParty SDI A/C field, then the system retrieves a **generic** SDI defined with Role CounterParty for the LE = Master Account Processing Organization (from the Account Mapping Table) for that account currency and, provided the subsidiary has a call account SDI defined with Agent = processing organization (= MT940 Receiver), the system automatically creates a cash pooling deal on the product customer transfer between the Subsidiary and the P.O. as CounterParty.

Transfer Agent Trade

From the incoming MT940, when the system can find an Account Mapping Rule between two processing organization bank accounts and when there is no existing 'matching' transfer, the system automatically creates the cash sweeping deal using the product transfer agent, as shown below:



The screenshot shows the 'Transfer Agent' window with the following details:

- Trade Details:** Cpty: PARENT_COMPANY, ProcessingOrg, Status: VERIFIED, ID: 100002632, Book: BOOK1, Template: NONE.
- Cash Transfer Details:** Trade Date: 19/01/2009, 23:59:00, Settle Date: 19/01/2009, Cash, Transfer Type: CASHSWEEPING, Linked Id: 0, Principal: 44,846.94, Ccy: EUR.
- Settlement Instructions:** From: DEUTSCHE BANK, Agent: SWIFT/DEUTSCHE BANK MUNICH/19390, Account: DEUMUC-MA-EUR; To: DEUTSCHE BANK, Agent: SWIFT/DEUTSCHE BANK MUNICH/19078, Account: DEUMUC-PF-EUR.

Transfer Agent Trade Keywords:

- CashStatementProcess: Automatic CashSweeping
- CrossChecked: true
- TradeSource: CashStatement

MT940 sent by DEUTDEFF for bank account 19078XXX

```
{1:F01PARNTCPYAXXX1326202000}{2:09402345081008DEUTDEFFIXX294485849608100905
59N}{3:{108:
:20:220190786400
:25:70070010/19078XXX
:28C:00082/001
:60F:C090116EUR0, 00
:61:090119C44846, 94NCMZNONREF
:86:/REMI/ 019390810070070010
DB-TRANSFER
DB-TRANSF. 19390XXX
```

MT940 Data (Right):

```
{1:F01PARNTCPYAXXX1361208793}{2:09400022081127DEUTDEFFIXX299816980808112706
01N}{3:{108:
:20:220193908100
:25:19390XXX
:28C:00178/001
:60F:C090116EUR12750192, 42
:61:090119D44846, 94NCMZ220 19078XXX
:86:/REMI/ 01907860
DB-TRANSF. 220 19078XXX
```

A cross-checked keyword is set to true only when both statements confirming both legs (pay/receive) are received and mapped with the trade related transfers.

When the mapping exists for accounts belonging to two different processing organizations, the system creates automatically two Simple Transfers.

Detailed mapping algorithm is provided in Appendix.

FX & MM Consolidation Deals

Once cash pooling deals have been created by the INC_CASH_STATEMENT scheduled task, the system must run the Scheduled Task called ACCOUNT_CONSOLIDATION.

This scheduled task creates FX Spot and Cash MM deals to zero balance some subsidiary call accounts.

The computation of the FX Spot and/or Cash deals depends on the subsidiary call account balance **after integration and processing of MT940**, the cash pooling deals generated from the statement impacting the subsidiary call account.

The ACCOUNT_CONSOLIDATION scheduled task must be linked (NextId) to the INC_CASH_STATEMENT scheduled task.

Once the INC_CASH_STATEMENT is reported as “successful”, the system automatically runs the ACCOUNT_CONSOLIDATION to create the FX and Cash deals zero-balancing some subsidiary call accounts.

The deal creation is done **in sequence**. Thus, the system first creates the FX Spot deals for subsidiary call accounts that are not allowed to carry an FX position. Then the system simulates the impact of these FX Spot related transfers on the subsidiary call account balance for the currency of consolidation of that account. Based on that simulation, the scheduled task then creates the Cash deals to move this subsidiary call account balance to zero.

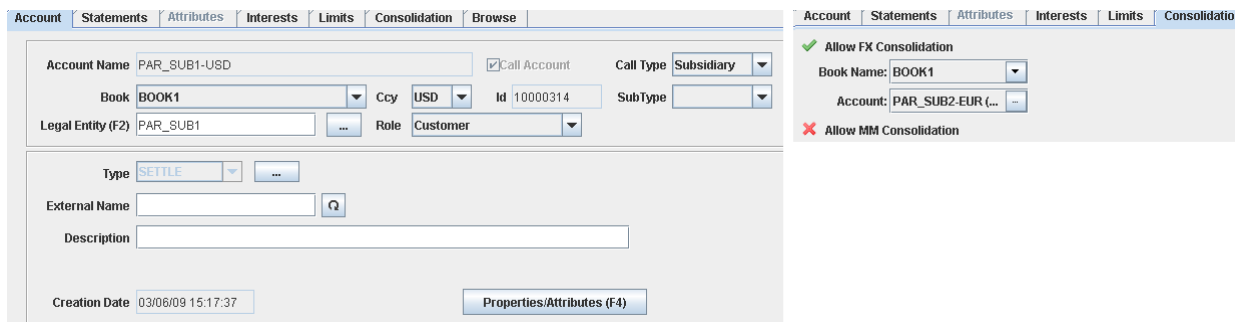
2.1 Account Configuration

2.1.1 FX Consolidation

To flag a call account as eligible to the FX consolidation process, go to the **Consolidation** panel of the call account, activate the ‘Allow FX Consolidation’ flag and specify the book and the FX consolidation call account. The FX consolidation call account must have a different currency than the subsidiary call account. The consolidation currency = FX consolidation call account currency.

In the example below, the internal subsidiary call account PAR_SUB1-USD is consolidated in EUR using the PAR_SUB2-EUR call account.

This means that PAR_SUB1-USD cannot carry a USD position. Any USD position on that call account will be automatically converted in EUR using the PAR_SUB2-EUR call account.



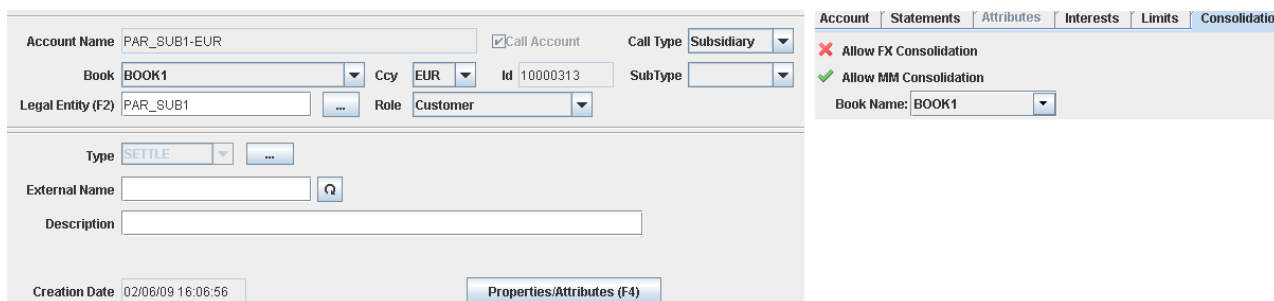
The screenshot displays the 'Consolidation' tab of the account configuration window for 'PAR_SUB1-USD'. The 'Call Account' checkbox is checked, and the 'Call Type' is set to 'Subsidiary'. The 'Book' is 'BOOK1', 'Ccy' is 'USD', 'Id' is '10000314', and 'SubType' is empty. The 'Legal Entity (F2)' is 'PAR_SUB1' and the 'Role' is 'Customer'. The 'Type' is 'SETTLE'. The 'External Name' and 'Description' fields are empty. The 'Creation Date' is '03/06/09 15:17:37'. On the right, the 'Consolidation' panel shows 'Allow FX Consolidation' checked with a green checkmark, 'Book Name' set to 'BOOK1', and 'Account' set to 'PAR_SUB2-EUR (...)'. 'Allow MM Consolidation' is unchecked with a red X.

2.1.2 MM Consolidation

To flag a call account as eligible to the MM consolidation process, go to the **Consolidation** panel of the call account, activate the 'Allow MM Consolidation' flag and specify the consolidation book that will be used for the Cash trade creation.

In the example below, the internal subsidiary call account PAR_SUB1-EUR is consolidated in EUR using BOOK1.

This means that PAR_SUB1-EUR cannot carry a negative balance. Any negative balance on that call account will be automatically counterbalanced by a Cash trade in Calypso.



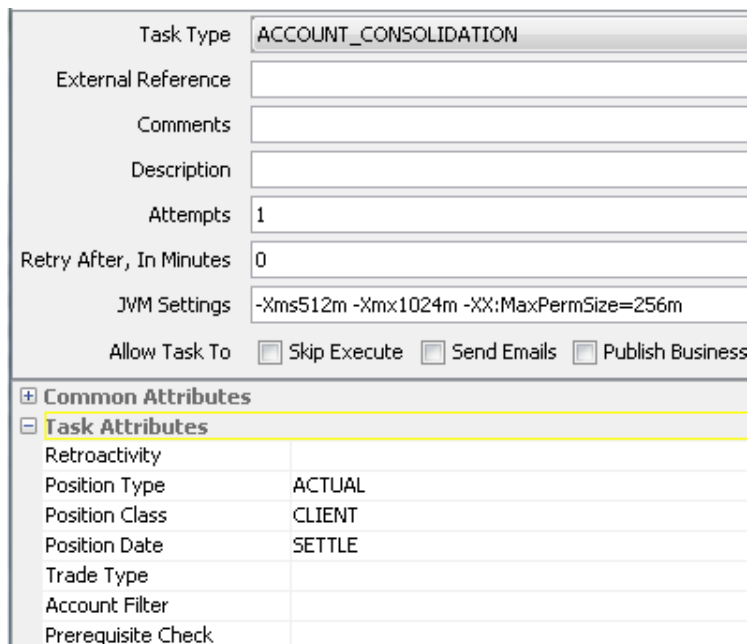
The screenshot shows the 'Consolidation' tab of the account configuration for PAR_SUB1-EUR. The 'Allow MM Consolidation' checkbox is checked, and the 'Book Name' is set to BOOK1. The 'Allow FX Consolidation' checkbox is unchecked. The account is a 'Subsidiary' call account with currency EUR and ID 10000313. The legal entity is PAR_SUB1 and the role is Customer. The account type is SETTLE. The creation date is 02/06/09 16:06:56.

2.2 Scheduled Task ACCOUNT_CONSOLIDATION

Internal consolidation FX and MM deals are generated by the ACCOUNT_CONSOLIDATION scheduled task.

The ACCOUNT_CONSOLIDATION scheduled task must be linked (NextId) to the INC_CASH_STATEMENT scheduled task.

Once the INC_CASH_STATEMENT is reported as "successful", the system automatically runs that process to create the FX and Cash deals zero-balancing the "eligible" subsidiary call accounts.



The screenshot shows the configuration for the ACCOUNT_CONSOLIDATION scheduled task. The task type is ACCOUNT_CONSOLIDATION. The task attributes section is expanded, showing Retroactivity, Position Type (ACTUAL), Position Class (CLIENT), Position Date (SETTLE), Trade Type, Account Filter, and Prerequisite Check. The task is configured to run every 1 minute, with a retry after 0 minutes. The JVM settings are -Xms512m -Xmx1024m -XX:MaxPermSize=256m. The task is allowed to skip execute, send emails, and publish business.

Attributes

- **Position Type:** Specify the type of the inventory position to retrieve for eligible call accounts. The process must run on the **ACTUAL** position type.
- **Position Class:** Specify the class of the inventory position to retrieve for eligible call accounts. The process must run on the **CLIENT** position class.
- **Position Date:** Specify the date type of the inventory position to retrieve for eligible call accounts. The process must run on the **SETTLE** position date.
- **Trade Type:** Specify if the process must generate FX only, Cash only or both. This can be used when the user must rerun only part of the process on a limited scope of call accounts.
- **Account Filter:** Select the Static Data Filter among the list of available filters. This can be used, for instance, when the user wants to run or rerun the process on a limit scope of call accounts or for specific banks, etc.
- **Prerequisite Check:** Blank or SubsidiaryAccount. When SubsidiaryAccount value is set, the system checks if **all** the bank account statements for the call accounts concerned by that process have been received and processed: if yes the system creates the FX deals then the MM; else the system only creates the FX (and MM) deals for the call accounts for which we have received all the MT940. The check is performed based on the rules set in the Account Mapping table.

2.2.1 FX Consolidation deal generation process

When running the ACCOUNT_CONSOLIDATION scheduled task, the system first retrieves ALL the (subsidiary) call accounts that have been defined with an FX Consolidation Account.

For these call accounts, the system retrieves the CLIENT-ACTUAL-SETTLE inventory position as specified in the scheduled task attributes for the process Valuation Date (T-1).

For these call accounts, the system also retrieves the **Account Mapping Rules** to check if all statements have been received and processed for all processing organization accounts (one call account is linked to 1 or n P.O. bank account) associated to that call account in the Mapping table.

When all statements impacting a call account have been received and processed and when the CLIENT-ACTUAL-SETTLE inventory position for that call account is not null on that date, the system creates FX Spot deals according to the following rules:

- **if that balance > 0**, the system create two spot trades as follows:
 - FX Spot Deal # 1: Buy subsidiary call account ccy/Sell related FX consolidation account ccy
 - FX Spot Deal # 2: Sell subsidiary call account ccy/Buy related FX consolidation account ccy
- **If that balance < 0**, the system will create two spot trades as follows:
 - FX Spot Deal #1 Sell subsidiary call account ccy/Buy related FX consolidation account ccy
 - FX Spot Deal #2 Buy subsidiary call account ccy/Sell related FX consolidation account ccy

For these FX deals:

- Trade and Settle Date = scheduled task Valuation Date
- Trade Book = Book set on the consolidation panel
- Trade role = Account Holder (subsidiary 1 & 2)
- FX rate is taken from the quotes for the scheduled task Valuation Date. The system uses the Quote Set and Pricing Params (QuoteUsage) associated with the pricing environment set on the scheduled task

Please note that **when the Subsidiary is also defined as a Processing Organization**, the system creates **four FX transactions** (instead of 2): 2 FX Spot (above mentioned) between the Parent Company as a Processing Organization and the Subsidiary as an AccountHolder plus 2 FX Spot between the Subsidiary as a Processing Organization and the Parent Company as a CounterParty. This may be needed for subsidiary reporting purposes.

If a Statement is missing or has not been processed and/or if an FX rate is missing, the system raises an exception in a dedicated report named "Process Status Report".

2.2.2 MM Consolidation deal generation process

After generation of the FX consolidation deals, the ACCOUNT_CONSOLIDATION scheduled task creates the Cash deals for subsidiary call accounts that are not allowed to carry a negative balance in the consolidation currency.

When running the scheduled task ACC_CONSOLIDATION, after creation of FX consolidation deals, the system retrieves ALL the subsidiary call accounts that have been marked with 'Allow MM Consolidation'.

For these call accounts, the system also retrieves the **Account Mapping Rules** to check if all statements have been received and processed for all processing organization accounts (one call account is linked to 1 or n P.O. bank account) associated to that call account in the Mapping table.

For these call accounts, the system simulates the CLIENT-ACTUAL-SETTLE inventory position (as specified in the scheduled task attributes) on the scheduled task Valuation Date, including transfers associated to the FX consolidation deals.

When this CLIENT-ACTUAL-SETTLE inventory position is negative on that date, the system creates Cash deals according to the following rules:

- Loan (this is displayed from the Processing Organization perspective => A Loan/PO is a Deposit 'Client')
- Trade role = Account Holder
- Trade book = Book set on the consolidation panel for MM
- Ccy = subsidiary call account ccy
- Nominal = (simulated) call account balance
- Trade Date = Start Date = Scheduled Task Valuation Date
- End Date = Start Date + 1 Business Day, considering the currency holidays
- Frequency = ZC
- Date Roll = MOD_FOLLOW
- Period = ADJUSTED
- No Amortization / No Stub / No Cmp
- Rate conditions (including Day Count) are taken from the call account interest configuration for the **Call Account Balance**, especially when tiered matrix applies. If floating rate applies, rate value is taken from the Quotes for the scheduled task Valuation Date. The system uses the Quote Set and Pricing Params (QuoteUsage) associated with the pricing environment set on the scheduled task

Please note that **when the Subsidiary is also defined as a Processing Organization**, the system creates **two MM transactions** (instead of 1): 1 Cash MM (above mentioned) between the Parent Company as a Processing

Organization and the Subsidiary as an AccountHolder plus 1 Cash MM between the Subsidiary as a Processing Organization and the Parent Company as a CounterParty. This may be needed for subsidiary reporting purposes.

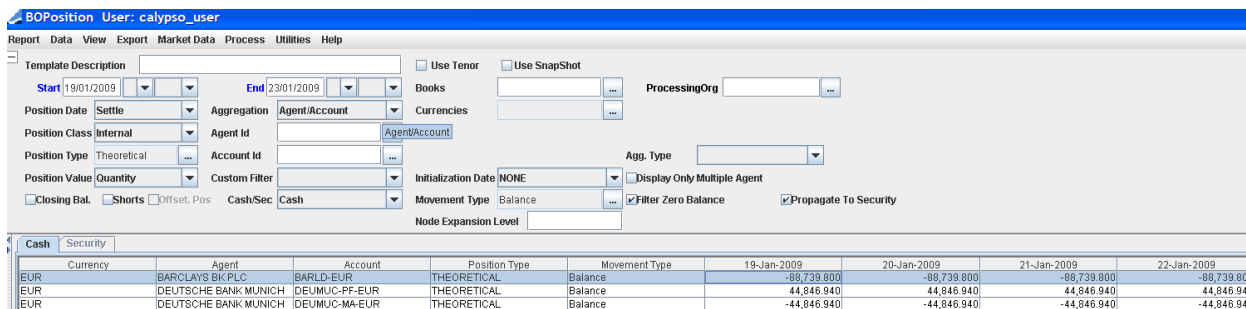
If a Statement is missing or has not been processed and/or if a MM rate is missing, the system raises an exception in a dedicated report named "Process Status Report".

BO Positions and Process Status Reports

3.1 BO Position

The Calypso reporting to check the cash balance by bank/account/ccy, account/ccy or ccy is the Back-Office Position Report.

This reporting is available under **Report > Nostro/Custodian Position > Back Office Position**.



Currency	Agent	Account	Position Type	Movement Type	19-Jan-2009	20-Jan-2009	21-Jan-2009	22-Jan-2009
EUR	BARCLAYS BK PLC	BARLD-EUR	THEORETICAL	Balance	-88,739,800	-88,739,800	-88,739,800	-88,739,800
EUR	DEUTSCHE BANK MUNICH	DEUMUC-PF-EUR	THEORETICAL	Balance	44,846,940	44,846,940	44,846,940	44,846,940
EUR	DEUTSCHE BANK MUNICH	DEUMUC-MA-EUR	THEORETICAL	Balance	-44,846,940	-44,846,940	-44,846,940	-44,846,940

This report displays the global position based on the Aggregation level defined by the user (Agent/Account in the above example).

Double-click on a balance cell automatically displays the details of flows for that day.

Using the function Show - Default configuration available by a right click on a cell, the user can fix a predefined Transfer Report template that will always pop-up when double-clicking on a cell. This allows providing the adequate information (Flow type Forecast/CashPooling, etc.) that may not be available in the default transfer details report.

Load is based on the criteria set by the user. The BO Position uses the Calypso Reporting Framework and as such allows selecting, sorting and renaming the selected columns.

A detailed description of the report capabilities is available on-line using the Help menu.

3.2 Account Activity Report

The Calypso reporting to check the opening/closing balance and movements is the Account Activity Report.

This reporting is available in **Report > Nostro/Custodian Position > Account Activity**.

We have added the possibility to display several accounts at the same time using the **Detail by Account** flag. This flag must be checked to display n subsidiary call accounts in the same report.

The Account Activity uses the Calypso Reporting Framework and as such allows selecting, sorting and renaming the selected columns.

The user must choose the **Account Name** as a **column/sort and subheading criteria** to display a correct view when Detail by Account is ticked, as shown below:

AccountActivity Report PE: default (18/03/09 17:07:35) User: calypso_user[EAD5]

Report Data View Expert Market Data Process Utilities Help

Template Description: Start: 18/01/2009 End: 18/01/2009 Initialization Da...: NONE

Position Date: Settle Processing Org: Cash/Sec: Cash

Position Class: Client Cpty Id: SUBTEST_SUB1 Currency: EUR/USD

Position Type: Theoretical Account Id: Show Only Positions

Position Detail: Start/End Detail by Account Exclude Unchanged Positions

N°	Status	Account Name	Wording	Clay	PO	Value Date	Settle Date	Debit	Credit	Balance
		Account Name: TESTSUB1-EUR								
		TESTSUB1-EUR				18/01/2009	18/01/2009	0.000		0.000
87378	SETTLED	TESTSUB1-EUR	CASHPOOLING BARCLAYS BK PLC05537277	TEST_SUB1	TEST_EAD5	18/01/2009	18/01/2009	8,320.800		(8,320.800)
87388	SETTLED	TESTSUB1-EUR	PAYMENT FACTORY CASHPOOLING DEUTSCHE BANK MUNICH05212	TEST_SUB1	TEST_EAD5	18/01/2009	18/01/2009	1,063.410		(9,384.210)
87392	SETTLED	TESTSUB1-EUR	PAYMENT FACTORY CASHPOOLING DEUTSCHE BANK MUNICH05212	TEST_SUB1	TEST_EAD5	18/01/2009	18/01/2009	3,662.730		(13,046.940)
87392	SETTLED	TESTSUB1-EUR	PAYMENT FACTORY CASHPOOLING DEUTSCHE BANK MUNICH05212	TEST_SUB1	TEST_EAD5	18/01/2009	18/01/2009	4,368.840		(17,415.780)
87394	SETTLED	TESTSUB1-EUR	PAYMENT FACTORY CASHPOOLING DEUTSCHE BANK MUNICH05212	TEST_SUB1	TEST_EAD5	18/01/2009	18/01/2009	37,753.910		(55,169.740)
87486	VERIFIED	TESTSUB1-EUR		TEST_SUB1	TEST_EAD5	18/01/2009	18/01/2009		53,167.740	(0.000)
87492	SETTLED	TESTSUB1-EUR	CASHPOOLING JP MORGAN CHASE LON00025492901	TEST_SUB1	TEST_EAD5	18/01/2009	18/01/2009	80,419.000		(135,588.740)
87496	SETTLED	TESTSUB1-EUR	CASHPOOLING JP MORGAN CHASE LON00025492901	TEST_SUB1	TEST_EAD5	18/01/2009	18/01/2009		531.890	(135,056.850)
		Account Name: TESTSUB2-EUR								
		TESTSUB2-EUR				18/01/2009	18/01/2009	79,867.010		(214,923.860)
87383	SETTLED	TESTSUB2-EUR	CASHPOOLING BARCLAYS BK PLC05463005	TEST_SUB2	TEST_EAD5	18/01/2009	18/01/2009		0.000	0.000
87396	SETTLED	TESTSUB2-EUR	CASHPOOLING DEUTSCHE BANK MUNICH02490000000	TEST_SUB2	TEST_EAD5	18/01/2009	18/01/2009	2,580.000		(2,580.000)
87482	VERIFIED	TESTSUB2-EUR		TEST_SUB2	TEST_EAD5	18/01/2009	18/01/2009	222,750.300		(225,330.300)
87494	SETTLED	TESTSUB2-EUR	CASHPOOLING JP MORGAN CHASE LON00099020500	TEST_SUB2	TEST_EAD5	18/01/2009	18/01/2009	152,726.490		(378,056.790)
		Account Name: TESTSUB3-EUR								
		TESTSUB3-EUR				18/01/2009	18/01/2009	152,726.490		(530,783.280)
87381	SETTLED	TESTSUB3-EUR	CASHPOOLING BARCLAYS BK PLC05470634	TEST_SUB3	TEST_EAD5	18/01/2009	18/01/2009		0.000	0.000
87400	SETTLED	TESTSUB3-EUR	CASHPOOLING DEUTSCHE BANK MUNICH03399660000	TEST_SUB3	TEST_EAD5	18/01/2009	18/01/2009	316.750		(316.750)
		TESTSUB3-EUR				18/01/2009	18/01/2009	2,661.650		(2,978.400)
		TESTSUB3-EUR				18/01/2009	18/01/2009	2,778.400		(5,756.800)

Pricing Env: default Val Date: 18/03/2009 17:07:35

Load Clear Print Close

The Xfer Description is used to populate the type of movement (column Wording in the above example).

The report is based on a **Position Class** that can be set to **Client** (to display one or n subsidiary internal/call account) or **Internal** (to display one or n processing organization bank accounts) to display the opening, closing balances and movements. The Position Date allows displaying the account balance and movements by Booking Date, Value Date or Settle Date.

3.3 BO Position Reconciliation Report

3.3.1 Scheduled Task INVENTORY_SNAPSHOT

Using the Inventory Snapshot Scheduled task, we provide the ability for the treasurer to freeze the position at any given time and identify the difference (transfers) in comparison with any previous snapshot or the current inventory position.

To access that scheduled task, go to **Configuration > Scheduled Tasks** and select the INVENTORY_SNAPSHOT. This Scheduled Task will load inventory position between the specified "From" and "To" days and will store it in the Inventory Tables. The snapshot date will be stored in the domain value Bo_position_snapshot with the types of position and the dates in the comment field.

Task Type	INVENTORY_SNAPSHOT
External Reference	
Comments	
Description	
Attempts	1
Retry After, In Minutes	0
JVM Settings	-Xms512m -Xmx1024m -XX:MaxPermSize=256m
Allow Task To	<input type="checkbox"/> Skip Execute <input type="checkbox"/> Send Emails <input type="checkbox"/> Publish Business
+ Common Attributes	
- Task Attributes	
INVENTORY TYPE	CASH
DATE TYPE	SETTLE
POSITION TYPE	THEORETICAL
POSITION CLASS	INTERNAL
PURGE SNAPSHOT	false
SNAPSHOT	
KEEP LATEST ONLY	
CURRENCY	
ACCOUNT_ID	
AGENT	

This scheduled task loads inventory positions between the “From” and “To” days and stores them in the inventory tables.

The snapshot date is stored in the domain value Bo_position_snapshot with the types of position and the dates in the comment field.

Attributes

- **INVENTORY TYPE:** Allow the user to choose between ALL, CASH or SECURITY. Depending on the type of inventory selected you can store/freeze cash and security (ALL), only cash (CASH) or only security (SECURITY) inventory positions as “Snapshot Positions”
- **DATE TYPE:** Allow the user to freeze TRADE, SETTLE, AVAILABLE or ALL inventory positions date types
- **POSITION TYPE:** Allow the user to freeze the THEORETICAL, ACTUAL, FAILED or ALL inventory position types
- **POSITION CLASS:** Allow the user to freeze the INTERNAL, EXTERNAL, CLIENT or MARGINCALL inventory position classes
- **PURGE SNAPSHOT:** Set to false by default. If set to true, the scheduled task will delete all (if unspecified in the field SNAPSHOT) or only the specified “snapshot inventory positions” mentioned in the attribute SNAPSHOT
- **SNAPSHOT:** Only active when PURGE_SNAPSHOT is set to true. This allows the user to specify which snapshot inventory position he wants to purge/delete from the inventory
- **KEEP LATEST ONLY:** Active in conjunction with PURGE_SNAPSHOT set to true. The default value is false. When set to true, when performing the PURGE_SNAPSHOT the system will delete all snapshot inventory positions except the latest one

- **CURRENCY:** Default is blank (= ALL). Pick a Currency if you want to limit the snapshot process for the positions specified in that currency
- **ACCOUNT_ID:** Default is blank (= ALL). Enter an Account Id to limit the snapshot process to that specific account
- **AGENT:** Default is blank (= ALL). Enter the Agent Short Name to limit the snapshot process to accounts hold at that Agent only

From Days/To

The INVENTORY_SNAPSHOT scheduled task will store inventory positions as snapshots depending on the number of days specified in From and To field.

For instance, if you set From = -5 and To = 5, when running the scheduled task the system will store inventory positions from Valuation Date – 5 days till Valuation Date + 5days

In order to display the frozen position(s) in the BO Position, we have added a Snapshot flag on that position screen.

When activated, the system asks the user to choose which frozen position he wants to display. Once selected, the user has to hit the Load button to see that position. Double-clicking on a cell allows drilling-down to the snapshot movements for that position.

3.3.2 BO Position Reconciliation Report

To access the BO Position Reconciliation Report, go to **Processing > Reconciliation > BO Position Reconciliation**.

In the BO Position Reconciliation screen, the user has the ability to select a snapshot position class (in both the Base and/or Target) by flagging the “Use Snapshot” box available in these panels.

This allows the user to make reconciliations between any type of inventory position and a “snapshot” inventory position.

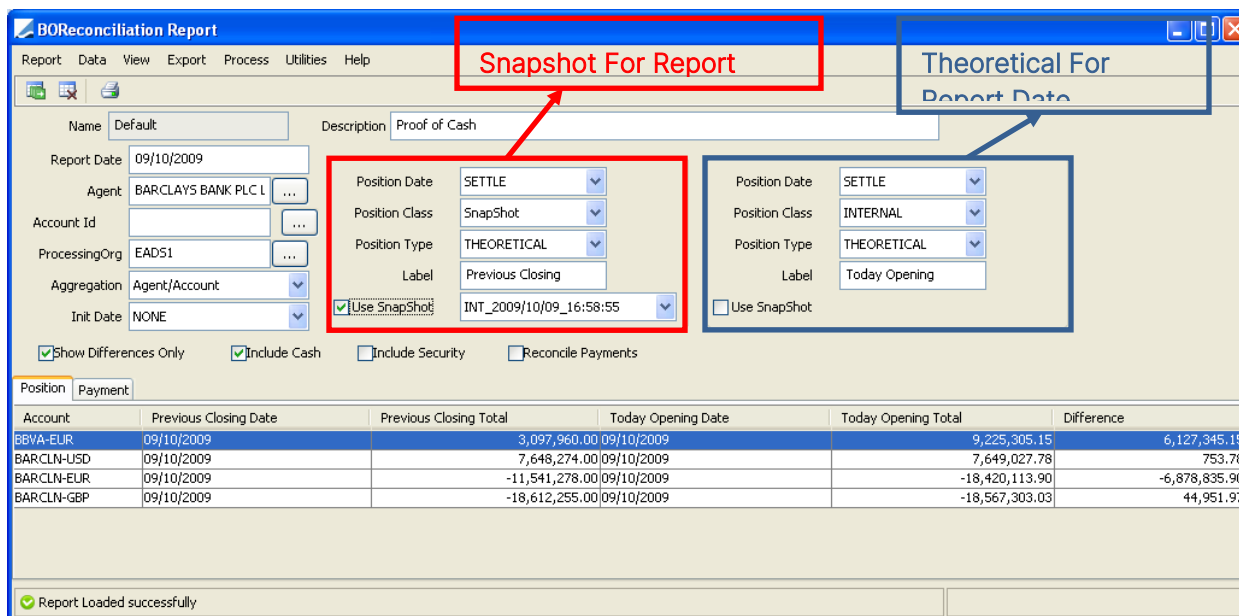
The user can limit the reconciliation process for:

- 1 or n Agent(s)/Bank(s)
- 1 or n Account(s)
- 1 or n Processing Organization(s)

The BO Position Reconciliation screen gives a **summary view** by agent/account of the reconciliation results between two position types. To do so, you must set a BO Position Reconciliation Template with the following criteria:

- Agent = ALL (blank)
- Account Id = ALL (blank)
- Processing Org. = Your P.O.
- Aggregation = Agent/Account
- Previous Closing = Snapshot Position of report date (Position Date = SETTLE, Position Class = Snapshot, Position Type) THEORETICAL and snapshot = latest snapshot position saved by the Scheduled Task)

- Today Opening = Same day standard position (Position Date = SETTLE, Position Class = INTERNAL, Position Type = THEORETICAL)
- “Show Differences Only” must be picked
- “Include Cash” must be picked

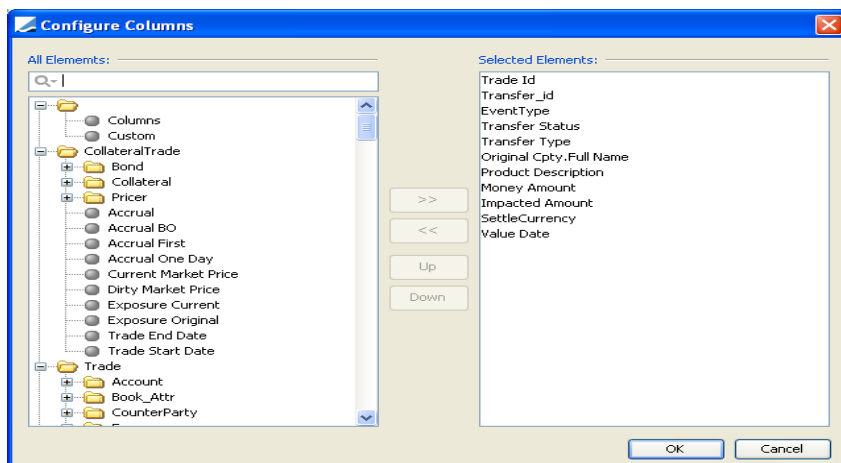


Account	Previous Closing Date	Previous Closing Total	Today Opening Date	Today Opening Total	Difference
BBVA-EUR	09/10/2009	3,097,960.00	09/10/2009	9,225,305.15	6,127,345.15
BARCLN-USD	09/10/2009	7,648,274.00	09/10/2009	7,649,027.78	753.78
BARCLN-EUR	09/10/2009	-11,541,278.00	09/10/2009	-18,420,113.90	-6,878,835.90
BARCLN-GBP	09/10/2009	-18,612,255.00	09/10/2009	-18,567,303.03	44,951.97

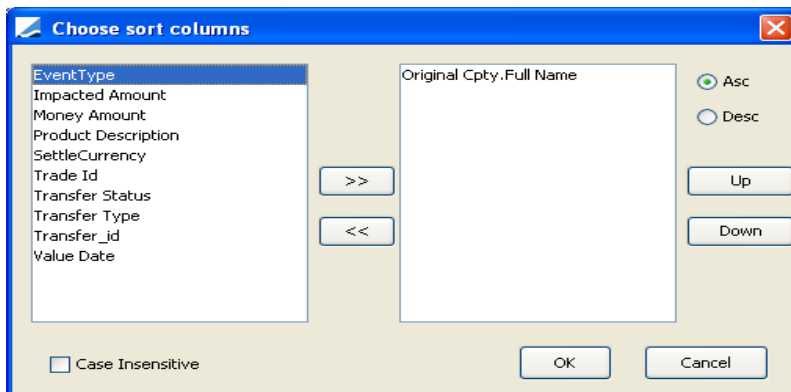
Then, to explain the **opening balance of the day** and display the **movements** explaining the difference between the previous day closing balance (snapshot of the THEORETICAL/SETTLE/INTERNAL) and the current day opening balance (standard THEORETICAL/SETTLE/INTERNAL position), the user must select one line/account, right-click and choose the function “Explain Difference” available in the Process menu of that report.

Before doing so, the user must define the transfer report template that will be called by this Explain Difference function.

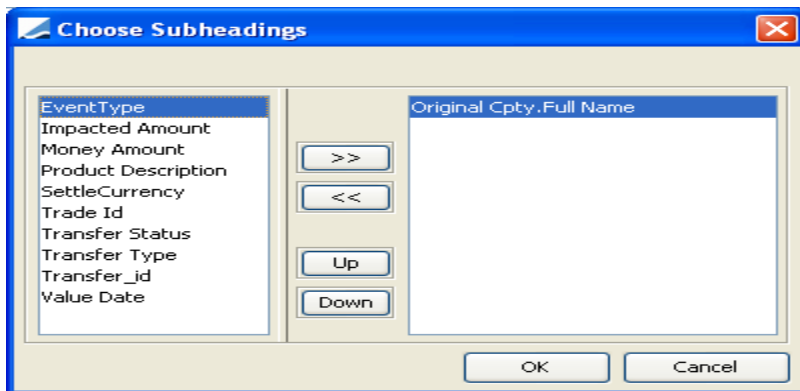
To do so, go to the Transfer Report menu. Select the following columns in the Configure Columns menu (example):



Select the Original Cpty.Full Name as a Sort Criteria and SubHeadings criteria, as stated below:

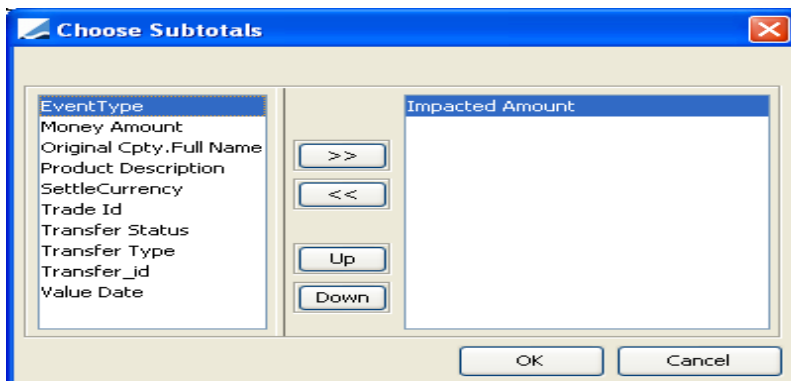


The "Choose sort columns" dialog box shows a list of fields on the left: EventType, Impacted Amount, Money Amount, Product Description, SettleCurrency, Trade Id, Transfer Status, Transfer Type, Transfer_id, and Value Date. The field "Original Cpty.Full Name" is selected and moved to the right pane. The "Asc" radio button is selected. The "Up" and "Down" buttons are visible. At the bottom, there is a "Case Insensitive" checkbox, and "OK" and "Cancel" buttons.



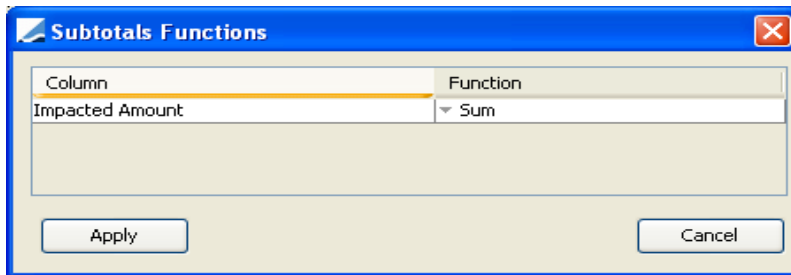
The "Choose Subheadings" dialog box shows the same list of fields on the left. The field "Original Cpty.Full Name" is selected and moved to the right pane. The "Up" and "Down" buttons are visible. At the bottom, there are "OK" and "Cancel" buttons.

Select the Impacted Amount as Subtotals criteria:



The "Choose Subtotals" dialog box shows a list of fields on the left: EventType, Money Amount, Original Cpty.Full Name, Product Description, SettleCurrency, Trade Id, Transfer Status, Transfer Type, Transfer_id, and Value Date. The field "Impacted Amount" is selected and moved to the right pane. The "Up" and "Down" buttons are visible. At the bottom, there are "OK" and "Cancel" buttons.

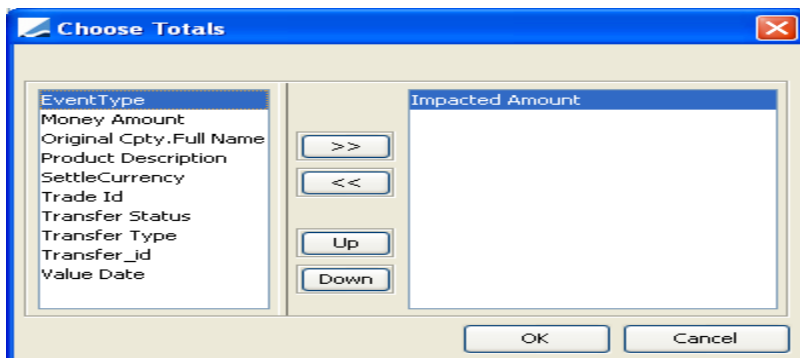
Select the Sum Function for that criteria as SubTotals Function, as stated below:



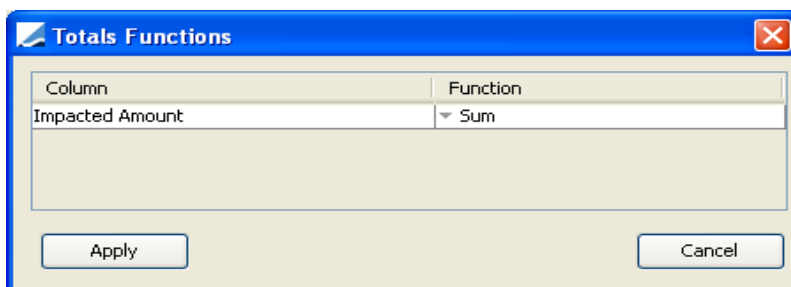
The 'Subtotals Functions' dialog box has a table with two columns: 'Column' and 'Function'. The 'Column' column contains 'Impacted Amount' and the 'Function' column contains 'Sum'. Below the table are 'Apply' and 'Cancel' buttons.

Column	Function
Impacted Amount	Sum

Do the same setup for the Totals, as stated below:



The 'Choose Totals' dialog box shows a list of fields on the left and a selected field 'Impacted Amount' on the right. The fields on the left are: EventType, Money Amount, Original Cpty.Full Name, Product Description, SettleCurrency, Trade Id, Transfer Status, Transfer Type, Transfer_id, and Value Date. Between the lists are buttons for '>>', '<<', 'Up', and 'Down'. At the bottom are 'OK' and 'Cancel' buttons.



The 'Totals Functions' dialog box has a table with two columns: 'Column' and 'Function'. The 'Column' column contains 'Impacted Amount' and the 'Function' column contains 'Sum'. Below the table are 'Apply' and 'Cancel' buttons.

Column	Function
Impacted Amount	Sum

Then save that template with the **mandatory Template Name: Reconciliation** (to call it by default when choosing the BO Position Reconciliation – Explain Difference menu).

Once done, when the user chooses the “Explain Difference” function, the system pops-up that transfer template, as stated below:

Name

Default

Description

Proof of Cash

Report Date

09/10/2009

Agent

BARCLAYS BANK PLC L

Account Id

ProcessingOrg

EADS1

Aggregation

Agent/Account

Init Date

NONE

Position Date

SETTLE

Position Class

SnapShot

Position Type

THEORETICAL

Label

Previous Closing

Use SnapShot

☒ Use SnapShot

INT_2009/10/09_16:58:55

Position Date

SETTLE

Position Class

INTERNAL

Position Type

THEORETICAL

Label

Today Opening

Use SnapShot

☐ Use SnapShot

Show Differences Only

☒ Show Differences Only

Include Cash

☒ Include Cash

Include Security

☐ Include Security

Reconcile Payments

☐ Reconcile Payments

Position

Payment

Account	Previous Closing Date	Previous Closing Total	Today Opening Date	Today Opening Total	Difference
88VA-EUR	09/10/2009	3,097,960.00	09/10/2009	9,225,305.15	6,127,345.15
88VA-EUR	09/10/2009	3,449,334.00	09/10/2009	7,449,022.80	-399,334.00

Explain Difference

Report

Data

View

Export

Market Data

Process

Utilities

Help

Trade Id	Transfer_id	Event Type	Transfer Status	Transfer Type	Original Cpty.Full Name	Product Description	Money Amount	Impacted Amount	Settle Currency	Value Date
10004201	3145	RECEIPT	SETTLED	CASHSWEEPING	Original Cpty.Full Name: EADS1	TransferAgent(6,127,150.80 EUR)	6,127,150.80	6,127,150.80	EUR	09/10/2009
					EADS1			6,127,150.80		
10004178	3103	PAYMENT	SUBSTITUTED	FORECAST	Original Cpty.Full Name: EADSHQSP	CashTransfer(-2,000.00 EUR)	(2,000.00)	2,000.00	EUR	09/10/2009
10004203	3115	PAYMENT	SETTLED	CASHPOOLING	EADSHQSP	CustomerTransfer(1,807.36 EUR) To :EADSHQSP	(1,807.36)	(1,807.36)	EUR	09/09/2009
								192.64		
10004179	3104	PAYMENT	SUBSTITUTED	FORECAST	Original Cpty.Full Name: ECE	CashTransfer(-190.00 EUR)	(190.00)	190.00	EUR	09/10/2009
10004204	3117	PAYMENT	SETTLED	CASHPOOLING	ECE	CustomerTransfer(188.29 EUR) To :ECE	(188.29)	(188.29)	EUR	09/10/2009
								1.71		
								6,127,345.15		

The user can double-click on each line of that report to drill-down to the movement details. Additional information/columns can be displayed in that report. The only mandatory columns is the impacted amount and the subtotal/total using that specific column.

3.4 Process Status Report

A new report named Process Status report (reporting.ReportWindow\$ProcessStatus) has been added to report exceptions/errors blocking all or part of the chained process for all or a subset of subsidiaries accounts.

3.4.1 Scheduled Task CHECK_INC_STATEMENT

A new scheduled task CHECK_INC_STATEMENT has been created to check the **completeness** of the incoming statements (MT940) before running the ACCOUNT_CONSOLIDATION and ACCOUNT_STATEMENT scheduled tasks.

The scheduled tasks sequence should be the following:

- **MESSAGE_MATCHING** to integrate the incoming statements
- **INC_CASH_STATEMENT** to split and type the statement into sub-statements; for some types, the system automatically creates some deals based on the mapping information (and related static data) set in the Account Mapping table
- **CHECK_INC_STATEMENT** to send the 'status' information into the Process Status Report. An Account Filter (SD Filter) is available as an attribute to limit the process to a list of call accounts.

Scheduled Task Window [110200/RELEASE/calypso_user]

Report Tools Help

Definition Report

? Type: CHECK_INC_STATEMENT Description: Prerequisite check Process Org: [v]

Trade Filter: [v] Pricing Env: [v] Risk Config: [v]

User: [v] Filter Set: [v] Next Id: 0 [v]

Measures: [v] Ext Ref: CHECK_INC_STATEMENT_1

Time Zone: Europe/Paris Exec Time: [v] H [v] M Val Date Offset: 0

From Days: 0 To: 0 Valuation Time: 12 H 0 M Date Rule: [v]

Holidays: [v] Undo Time: [v] H [v] M ☐ Private ☐ DeActivated

☐ Skip Exec CutOff: 0 Hour 0 Min ☒ Execute

Attributes

Attribute	Value
Account Filter	Account A

☐ Publish ☐ Send Email ☐ Exec On Holidays

Comment

- **ACCOUNT_CONSOLIDATION** to generate the FX and MM deals to move the balance of specific internal call accounts to zero
- **ACCOUNT_INTEREST** to compute the daily interest entries for internal call accounts
- **ACCOUNT_STATEMENT** to generate the internal statements sent to subsidiaries (either MT940 or HTML statements)

The CHECK_INC_STATEMENT Scheduled Tasks creates the exception/errors reported in the Process Status Report.

3.4.2 Report

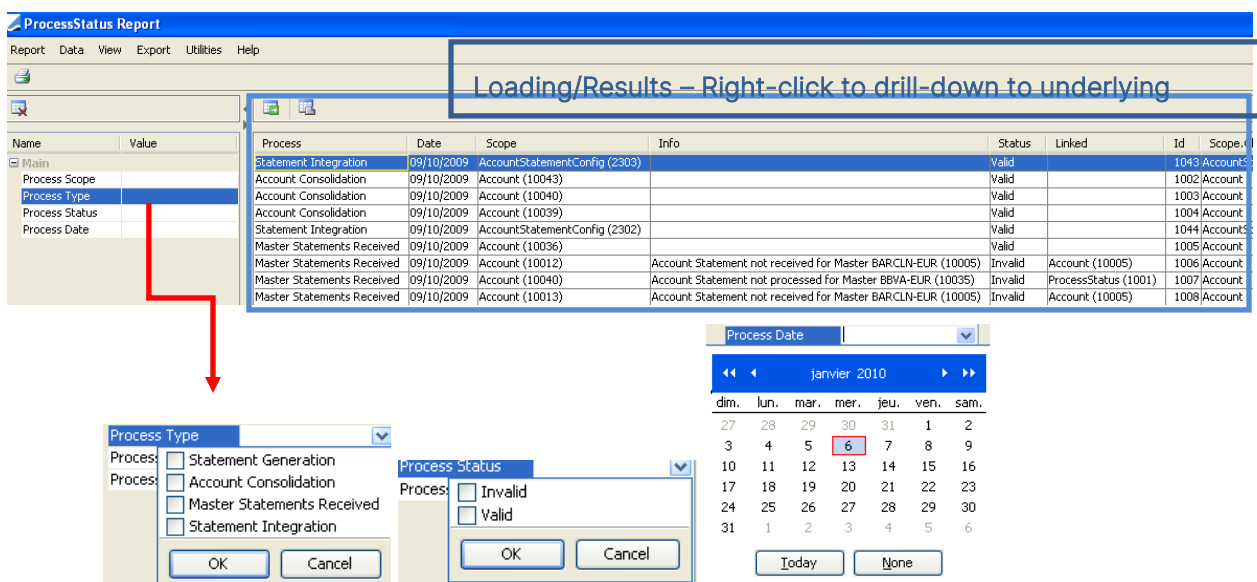
The report Process Status allows checking the status of automatic chained processes from the integration of incoming statement MT940 to the generation of internal subsidiary call account statement generation. Only incorrect or incomplete internal accounts are blocked. Others are fully processed.

This report lists the following processing scopes with their status (valid/invalid):

- **Statement Integration:** the report produces a line per P.O. Bank Account having an Incoming Statement Configuration. If the statement is expected and received (based on the incoming statement date rule) the status is valid, else the status is invalid and a comment (Info column) is provided to give the reason of failure. From that 'status' line the user can reach all the information regarding the account, statement config. etc. and take further action.
- **Master Statement Received:** Based on the Account Mapping table we store the relationships between the P.O. Bank Accounts (for which we receive MT940) and the Subsidiary Call Accounts impacted by these P.O. Accounts / Statements. Thus, **for each call account**, the Process Status reports a line type 'Master Statement Received' by Statement (Nostro) impacting the internal subsidiary account. If the Master Statement impacting that subsidiary internal account has been received, status is valid, else it is invalid.
- **Account Consolidation:** when all Master Statements impacting a call account for which we have to automatically create FX and MM deals have been received and processed, the Process Status reports an

Account Consolidation line with a valid status. When one or n Master Statements have not been received or processed, blocking the consolidation process, the Process Status reports an Account Consolidation error with an Invalid Status and a comment (Info column) to give the reason of failure. From that 'status' line the user can reach all the information regarding the account, etc. and take further action. The 'invalid' call accounts are blocked and FX/MM deals are not generated automatically for these internal accounts.

- **Statement Generation:** when all Master Statements impacting a call account have been received and processed and when the Account Consolidation has successfully run, the internal subsidiary call account statements can be generated. In such a case, the Process Status reports a Statement Generation line with a valid status. Else, it reports a Statement Generation line for that(these) call account(s) with an invalid status. The 'invalid' call accounts are blocked and the statements are not generated automatically for these internal accounts.
- **Layout Example:** the Process Status Report uses the calypso report framework with possibility to configure and rename columns, save templates and right-click to drill-down to the related object and investigate. An example is presented below:



The screenshot displays the 'ProcessStatus Report' window. A red arrow points from the 'Process Type' dropdown in the left sidebar to the 'Process Type' configuration panel at the bottom. Another red arrow points from the 'Process Status' dropdown in the left sidebar to the 'Process Status' configuration panel at the bottom. The main table lists various processes with columns for Name, Date, Scope, Info, Status, Linked, Id, and Scope. A callout box highlights the 'Loading/Results - Right-click to drill-down to underlying' text. Below the table, there is a 'Process Date' dropdown set to 'Janvier 2010' and a calendar view showing the month of January with the 6th highlighted. At the bottom, there are 'Today' and 'None' buttons.

Name	Date	Scope	Info	Status	Linked	Id	Scope
Statement Integration	09/10/2009	AccountStatementConfig (2303)		Valid		1043	Account
Account Consolidation	09/10/2009	Account (10043)		Valid		1002	Account
Account Consolidation	09/10/2009	Account (10040)		Valid		1003	Account
Account Consolidation	09/10/2009	Account (10039)		Valid		1004	Account
Statement Integration	09/10/2009	AccountStatementConfig (2302)		Valid		1044	Account
Master Statements Received	09/10/2009	Account (10036)		Valid		1005	Account
Master Statements Received	09/10/2009	Account (10012)	Account Statement not received for Master BARCLIN-EUR (10005)	Invalid	Account (10005)	1006	Account
Master Statements Received	09/10/2009	Account (10040)	Account Statement not processed for Master BBVA-EUR (10035)	Invalid	ProcessStatus (1001)	1007	Account
Master Statements Received	09/10/2009	Account (10013)	Account Statement not received for Master BARCLIN-EUR (10005)	Invalid	Account (10005)	1008	Account

The Process Status allows blocking the Account Consolidation and Internal Subsidiary Call Account Statement Generation for incomplete Call Accounts. Thus, when one or n Master Statement impacting a subsidiary internal call account is/are missing or incorrect, the system blocks that internal account. An exception (Invalid Status) is reported in the Process Status and the process will have to be rerun manually for that internal account once the new statements are received.

Other internal subsidiary accounts that are complete are processed. Only incorrect or incomplete internal accounts are blocked.

Account Sweeping

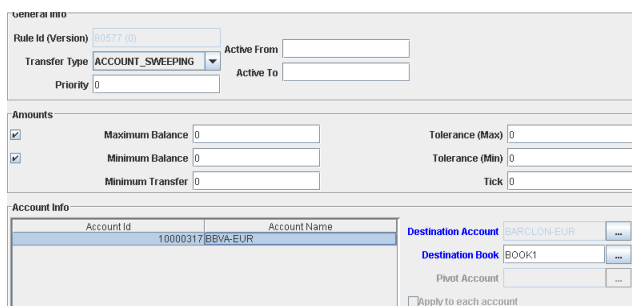
4.1 Active Account Sweeping Process from BO Position

We have added the possibility to trigger the account sweeping directly from the BO Position.

To use that feature, first go to **Configuration > Account > Account Sweeping** and define the account sweeping rules for accounts that are **actively** swept.

An example is presented below for BBVA-EUR account swept within BARCLON-EUR account.

Please refer to the general Cash Management User Guide for more information regarding account sweeping configuration.



Then, go to the BO Position Report.

Two new columns have been added in that report:

- **Sweeping Config:** to identify accounts for which a sweeping rule is set in the account sweeping configuration. When ticked, it means the account can be swept based on the account sweeping rule criteria previously defined for that account;
- **Perform Sweeping:** to select an account to sweep. The user can select all accounts that have sweeping rules or only a subset of these accounts. Thus, when the sweeping is triggered from the BO Position, the user keeps control of the sweeping process and may decide to sweep only some accounts for which sweeping rules exist but not all.

An example is shown below:

BOPosition User: calypso_user[PARENT_COMPANY]

Report Data View Export Market Data Process Utilities Help

Template Description ☐ Use Tenor ☐ Use Snapshot

Start 04/06/2009 End 11/06/2009 Books ProcessingOrg PARENT_COMPANY

Position Date Settle Aggregation Agent/Account Currencies EUR

Position Class Internal Agent Id

Position Type Theoretical Account Id

Position Value Quantity Custom Filter Initialization Date NONE Agg. Type

☐ Closing Bal. ☐ Shorts ☐ Offset Pos Cash/Sec Cash Movement Type Balance ☐ Display Only Multiple Agent ☐ Filter Zero Balance ☒ Propagate To Security

Node Expansion Level

Cash	Security	Sweeping Config	Perform Sweeping	Currency	Agent	Account	Position Type	Movement Type	04-Jun-2009	05-Jun-2009	06-Jun-2009	07-Jun-2009	08-Jun-2009
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			EUR	BARCLAYS BK P...	BARCLON-EUR	THEORETICAL	Balance	-10,024,771.040	-10,024,771.040	-10,024,771.040	-10,024,771.040	-10,024,771.040
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			EUR	BBVA	BBVA-EUR	THEORETICAL	Balance	10,000,000.000	10,000,000.000	10,000,000.000	10,000,000.000	10,000,000.000

Configure Columns ...
 Configure Sort ...
 Configure SubHeadings ...
 Subtotals
 Totals
 Configure Totals Formatting
 Set Column Names
 Set Fixed Columns
 Set Holidays
 Calendar
 Clear All Table Filters
☐ Use Zebra Striping
 Set Report Color Values...
 Set Conditional Colors
 Set Book...
 Show
 Process

Details...
 Reconcile Position...
 Transfer Agent...
 Position Adjustment...
 Unavailability Transfer...
 Repo Sweeping...
 Account Sweeping
 On All Selected Positions
 On Specific Date
 Financing...
☐ Display Financing
 MarginCall...
 Create Movement Type...
 Create Balance Type...
 Define Movement Type...
 Define Balance Type...
 Check FX Quotes...

To actively sweep an account from the BO Position, the user must right-click, select the Process function (or go to the menu Process) / **Account Sweeping** and choose:

- Account Sweeping / **On All Selected Positions**: this will create Transfer Agent deals for all accounts ticked in the 'Perform Sweeping' column. Transfer Agents deal will move the balance for the selected accounts based on the account sweeping rules set in the account sweeping configuration. When this option is chosen, the sweeping (Transfer Agent deals) is done on BO Position **Start Date**;
- Account Sweeping / **On Specific Date**: the system also allows performing account sweeping for a **Specific Date**, different from the BO Position Start Date. To use that function, the user must first select the accounts to sweep by checking the 'Perform Sweeping' flag for these accounts, select the a cell corresponding to the sweeping date, right-click to select the Process function / **Account Sweeping** and choose 'On Specific Date' option. The system will perform the sweeping (Transfer Agent deal generation) for all the selected balances on that date.

The BO Position Account Sweeping function must be used when the user wants to **keep control** of the sweeping process and determine manually (based on account characteristics/sweeping rules) which accounts, among the list of sweeping accounts, must finally be swept.

When no prerequisite control/order is required, the scheduled task **TARGET_BALANCE** must be used. It will always perform the sweeping for all accounts based on their sweeping rules.

4.2 TARGET_BALANCE Active Account Sweeping

When no prerequisite control/order is required, the scheduled task **TARGET_BALANCE** must be used. It will always perform the sweeping for all accounts based on their sweeping rules.

The Scheduled Tasks window is accessed from **Configuration > Scheduled Tasks**.

Task Type	TARGET_BALANCE
External Reference	
Comments	
Description	
Attempts	1
Retry After, In Minutes	0
JVM Settings	-Xms512m -Xmx1024m -XX:MaxPermSize=256m
Allow Task To	<input type="checkbox"/> Skip Execute <input type="checkbox"/> Send Emails <input type="checkbox"/> Publish Business
+ Common Attributes	
- Task Attributes	
Config Type	
Retroactivity	
Position Type	ACTUAL
Position Class	INTERNAL
Position Date	SETTLE
Legal Entity	

Attributes

- **Retroactivity:** Enter true or false. Setting this field to true means that in case of back valued transfers, the sweeping process will generate Trade transfers related to the back valued amounts and dates, instead of the process date.
- **Position Type:** Specify the type of the inventory position to retrieve for 'nostro' bank accounts. The process must run on the **ACTUAL** position type.
- **Position Class:** Specify the class of the inventory position to retrieve for 'nostro' bank accounts. The process must run on the position class **INTERNAL**.
- **Position Date:** Specify the date type of the inventory position to retrieve. The process must run on the **SETTLE** position date.
- **Legal Entity:** Specify an Agent or leave it blank to select ALL Agents.

This process is based on the Inventory Position.

The result is the generation of Transfer Agent trades (for 'nostro' bank account sweep).

To view the Transfer Agent trades, choose **Processing - Accounting Operations - Transfer Agent – Trade - Open**.

4.3 Passive Account Sweeping Process

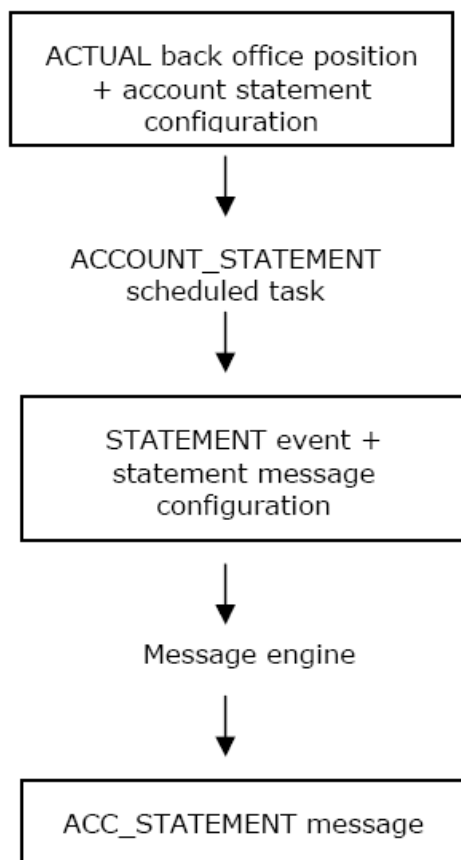
When account sweeping is passive (ie. generated by the bank on behalf of the processing organization), Calypso creates the Transfer Agent trade (or Simple Transfer trades when two processing organizations are involved) when processing the incoming MT940 in T+1. This is based on the Account Mapping Rules set in the Mapping table.

Please also refer to the Appendix for details in terms of mapping and creation rules.

Internal Messages

5.1 Scheduled Task ACCOUNT_STATEMENT

Account statement events are generated by the scheduled task ACCOUNT_STATEMENT based on **actual cash account positions**, and **account statement configurations**. The Message engine subscribes to account statements events and generates **account statement messages** based on **statement message configurations**



The scheduled task ACCOUNT_STATEMENT generates statement events based on account statement configurations and cash account positions computed by the Inventory engine. The statement events are then processed by the Message engine for the actual generation of the statement document.

Go to [Configuration > Scheduled Tasks](#) to open the Scheduled Tasks window, and select the ACCOUNT_STATEMENT scheduled task. Select a trade filter, a user, a pricing environment, and a processing organization.

In the scheduled task, you can specify as Attribute LEGALENTITY the AccountHolder (Customer) for which you want to generate a statement (to generate a statement only for that LE), and the type of message (it must be the same as the message configuration selected in the statement configuration = ACC_STATEMENT).

Task Type	ACCOUNT_STATEMENT
External Reference	
Comments	
Description	
Attempts	1
Retry After, In Minutes	0
JVM Settings	-Xms512m -Xmx1024m -XX:MaxPermSize=256m
Allow Task To	<input type="checkbox"/> Skip Execute <input type="checkbox"/> Send Emails <input type="checkbox"/> Publish Business
+ Common Attributes	
- Task Attributes	
MESSAGETYPE	ACC_STATEMENT
ROLE	
LEGALENTITY	
CURRENCIES	
CHECK_FREQUENCY	true
EXCLUDE_ACCOUNT_STATUS	
Prerequisite Check	
SD_FILTER	

Attributes

- **MESSAGETYPE** – Select an account statement message type for this type of message to be generated (ACC_STATEMENT in our example to match the Advice Config)
- **ROLE** – Select the value set in the domain Name AccountHolderRole (Customer in our example) to be able to send account statements to customers
- **LEGALENTITY** – Enter the name of the L.E. or leave it blank for all Customers
- **CHECK_FREQUENCY** – Must be set to true to generate statements only for statement configuration date rules matching the Scheduled Task Valuation Date. If you want to use the Scheduled Task to generate a statement manually, this attribute must be set to false

5.2 Subsidiary Internal MT940

Each subsidiary call account must be defined with a statement configuration to produce daily internal Swift MT940.

These internal MT940 are sent by the processing organization to the subsidiary (Account Holder) and mirror what the bank account statement has confirmed for the related internal account.

A Date Rule, set on that configuration, determines the frequency of production of these internal MT940.

The Flag Zero Balance and No Movement leave the possibility to always send a MT940, including when there is no movement or when balance is zero.

The position to trigger the internal MT940 generation is the Client – Actual – **Booking Date** Position.

The Advice Configuration to use must refer to the Message Template MT940 (SWIFT). That Advice Configuration can be set for Product Type = N/A or Call Account.

An example of call account statement configuration is presented below.

Please note that you need to refer to an advice configuration previously saved in your message setup before configuring the Account Statement Configuration.



Generation of MT940 is triggered by the ACCOUNT_STATEMENT Scheduled Task based on the Statement Frequency.

We also allow a user to generate an ad-hoc MT940 or a duplicate of a previously generated MT940 using the Account Statement Configuration Report under **Reports > Accounting Reports > Account Statement Config**.

For more information regarding call account statements, please refer to the Client Custody Management User Guide.

5.3 Subsidiary Internal Bank Account Statement

Each subsidiary call account must have one (or n) dedicated statement configurations to produce HTML Bank Account Statements.

A Date Rule set on the Account Statement Configuration determines the frequency of production of these internal bank account statements.

The Flag Zero Balance and No Movement leave the possibility to always send a MT940, including when there is no movement or when balance is zero.

The position to trigger the internal MT940 generation is the Client – Actual – **Booking** or **Settle** Date Position.

The Advice Configuration to use must refer to the HTML Templates:

- SubsidiaryICStatement.html for Value Date statements
- SubsidiaryICStatementBookingDate.html for Booking Date statements

These Advice Configurations can be set for Product Type = N/A or Call Account.

An example of call account statement configuration in **Value/Settle Date** is presented below.

Please note that you need to refer to an advice configuration already saved in your message setup before configuring the Account Statement Configuration:

General

Statement Type: **Default** Last Statement

Numbering: **DDD** Last Date: 19/01/2009

Zero Balance: ☒

No Movement: ☒

Active From:

To:

Add
Update
Remove
Generate

Position

Cash/Sec: **Cash**

Class: **Client**

Type: **Actual**

Date: **Settle**

Value: **Quantity**

Payment Based: ☒

Frequency: **Rule** **FirstBusMonth**

Message Config

Config: **76154**

Message Type: **ACC_STATEMENT**

Template: **SubsidiaryCStatement.html**

Format: **HTML**

Gateway: **PRINTER**

Product Type: **N/A** Language: **English**

Event Type: **STATEMENT** Address Type: **MAIL**

Message Type: **ACC_STATEMENT** Gateway: **PRINTER**

Processing Org: **ALL** Format Type: **HTML**

PO Contact Type: **Default** Template: **SubsidiaryCStatement.html**

Receiver: **ALL** SD Filter:

Receiver Role: **Customer** ☐ Matching

Rec Contact Type: **Default** ☐ Do not Send Message

Grouping: ☐ Inactive


Config Id: **76154** **Delete** **Save** **Update**

Generation of internal call account statement is triggered by the ACCOUNT_STATEMENT Scheduled Task based on the Statement Frequency.

We also allow a user to generate an ad-hoc HTML Bank Account Statement or a duplicate of a previously generated Statement using the Account Statement Configuration Report under [Reports > Accounting Reports > Account Statement Config](#).

All Statements are audited; we store for each one the Opening/Closing Balance and related movements for audit & investigation purposes.

An example of statement layout is presented below:



PARENT COMPANY
Bernard Dupont
Treasury
1 Straat
Otto brun
GERMANY

Date: March 18, 2009

To: **PAR_SUB1**

Address: 106 Rue de la Paix
Frankfurt
GERMANY

This is Not a Formal Statement

Account Statement Number from 02-Jan-2009 to 19-Jan-2009

Account Number : **PAR_SUB1-EUR**

Account Owner : Alain Durand

Account Currency : EUR

Statement status : NEW

Original Statement Number :

MOVEMENTS DETAILS

VALUE DATE	SETTLE DATE	TRAN REF	DETAILS	DEBIT	CREDIT	BALANCE
02/01/2009	02/01/2009		OPENING BALANCE			0.000
19/01/2009	19/01/2009	1000002533	CASHPooling BARCLAYS BK PLC/85537277	8,320.800		8,320.800DR
19/01/2009	19/01/2009	1000002538	PAYMENT FACTORY CASHPooling DEUTSCHE BANK MUNICH/5212	1,063.410		9,384.210DR
19/01/2009	19/01/2009	1000002539	PAYMENT FACTORY CASHPooling DEUTSCHE BANK MUNICH/5212	1,662.780		11,046.990DR
19/01/2009	19/01/2009	1000002540	PAYMENT FACTORY CASHPooling DEUTSCHE BANK MUNICH/5212	4,366.840		15,413.830DR
19/01/2009	19/01/2009	1000002541	PAYMENT FACTORY CASHPooling DEUTSCHE BANK MUNICH/5212	37,753.910		53,167.740DR
19/01/2009	19/01/2009		CLOSING BALANCE			53,167.740DR

Please note that we also include the message keyword **INTEREST_DETAILS** to confirm the interest on the subsidiary internal call account using the layout below:

INTERESTS DETAILS

VALUE DATE	TYPE	INTEREST AMOUNT	INTEREST RATE	INTEREST TOTAL	INTEREST POSITION
------------	------	-----------------	---------------	----------------	-------------------

Same logic applies for Booking Date Statements but in that case the template only displays the Booking and Settle Dates.

Call Account Statement Configuration for booking Date HTML Statement

Account
Statements
Attributes
Interests
Limits
Consolidation
Browse

General

Statement Type

Default

Last Statement

Numbering

Last Date

09/10/2009

Zero Balance

☒

Active From

No Movement

☒

To

Position

Cash/Sec

Cash

Class

Client

Type

Actual

Date

Booking

Value

Quantity

Payment Based

☒

Message Config

Config

2501

Message Type

ACC_STATEMENT

Template

SubsidiaryICStatementBookingDate.html

Format

HTML

Gateway

PRINTER

Frequency

Freq

DLY

Day

1

Roll

MOD_FOLLOW

Config Id	Statement Type	Numbering	Last Statement	Zero Bal	No Mvt	Active From	Active To	Position Cash/Sec	Position Class
2762	Default		09/10/2009	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Cash	Client
2763	Default		09/10/2009	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Cash	Client

Balance and movement details (only Booking and Settle Dates are displayed).

BOOKING DATE	SETTLE DATE	TRAN REF	DETAILS	DEBIT	CREDIT	BALANCE
09/10/2009	09/10/2009		OPENING BALANCE			0.00
09/10/2009	09/10/2009	10004221	Loan 09/10/2009-09/11/2009-4.000000%		205.93	205.93CR
09/10/2009	09/14/2009	10004202	CASHPOOLING BBVA/3999-010-0458309	205.93		0.00
09/10/2009	09/10/2009		CLOSING BALANCE			0.00

5.4 Subsidiary Internal Interest Advice Message

A dedicated HTML template 'SubsidiaryICInterestAdvice.html' allows confirming the amount of interests and the related interest details (daily position/rate used to compute daily interest/daily interest amount/total amount over the period).

This message must be triggered by the **Interest Bearing** product type, interests for internal call accounts being generated using the ACCOUNT_INTEREST Scheduled Task that creates or updates (daily) Interest Bearing trades for the interest period for each subsidiary call account.

Once interests transfer are **settled** we will trigger the Interest Advice html message generation as stated below (please note that the triggering events should be payment and receipt):

Product Type: InterestBearing
Event Type: SETTLED_PAYMENT
Message Type: RATE_RESET
Processing Org: ALL
PO Contact Type: Default
Receiver: ALL
Receiver Role: Customer
tec Contact Type: Default
Grouping:

Language: English
Address Type: MAIL
Gateway: PRINTER
Format Type: HTML
Template: sidiary(CInterestAdvice.html)
SD Filter:

☐ Matching
☐ Do not Send Message
☐ Inactive

Config Id: 79596
Delete Save Update

Product Type: InterestBearing
Event Type: SETTLED_RECEIPT
Message Type: RATE_RESET
Processing Org: ALL
PO Contact Type: Default
Receiver: ALL
Receiver Role: Customer
Rec Contact Type: Default
Grouping:

Language: English
Address Type: MAIL
Gateway: PRINTER
Format Type: HTML
Template: sidiary(CInterestAdvice.html)
SD Filter:

☐ Matching
☐ Do not Send Message
☐ Inactive

Config Id: 79598
Delete Save Update

An example of the layout is presented below:

Date: April 24, 2018
To: Delete during implementation
Address: 99 Park Ave Rm 930
New York NY
UNITED STATES
Our Reference: 78430

InterestBearing Payment Advice

Dear Marion Fraser,

We are pleased to advise, for value date, , that you will .

INTERESTS DETAILS

VALUE DATE	TYPE	INTEREST AMOUNT	INTEREST RATE	SPREAD	FINAL RATE	INTEREST TOTAL	POSITION CHANGE	INTEREST POSITION
02/01/2018	INTEREST	602.71	1.31	0.005	1.315	602.71	0.00	16,500,000.00
02/02/2018	INTEREST	605.00	1.315	0.005	1.32	1,207.71	0.00	16,500,000.00
02/03/2018	INTEREST	605.00	1.315	0.005	1.32	1,812.71	0.00	16,500,000.00
02/04/2018	INTEREST	605.00	1.315	0.005	1.32	2,417.71	0.00	16,500,000.00
02/05/2018	INTEREST	570.62	1.24	0.005	1.245	2,988.33	0.00	16,500,000.00
02/06/2018	INTEREST	575.21	1.25	0.005	1.255	3,563.54	0.00	16,500,000.00
02/07/2018	INTEREST	570.62	1.24	0.005	1.245	4,134.17	0.00	16,500,000.00
02/08/2018	INTEREST	571.08	1.241	0.005	1.246	4,705.25	0.00	16,500,000.00
02/09/2018	INTEREST	571.54	1.242	0.005	1.247	5,276.79	0.00	16,500,000.00
02/10/2018	INTEREST	571.54	1.242	0.005	1.247	5,848.33	0.00	16,500,000.00
02/11/2018	INTEREST	571.54	1.242	0.005	1.247	6,419.88	0.00	16,500,000.00
02/12/2018	INTEREST	571.08	1.241	0.005	1.246	6,990.96	0.00	16,500,000.00
02/13/2018	INTEREST	571.08	1.241	0.005	1.246	7,562.04	0.00	16,500,000.00
02/14/2018	INTEREST	571.54	1.242	0.005	1.247	8,133.58	0.00	16,500,000.00
02/15/2018	INTEREST	572.00	1.243	0.005	1.248	8,705.58	0.00	16,500,000.00
02/16/2018	INTEREST	571.54	1.242	0.005	1.247	9,277.12	0.00	16,500,000.00
02/17/2018	INTEREST	571.54	1.242	0.005	1.247	9,848.67	0.00	16,500,000.00
02/18/2018	INTEREST	571.54	1.242	0.005	1.247	10,420.21	0.00	16,500,000.00
02/19/2018	INTEREST	572.00	1.243	0.005	1.248	10,992.21	0.00	16,500,000.00
02/20/2018	INTEREST	561.46	1.22	0.005	1.225	11,553.67	0.00	16,500,000.00
02/21/2018	INTEREST	572.00	1.243	0.005	1.248	12,125.67	0.00	16,500,000.00
02/22/2018	INTEREST	572.46	1.244	0.005	1.249	12,698.12	0.00	16,500,000.00
02/23/2018	INTEREST	561.12	1.22	0.005	1.225	13,259.24	-10,000.00	16,490,000.00
02/24/2018	INTEREST	561.12	1.22	0.005	1.225	13,820.36	0.00	16,490,000.00
02/25/2018	INTEREST	561.12	1.22	0.005	1.225	14,381.48	0.00	16,490,000.00
02/26/2018	INTEREST	2.29	0	0.005	0.005	14,383.77	0.00	16,490,000.00
02/27/2018	INTEREST	506.15	1.1	0.005	1.105	14,889.92	0.00	16,490,000.00
02/28/2018	INTEREST	505.69	1.099	0.005	1.104	15,395.62	0.00	16,490,000.00

RATE CHANGE DETAILS

No Rate Change

Please refer to our reference number in your correspondence concerning this payment.

5.5 Subsidiary Statement of Holdings Internal Message

We also provide the ability to send a statement of holdings for each subsidiary (e.g. All FX & MM deals + Balance of Internal Account, etc.).

For this functionality, please refer to the Client Custody Management User Guide.

Swift MT101 Payment Message

6.1 MT101 Setup

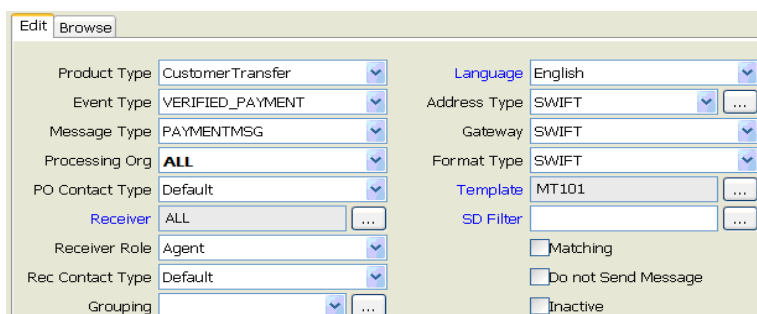
6.1.1 Individual MT101

Message Setup

Go to **Configuration > Message & Matching > Message Set-up** and define the template MT101 for Payment Messages.

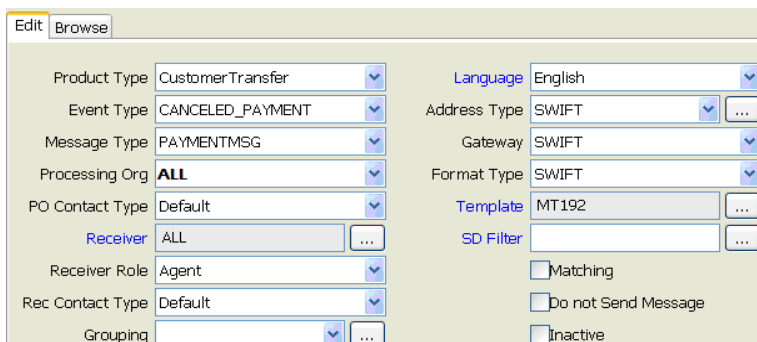
An example is presented below for the product Customer Transfer

VERIFIED_PAYMENT



The screenshot shows the 'Message Setup' form for 'VERIFIED_PAYMENT'. The form is divided into two columns. The left column contains dropdown menus for Product Type (CustomerTransfer), Event Type (VERIFIED_PAYMENT), Message Type (PAYMENTMSG), Processing Org (ALL), PO Contact Type (Default), Receiver (ALL), Receiver Role (Agent), Rec Contact Type (Default), and Grouping. The right column contains dropdown menus for Language (English), Address Type (SWIFT), Gateway (SWIFT), Format Type (SWIFT), Template (MT101), and SD Filter. There are also checkboxes for Matching, Do not Send Message, and Inactive.

CANCELED_PAYMENT to generate Swift MT192



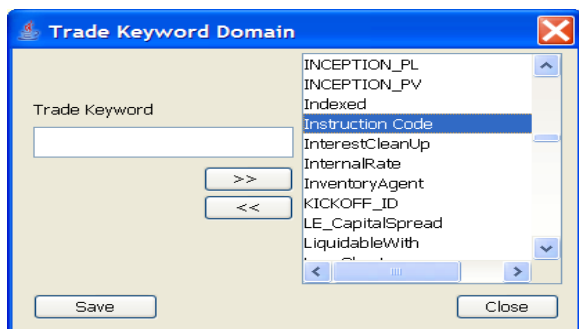
The screenshot shows the 'Message Setup' form for 'CANCELED_PAYMENT'. The form is divided into two columns. The left column contains dropdown menus for Product Type (CustomerTransfer), Event Type (CANCELED_PAYMENT), Message Type (PAYMENTMSG), Processing Org (ALL), PO Contact Type (Default), Receiver (ALL), Receiver Role (Agent), Rec Contact Type (Default), and Grouping. The right column contains dropdown menus for Language (English), Address Type (SWIFT), Gateway (SWIFT), Format Type (SWIFT), Template (MT192), and SD Filter. There are also checkboxes for Matching, Do not Send Message, and Inactive.

[NOTE: For MT101 “receipts”, you need to use the template MT101SAP]

Instruction Code

You need to define a new trade keyword “Instruction Code” to handle custom Tag 23E.

To do so, go to **Configuration > Domain Values**, choose the domain tradeKeyword and add the value Instruction Code.



Then add the trade keyword Name to the domain XferAttributes.



This trade keyword will be automatically copied as a Xfer Attribute.

Default value for that keyword is URGP.

The user can change the default by changing the keyword or using the UPDATE_MT101TAGS transfer workflow action.

6.1.2 Grouped MT101

The setup presented below is only needed if you want to use the grouping functionality.

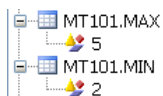
If only individual MT101 are used, please refer to the MT101 individual section.

Domain Values

Select domainName and define the values TemplateName.MIN and TemplateName.MAX (MT101.MIN and MT101.MAX).

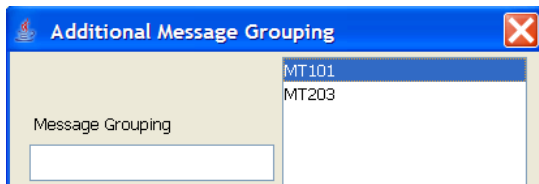
Then, go to the domain MT101.MIN and add (in its value field) the minimum number of underlying MT101 to group (value must be set to 2) and in the domain MT101.MAX the maximum number of underlying MT101 to group.

These TemplateName.MIN and TemplateName.MAX domains are used by the system to determine the number of underlying MT101 to include into the multiple MT101Grouped.



Message Grouping

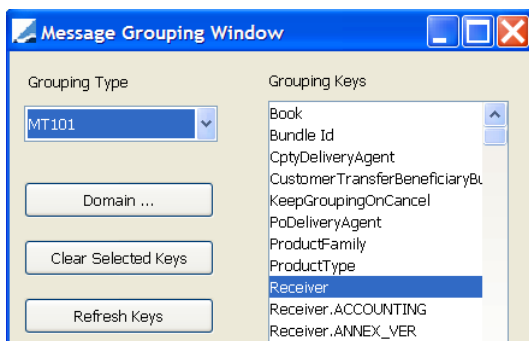
Go to **Configuration > Message & Matching > Message Grouping**, select the Domain button which opens the additional message grouping window and create the new message grouping MT101 as shown below.



Grouping Keys

Then define the MT101 **grouping keys**. These keys will be used by the Message Engine to group the underlying MT101 into the GroupedMT101.

Select the Receiver + Settlement Ccy + Value Date as grouping keys.



Grouped MT101 Message Setup

Go to **Configuration > Message & Matching > Message Setup** and define the message configuration to handle the grouping of MT101.

An example is presented below for a Customer Transfer product type:

Product Type	CustomerTransfer	Language	English
Event Type	VERIFIED_PAYMENT	Address Type	SWIFT
Message Type	PAYMENTMSG	Gateway	SWIFT
Processing Org	ALL	Format Type	SWIFT
PO Contact Type	Default	Template	MT101
Receiver	ALL	SD Filter	
Receiver Role	Agent	<input type="checkbox"/> Matching	
Rec. Contact Type	Default	<input type="checkbox"/> Do not Send Message	
Grouping	MT101	<input type="checkbox"/> Inactive	

Product Type	CustomerTransfer	Language	English
Event Type	GROUPED_MESSAGE	Address Type	SWIFT
Message Type	PAYMENTMSG	Gateway	SWIFT
Processing Org	ALL	Format Type	SWIFT
PO Contact Type	Default	Template	MT101
Receiver	ALL	SD Filter	
Receiver Role	Agent	<input type="checkbox"/> Matching	
Rec Contact Type	Default	<input type="checkbox"/> Do not Send Message	
Grouping		<input type="checkbox"/> Inactive	

Message Workflow

Specific actions and rules must be added on your message workflow to handle the message grouping function.

First, the action GROUP must be added to move all underlying into a GROUPED status when the grouped MT101 is created. The GROUPED_MESSAGE event triggering the creation of Grouped MT101 is generated by the MESSAGE_GROUPING scheduled task. When that grouped message is created, the system applies the action specified in the scheduled task (GROUP in our configuration). See the MESSAGE_GROUPING scheduled task section below for more details.

In order to manage AMEND and/or CANCEL actions that can be done on underlying trades/transfers for which MT101 are underlying of a Grouped MT101 - before or after the SEND of the Grouped Message - we need to add the AmendGroup and RemoveGroup message rules, in conjunction with the "KeepGroupingOnCancel" message grouping key (when used).

An example of message workflow for message grouping is presented below:

Subtype	Orig Status	Action	Resulting Status	Rules	Filter
PAYMENTMSG	GROUPED	AMEND	VERIFIED	AmendGroup	
PAYMENTMSG	GROUPED	CANCEL	CANCELED	RemoveGroup	
PAYMENTMSG	GROUPED	SEND	SENT		Grouped MT101
PAYMENTMSG	VERIFIED	GROUP	GROUPED		
PAYMENTMSG	VERIFIED	UNGROUP	VERIFIED		

The GroupedMT101 Static Data Filter is defined as MSG_ATTRIBUTE.Group IN MT101 to return true only for Grouped MT101.

MESSAGE_GROUPING scheduled task

Type	MESSAGE_GROUPING	Description	MT101	Process Org	
Trade Filter	ALL	Pricing Env	default	Risk Config	
User	calypso_user	Filter Set		Next Id	0
Measures		Ext Ref	MESSAGE_GROUPING		
Time Zone	Europe/Paris	Exec Time		Val Date Offset	0
From Days	0	To	0	Valuation Time	23 H 59 M
Holidays	TGT	Undo Time		Date Rule	
Skip Ex...	CutOff	0	Hour	0	Min
Attributes		Execute	<input checked="" type="checkbox"/>	Publish	<input type="checkbox"/>
Message Status	VERIFIED	Send Email	<input type="checkbox"/>	Exec On Holidays	<input type="checkbox"/>
Group Action	GROUP	Comment			
Only Messages for ValDate					

Attribute	Description
Message Status	<p>Specify the Underlying Message Status to be taken into account when running the MESSAGE_GROUPING Scheduled Task.</p> <p>In our example, Message Status = VERIFIED. This means the Scheduled Task will only select VERIFIED Messages marked with the Message Attribute Grouping = MT101.</p>
Group Action	<p>Specify the Message Workflow Action to be applied to messages to be grouped under MT101.</p>
Only Messages for ValDate	<p>By default, the value of that attribute is set to false.</p> <p>This means when running the Scheduled Task MESSAGE_GROUPING we try to group all underlying message marked as Grouping = MT101 (with the same keys) till Scheduled Task Valuation Date.</p> <p>The criteria is the Original Date of the underlying message compare to Scheduled Task Valuation Date.</p> <p>When set to true, we only try to GROUP underlying messages marked as Grouping = MT101 with the same keys when underlying message original date = Scheduled Task Valuation Date.</p>

UPDATE_TAGS and UPDATE_MT101_TAGS Function

When using the customer transfer product, Tag 70 (Remittance Information) and 71A (Details of Charges) are driven by the trade fields Remittance Information and Details of Charges.

When using the transfer action ASSIGN for 'nostro' transfer associated to a customer transfer trade, the system pops-up the trade window allowing the user to change the 'nostro' SDI and Tag70/71A to impact the MT101.

For other product types (eg. FX, Cash), when the user wants to change the default Tag70 and 71A driven by the CounterParty SDI attributes, he will have to use the **UPDATE_TAGS** transfer workflow action that will pop-up a window to change these values.

In addition, a new transfer workflow action **UPDATE_MT101TAGS** has been added to overwrite the default value of the trade keyword 'Instruction Code' (Tag 23E) also propagated as a XferAttribute.

Forecasts and In-House Transactions

7.1 Subsidiary Forecasts

Forecast transactions will be entered or interfaced into the system as **Simple Transfer** with a specific **Transfer Type = FORECAST**.

The usage of the **Transfer Type = FORECAST** is **critical** as the scheduled task INC_CASH_STATEMENT retrieves the list of transfers to exclude from the inventory position based on this type.

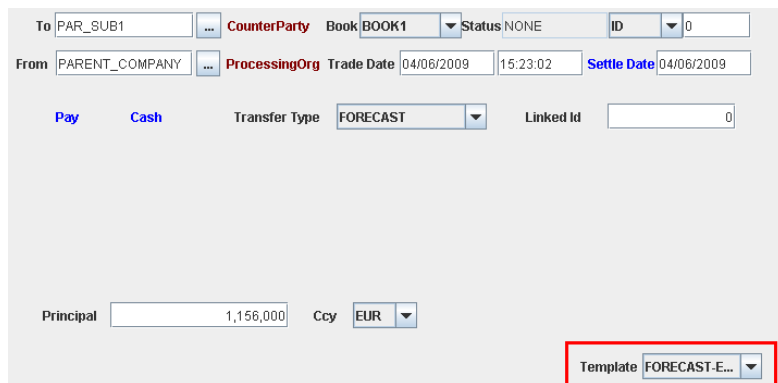
FORECAST transfers will impact the Processing Organization Bank Account.

To manually enter a Forecast within Calypso, the user can save a Simple Transfer following the steps described below:

- Let's assume PAR_SUB1 wants to report a Forecast movement of – 1,156,000.00 EUR value 04/06/2009 on its Barclays London Sub-Account;
- To enter that deal in the system, go to **Processing > Accounting Operations > Simple Transfer** and open the trade screen;
- The user has to enter the Book (defaulted from the user default - the Processing Organization field is automatically populated with the Processing Organization associated to the Book), Counterparty (= Subsidiary), Settle Date, Direction (Pay/Receive), Transfer Type = **FORECAST**, select the right Currency and enter the Amount.

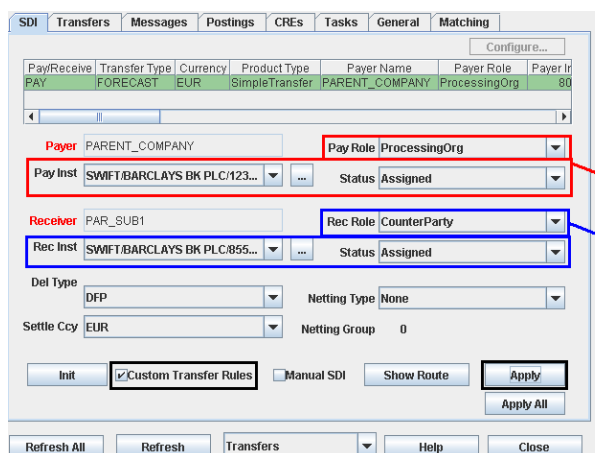
Please note the possibility to define, for instance, 'Forecast-EUR', 'Forecast-USD', 'Forecast-GBP' **trade templates** with Transfer Type defaulted to FORECAST.

An example is presented below:



- Before saving the trade, open the **BO Window** (Trade menu **Back Office > BO Window**) and **Assign SDI** to be applied by the system to impact the appropriate processing organization bank account.

An example is presented below:



1. Select the Transfer Rule line (PAY/FORECAST/EUR in the top part of the screen)
2. Tick the Custom Transfer Rules checkbox
3. Choose the Processing Organization Bank Account (SDI) BARCLON-EUR
4. Choose the CounterParty (subsidiary) sub-account (SDI)
5. Hit Apply
6. Close that window and Save the Trade

The transfer engine creates automatically the related FORECAST transfer hitting the selected PO Nostro Account, as shown below:

Settlements											
Transfer Id	Transfer Type	Product Type	Xfer Pay/Rec	Transfer Amount	Settle Currency	Settle Date	GL Account	Payer Inst Status	Receiver Inst Status	PO Settle Method	PO Agent
88166	FORECAST	Simple Transfer	PAY	(1,156,000.000)	EUR	04/06/2009	BARCLON-EUR	Assigned	Assigned	SWIFT	BARCLAYS BK PLC

7.2 In-House Transactions

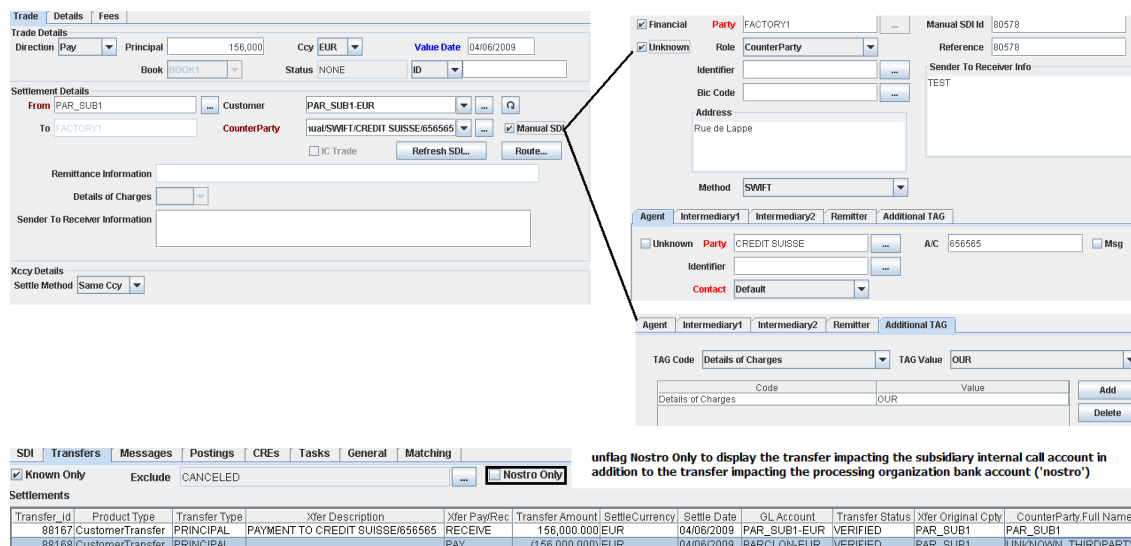
7.2.1 Payment on behalf of

This category covers the thirdparty payments. This type of transaction must be entered as a **Customer Transfer**, possibly using **ManualSDI**.

For more information around Customer Transfer setup and Manual SDI, please refer the Client Custody Management User Guide.

To manually enter a thirdparty payment within Calypso, the user must save a Customer Transfer. An example is presented below:

- Let's assume PAR_SUB1 wants to pay an invoice to Factory1 (which is not a Legal Entity known in the system) for 156,000.00 EUR value 04/06/2009
- To enter that deal in the system, the user will have to go to **Processing > Accounting Operations > Customer Transfer** and enter a customer transfer on the subsidiary call account (PAR_SUB1-EUR) using the ManualSDI function where you can add an 'unknown' beneficiary and its settlement instructions used only for that payment. Please note that when the beneficiary and its instructions are known in the system, there is no need to define ManualSDI, the user only picks the payment instructions from the list of valid SDI for that beneficiary.



Trade Details

Trade Details: Direction Pay, Principal 156,000, Ccy EUR, Value Date 04/06/2009, Status NONE, ID, Book BOOK1

Settlement Details

From PAR_SUB1, To CREDIT SUISSE, CounterParty, PAR_SUB1-EUR, Manual SDI, Refresh SDL, Route

Financial

Financial Party, CounterParty, Identifier, Bic Code, Address, Rue de Lappe, Method SWIFT, Manual SDI Id 80578, Reference 80578, Sender To Receiver Info TEST

Agent

Agent Intermediary1 Intermediary2 Remitter Additional TAG, CREDIT SUISSE, A/C 856565, Identifier, Contact Default, Msg

Settlements

unflag Nostro Only to display the transfer impacting the subsidiary internal call account in addition to the transfer impacting the processing organization bank account ('nostro')

Transfer Id	Product Type	Transfer Type	Xfer Description	Xfer Pay/Rec	Transfer Amount	Settle Currency	Settle Date	GL Account	Transfer Status	Xfer Original Cpty	CounterParty Full Name
88167	CustomerTransfer	PRINCIPAL	PAYMENT TO CREDIT SUISSE/856565	RECEIVE	156,000,000	EUR	04/06/2009	PAR_SUB1-EUR	VERIFIED	PAR_SUB1	PAR_SUB1
88168	CustomerTransfer	PRINCIPAL		PAY	(156,000,000)	EUR	04/06/2009	BARCLON-EUR	VERIFIED	PAR_SUB1	UNKNOWN_THIRDPARTY

Please note that a Customer Transfer Trade generates two transfers of different category:

- One transfer impacting the subsidiary call account which is used to:
 - Impact the subsidiary inventory position (subsidiary view)
 - Trigger the subsidiary bank account statements
 - Generate interest bearing trades for that subsidiary call account
- One transfer impacting the processing organization bank account (nostro) which is used to impact/trigger:
 - Payment Messages (MT101/210)
 - Internal BO Position
 - Cash Settle Postings

For more information around Customer Transfer setup and Manual SDI, please refer the [Client Custody Management User Guide](#).

7.2.2 Intercompany Transactions

This category includes:

- Inter-company transaction: transfer of cash from one internal company (call) account to another internal company (call) account in the same currency
- Inter-company FX transaction: transfer of cash between two internal company (call) accounts in a different currency
- Intra-company FX transaction: transfer of cash between two internal company (call) accounts in a different currency, both belonging to the same subsidiary

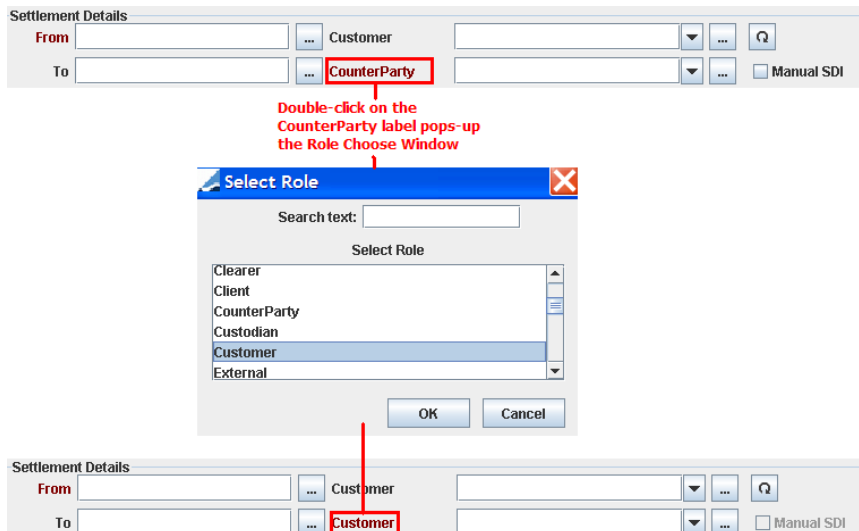
Inter-company transaction in the same currency

This type of transaction must be entered as a **Customer Transfer**.

To do so, go to **Processing > Accounting Operations > Customer Transfer** and enter a **unique** customer transfer deal between two Account Holders (AccountHolderRole = Customer in the example below).

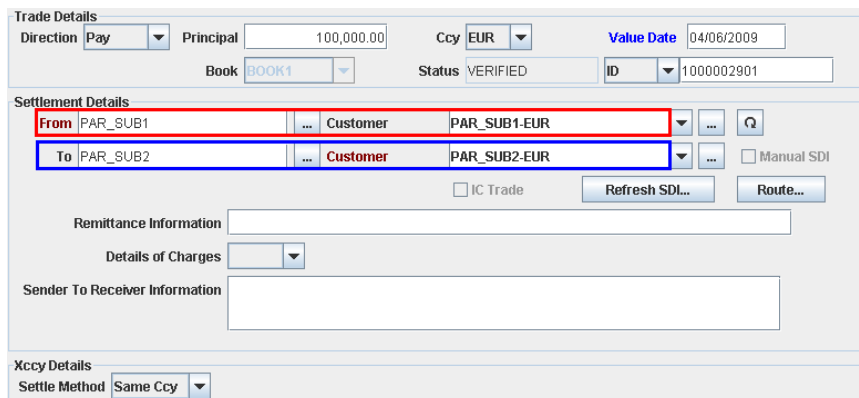
This can be achieved by changing the default role 'CounterParty' to Customer (= AccountHolderRole) for the second party involved in the customer transfer trade screen.

To do so, open the customer transfer trade window, double-click on the CounterParty role and select the AccountHolder role (Customer in the example below). You can save that configuration as a Customer Trade Template 'InterCompany' for instance.



The screenshot shows the 'Settlement Details' window. The 'From' field is set to 'Customer' and the 'To' field is set to 'CounterParty'. A red box highlights the 'CounterParty' role. A red arrow points from the 'CounterParty' role to a 'Select Role' dialog box. The dialog box has a search text field and a list of roles: Clearer, Client, CounterParty, Custodian, Customer, and External. The 'Customer' role is selected. The dialog box has 'OK' and 'Cancel' buttons. A red arrow points from the 'OK' button back to the 'CounterParty' role in the 'To' field, which now shows 'Customer'.

Once done, you can enter the trade details. An example is presented below, where we assume that the subsidiary PAR_SUB1 transfers EUR 100,000 from its internal EUR account to the subsidiary PAR_SUB2 internal EUR account value 04/06/2009. This requires a unique customer transfer deal as stated below:



The screenshot shows the 'Trade Details' window. The 'Direction' is 'Pay', 'Principal' is '100,000.00', 'Ccy' is 'EUR', 'Value Date' is '04/06/2009', 'Book' is 'BOOK1', 'Status' is 'VERIFIED', and 'ID' is '100002901'. The 'Settlement Details' section shows 'From' as 'PAR_SUB1' (Customer) and 'To' as 'PAR_SUB2' (Customer). The 'Remittance Information' field is empty. The 'Details of Charges' dropdown is set to 'Same Ccy'. The 'Sender To Receiver Information' field is empty. The 'Xccy Details' section shows 'Settle Method' as 'Same Ccy'.

To display the transfers generated for that internal deal, go to **Back Office > BO Window**, open the Transfer panel and **untick the Nostro Only** flag. Transfers only impact the subsidiary call accounts, no impact on the processing organization bank account as this is an internal deal.

SDI												Transfers												Messages												Postings												CREs												Tasks												General												Matching																																																											
<input checked="" type="checkbox"/> Known Only												<input type="checkbox"/> Exclude												CANCELED												...												<input type="checkbox"/> Nostro Only																																																																																															
Settlements																																																																																																																																															
Transfer Id												Transfer Type												Xfer Description												Xfer Pay/Rec												Transfer Amount												Settle Currency												Settle Date												GL Account												Transfer Status												Payer Inst. Status												Xfer Original Cpty												CounterParty Full Name											
88169												PRINCIPAL												PAYMENT TO PAR_SUB2												RECEIVE												100,000.000												EUR												04/06/2009												PAR_SUB1-EUR												VERIFIED												Default												PAR_SUB1												PAR_SUB1											
88170												PRINCIPAL												RECEIPT FROM PAR_SUB1												PAY												(100,000.000)												EUR												04/06/2009												PAR_SUB2-EUR												VERIFIED												Default												PAR_SUB1												PAR_SUB2											

Please note that the transfer engine requires a "PIVOT-EUR" processing organization SDI (as defined in Section 2 to match the Internal call account SDI for both subsidiaries.

Cross-Currency Intercompany transaction

This type of transaction must be entered as a **XCcy Customer Transfer**.

To do so, go to **Processing > Accounting Operations > Customer Transfer** and enter a **unique** Cross XCcy customer transfer deal between two Account Holders (AccountHolderRole = Customer in the example below).

To do so, you can define a 'XCcyInterCompany' trade template to default the role 'CounterParty' to Customer (= AccountHolderRole) for the second party involved in the customer transfer and fix the Settle Method = FX in the XCcy Details part of the window.

Once done, you can enter the trade details. An example is presented below, where we assume that the subsidiary PAR_SUB1 transfers the USD countervalue of EUR 100,000 from its internal EUR account to the subsidiary PAR_SUB2 internal USD account value 04/06/2009. PAR_SUB1 EUR internal (call) account is debited for EUR 100,000 and PAR_SUB2 USD internal (call) account is credited for USD 141,000. This requires a unique customer transfer deal as stated below:

Trade Details	
Direction: Pay	Principal: 100,000.00
Ccy: EUR	Value Date: 04/06/2009
Book: BOOK1	Status: VERIFIED
ID: 1000002902	
Settlement Details	
From: PAR_SUB1	Customer: PAR_SUB1-EUR
To: PAR_SUB2	Customer: PAR_SUB2-USD
<input type="checkbox"/> IC Trade Refresh SDI... Route...	
Remittance Information	
Details of Charges	
Sender To Receiver Information	
XCcy Details	
Settle Method: FX	FX Trade Id: 0
Settle Ccy: USD	FX Rate: 1.41000000
FX Reset	Amount: 141,000.00
Reset Date	
USD countervalue for USD IC Account	

To display the transfers generated for that internal deal, go to **Back Office > BO Window**, open the Transfer panel and **untick the Nostro Only** flag.

Transfers only impact the subsidiary call accounts, no impact on the processing organization bank account as this is an internal deal.

SDI Transfers Messages Postings CREs Tasks General Matching										
<input checked="" type="checkbox"/> Known Only		Exclude		CANCELED		...		<input type="checkbox"/> Nostro Only		
Settlements										
Transfer Id	Transfer Type	Xfer Description	Xfer Pay/Rec	Transfer Amount	Real Cash Amount	Settle Currency	Settle Date	GL Account	Xfer Original Cpty	CounterParty Full Name
88171	PRINCIPAL	PAYMENT TO PAR_SUB2	RECEIVE	100,000.000	100,000.000	EUR	04/06/2009	PAR_SUB1-EUR	PAR_SUB1	PAR_SUB1
88172	PRINCIPAL	RECEIPT FROM PAR_SUB1	PAY	(141,000.00)	(141,000.00)	USD	04/06/2009	PAR_SUB2-USD	PAR_SUB1	PAR_SUB2

Please note that the transfer engine requires a “PIVOT-EUR” and “PIVOT-USD” processing organization SDIs (as defined in Section 2) to match the Internal call account SDI for both subsidiaries.

Cross-Currency Intra-company transaction

This type of transaction must also be entered as a **XCcy Customer Transfer**.

No difference with the preceding example, except that the transfer of funds is done between two internal (call) accounts of the same subsidiary.

An example is presented below, where we assume that the subsidiary PAR_SUB1 transfers the USD countervalue of EUR 100,000 from its internal EUR account to its internal USD account, value 04/06/2009. PAR_SUB1 EUR internal (call) account is debited for EUR 100,000 and PAR_SUB1 USD internal (call) account is credited for USD 141,000. This requires a unique customer transfer deal as stated below:

Trade Details								
Direction	Pay	Principal	100,000.00	Ccy	EUR	Value Date	04/06/2009	
Book	BOOK1	Status	VERIFIED	ID	1000002903			
Settlement Details								
From	PAR_SUB1	Customer	PAR_SUB1-EUR					
To	PAR_SUB1	Customer	PAR_SUB1-USD					
Remittance Information								
Details of Charges								
Sender To Receiver Information								
Xcxy Details								
Settle Method	FX	FX TradeId	0	SettleCcy	USD	FX Rate	1.41000000	
FX Reset		Amount	141,000.00	Reset Date				
Settlements								
Transfer Id	Xfer Pay/Rec	Xfer Description	Transfer Amount	SettleCurrency	Settle Date	GL Account	Xfer Original Cpty	CounterParty Full Name
88173	RECEIVE	PAYMENT TO PAR_SUB1	100,000.00	EUR	04/06/2009	PAR_SUB1-EUR	PAR_SUB1	PAR_SUB1
88174	PAY	RECEIPT FROM PAR_SUB1	(141,000.00)	USD	04/06/2009	PAR_SUB1-USD	PAR_SUB1	PAR_SUB1

Manual Cash Pooling

Manual Cash Pooling entered by the Back Office on behalf of manually cash-pooled subsidiaries will be saved as Customer transfers, exactly as an automatic cash pooling deal generated from the incoming MT940.

To be able to enter a Manual Cash Pooling transaction, you must initially define for the related subsidiary an external ‘SWIFT’ SDI materializing the not managed sub-account at the external agent and a call account for that currency (the system will create the related AccountHolder SDI automatically). Please refer to section 2 of this document for details.

Once done, you can save the manual cash pooling entry as a standard customer transfer deal. An example is presented below between TEST_SUB4 as a Customer (to pick the **Internal** subsidiary call account) and TEST_SUB4 as a CounterParty (to select the external subsidiary not managed account – DEUTSCHE BANK MUNICH/Acct# 123456 in our example):

Trade Details				<pre> 1:F01EADSEMMXX0000000000(2)101BARC082200XN2020(3(108MT101))X4 2072357 21R:SWIFT72357 28D:00001/00001 500:20547889256555 EADSEMM 30:090319 21:SWIFT72357 23E:URGP 32B:EUR55000, 57A:DEUTDEF 59T123456 TEST SUB4 BERLINER STRAAT BERLIN GERMANY -X5] </pre>							
Direction	Pay	Principal	55,000.00					Ccy	EUR	Value Date	19/03/2009
Book	TEST_EADS	Status	VERIFIED					ID	1000002674		
Settlement Details											
From	TEST_SUB4	Customer	TESTSUB4-EUR	To	TEST_SUB4	CounterParty	/DEUTSCHE BANK MUNICH/123456				
				<input type="checkbox"/> IC Trade	<input type="button" value="Refresh SDL..."/> <input type="button" value="Route..."/>						
Remittance Information											
Details of Charges											
Sender To Receiver Information											

#	Xfer Description	Transfer Type	Product Type	Transfer Amount	Transfer Status	PO Settle Method	Value Date	Settle Currency	Xfer Pay Rec	PO Agent	Xfer Their Agent	GL Account
1	PAYMENT TO DEUTSCHE BANK MUNICH/123456	PRINCIPAL	Customer Transfer	55,000.000	VERIFIED	Internal	19/03/2009	EUR	RECEIVE	BARCLAYS BK PLC	TEST_EADS	TESTSUB4-EUR
2		PRINCIPAL	Customer Transfer	(55,000.000)	VERIFIED	SWIFT	19/03/2009	EUR	PAY	BARCLAYS BK PLC	DEUTSCHE BANK MUNICH	BARLD-EUR

This Customer Transfer Trade generates two transfers:

- One transfer impacting the subsidiary call account which is used to:
 - Impact the subsidiary inventory position (subsidiary view)
 - Trigger the subsidiary bank account statements
 - Generate interest bearing trades for that subsidiary call account
- One transfer impacting the processing organization bank account (nostro) which is used to impact/trigger:
 - Payment Messages (MT101/210) => See MT101 above
 - Internal BO Position
 - Cash Settle Postings

For more information around Customer Transfer setup and Manual SDI, please refer the Client Custody Management User Guide.

There is no forecast for this type of subsidiaries, and consequently no substitution process for the Back Office Position.

The reconciliation of the Manual Cash Pooling 'nostro' transfer falls into the 'nostro' category (sub-MT940 versus nostro transfer).

The transfer workflow rule “**SettleLinkedDDA**” must be put on the transfer SETTLE action to automatically move the subsidiary call account transfer of that deal in a SETTLED status when the related processing organization ‘nostro’ transfer is matched (settled) with the MT940 entry.

7.2.3 “In-House” Market Transactions with a Subsidiary

All market transaction types can be done with a subsidiary.

The internal (or in-house) transaction ordered by the subsidiary must be entered in calypso with the trade role = Account Holder in order to select the subsidiary call account SDI and generate only internal transfers.

An example is presented below for a Loan done with the subsidiary PAR_SUB1. Please note that trade details and related transfers are always shown from the processing organization perspective.

Cpty	PAR_SUB1	Customer	Broker	NONE	Status	VERIFIED	ID	1000002904
Book	BOOK1				Template	NONE		
Loan	Start	08/06/2009	End	08/07/2009	Nominal	1,000,000.000	RM	NEAREST
Fixed Rate	Ccy	EUR	Rate	3.00000	DayCount	ACT/360	Discount	
Sales Margin	0.00000	Final	3.00000		Cmp Frq	NONE		
					Cmp Method	None		Capitalize Meth...
					Hol	EUR		Lag 0 B
Frequency	ZC	Roll Day	0	Date Roll	FOLLOWING	Amortizing	Bullet	
Stub	NONE	Period	ADJUSTED	Principal Exchan...				
NONE								
				Open Term		Notice	0	

Related transfers impacts the subsidiary internal call account only

Settlements										
Transfer Id	Transfer Type	Product Type	Xfer Description	Xfer Pay/Rec	Transfer Amount	Settle Currency	Settle Date	OL Account	Xfer Original Cpty	Transfer Status
88175	NONE	Cash	RECEIPT EUR CASH	PAY	(1,000,000.000)	EUR	08/06/2009	PAR_SUB1-EUR	PAR_SUB1	VERIFIED
88176	NONE	Cash	PAYMENT EUR CASH	RECEIVE	1,002,500.000	EUR	08/07/2009	PAR_SUB1-EUR	PAR_SUB1	VERIFIED

7.2.4 Interest Bearing Transactions

Interests for Call Accounts are calculated based on the Interest Bearing Configuration.

Interest bearing trades are based on the back office position computed by the Inventory engine on accounts associated with an interest bearing rule.

You can process interest computation from the Interests panel in the Accounts window by clicking the Process Interest button, or you can run the **ACCOUNT_INTEREST** scheduled task in [Configuration > Scheduled Tasks](#).

Task Type	ACCOUNT_INTEREST
External Reference	
Comments	
Description	
Attempts	1
Retry After, In Minutes	0
JVM Settings	-Xms512m -Xmx1024m -XX:MaxPermSize=256m
Allow Task To	<input type="checkbox"/> Skip Execute <input type="checkbox"/> Send Emails <input type="checkbox"/> Publish Business

+

Common Attributes

-

Task Attributes

CHECK CONFIG ONLY	false
SAVE PROCESS	true
CALCULATION TYPE	Interest
ACCOUNT ID	
LEGAL_ENTITY	
SD_FILTER	
FileName	C:\tmp
POSITION AGGREGATION	Agent/Account
POSITION CLASS	CLIENT
DATE TYPE	VALUE
POSITION TYPE	ACTUAL
INV_AGG_TYPE	
INV_AGG_VALUE	
RETRO_ACTIVITY	true
RETRO_ACTIVITY_TYPE	
INITIALIZATION_MODE	false

Select a trade filter and a pricing environment in the Common Attributes.

Then, set the Task Attributes to be able to generate Interest Bearing Trades for Customers.

- **CHECK CONFIG ONLY** - Set to true to check that all the selected accounts have a valid config from the valDate to the valDate+ to day of the Scheduled Task (default is 1 month). The expired config is displayed in the file given as attribute. This produces a report which lists all the interest matrices that are attached to live accounts and that have expired or are due to expire in the coming month (or number of days defined in the "To Days" of the Scheduled Task). If the config is not valid, an ACCOUNT_INTEREST exception is raised and an email is sent
- **SAVE PROCESS** - If False, the Scheduled Task will only generate a report to be checked by the users. If True, it will generate an Interest Bearing Trade
- **CALCULATION TYPE** - Refer to the type defined on the matrix; choose Interest, Claim, etc. Interest in this example
- **ACCOUNT ID** - You can enter one particular account if you want to launch the process on one specific account only
- **LEGAL_ENTITY** - You can enter one particular Client name if you want to launch the process for one particular Client only

- **SD FILTER** - Define an SD Filter if you want to restrict the process to one given Processing Organization or Book
- **FileName** - Set the name and the directory of the report displaying the interests
- **POSITION AGGREGATION** - Define the type of position aggregation that will be used as the basis of interest calculation: "Agent/Account" or "Book/Agent/Account". For a Position Class = CLIENT, the Position Aggregation must be set to Agent/Account, at least without the book which is not a criteria for Client Position
- **POSITION CLASS** - Client: to calculate interest on client accounts (Internal: to calculate interest on NOSTRO Cash accounts)
- **DATE TYPE** - Trade: to calculate interest based on trade date positions, Settle: to calculate interest based on settle date positions (real settle date), or Value: to calculate interest based on value date (theoretical settle date) => Interest Bearing will have to be computed on a **CLIENT / VALUE / ACTUAL Position by Agent/Account**
- **POSITION TYPE** - **Actual**: for interest calculations, **Theoretical**: should not be used. Here for flexibility purposes in case one client wants to use it as well, or **Failed**: for claim calculation
- **RETRO_ACTIVITY** - True: the process will work in retroactivity mode, or False: the process will not apply any retroactivity rules. Retroactivity process will generate ADJUSTMENT entries and back dated RATE_CHANGE for backdated entries
- **INITIALIZATION MODE** - Set to True: Normally you set this the first time you calculate interest in the system. This will allow the system to create trades of interest without generating adjustments.

The scheduled task retrieves all SETTLE accounts with the "Interest Bearing" checkbox checked, and the positions corresponding to the selected attributes.

The position is stored each day and retrieves the corresponding interest bearing rule to compute the interest amount. The scheduled task creates (or amends) interest bearing trades.

To view the interest bearing trades, choose **Processing > Accounting Operations > Interest Bearing > Trade** - Open. It opens the trade selector. Click 'Show Trades' to view all interest bearing trades.

To	PAR_SUB1	...	Customer	Book	BOOK1	Status	VERIFIED	ID	60078
From	PARENT_COMPAN	...	ProcessingOrg	Trade Date	01/02/2008	23:59:00	Settle Date	03/03/2008	
				Start Date	01/02/2008		End Date	29/02/2008	
Pay			Transfer Type	INTEREST			Account Id	60075	
							Payment Date		
Principal	680.56		Ccy	USD			Template	NONE	

Go to the Entries panel to display the details of daily interest.

Trade Details Fees Entries									
Add		Remove		Update		Show Config			
Type	Date	Value Date	Amount	Adjustment	Rate	Config Id	Range Id		
ADJUSTME...									
Type	Date	Value Date	Adjustment Date	Amount	Adjustment	Rate	Spread	Tiered	Config Id
INTEREST	18/02/2008	03/03/2008		277.78	0.00	5	0	<input type="checkbox"/>	76533
POSITION	18/02/2008	18/02/2008		2,000,000.00	0.00	0	0	<input type="checkbox"/>	0
INTEREST	19/02/2008	03/03/2008		548.61	0.00	5	0	<input type="checkbox"/>	76533
POSITION	19/02/2008	19/02/2008		3,950,000.00	0.00	0	0	<input type="checkbox"/>	0
INTEREST	20/02/2008	03/03/2008		-145.83	0.00	5	0	<input type="checkbox"/>	76533
POSITION	20/02/2008	20/02/2008		-1,050,000.00	0.00	0	0	<input type="checkbox"/>	0

Transfers (type INTEREST) associated to the interest bearing trade only impact the subsidiary internal (call) account balance. These transfers are re-created as soon as interest bearing trade is amended.

ACCOUNT_INTEREST for Nostro Bank Account

You have the possibility (this is optional) to generate Interest Bearing transactions for Nostro Accounts, using the daily balance as confirmed by the Bank. This allows reconciling the interests paid by the bank when we receive them from the MT940.

To do so, define another ACCOUNT_INTEREST Scheduled Task which is triggered by the **EXTERNAL – ACTUAL – SETTLE DATE** position (the position created from the MT940, based on the BOCashSettlement trade/transfers, to save into Calypso the position as confirmed by the bank, regardless of its reconciliation status)

Attribute	Value
POSITION AGGREGATION	▼ Agent/Account
POSITION CLASS	▼ EXTERNAL
DATE TYPE	▼ SETTLE
POSITION TYPE	▼ ACTUAL

This process will select the bank confirmed position and will use that position to calculate the expected interest bearing on the Nostro Bank Accounts.

Appendix

Integration & Processing of MT940: Mapping algorithm for Automatic Cash Pooling

The default implementation for processing incoming MT940 is the following:

The Scheduled Task INC_CASH_STATEMENT, for incoming MT940 identified as complete and consistent, saves a global statement and splits that statement into sub-statements.

Each sub-statement is typed with one of the following category:

- CashPooling (for cash pooling entries related to not managed sub-accounts)
- CashPoolingPF (for cash pooling entries related to Payment Factory)
- GuaranteeFees (for guarantee fees accounts)
- BankFee (for automatic bank fee creation within a Payment Factory)
- CashSweeping (for automatic transfer agent generation when cash sweeping is automated by the bank itself)
- Nostro (for entries that only need to be reconciled with existing movements/transfers)

The Calypso default algorithm to find a sub-statement type is the following:

- We first retrieve the GL Account using the Statement **Tag 25** for a Sender (Agent) and Receiver (Processing Organization) BIC. That information is mapped to the GL Account Attribute "XferAgentAccount" for the PO/Agent;
- We then check if the Nostro identified from Tag 25 is a Payment Factory Nostro (account attribute PaymentFactory = true), a Guarantee Fees nostro (account attribute GuaranteeFees = true) or a 'Standard' Nostro (no attribute);
- We then parse the Statement Tag 61 or 86 in order to find an Identifier that is referenced in the Account Mapping Table for that Nostro;
- If there is no matching entry in the Account Mapping Table, then we create a sub-statement marked with CashStatementProcess = Substatement.Nostro;
- If there is one matching entry in the Account Mapping Table:

The system lookups for a CounterParty SDI such as:

- Role = Counterparty
- Agent = Swift Sender
- Beneficiary = Call Account Holder from Mapping
- Agent A/C = Account Mapping Identifier
- Currency = Swift Currency
- Products is Empty or CustomerTransfer
- Valid for the Swift Settle Date

Or, if such SDI does not exist or is not marked as Preferred, for the Call Account Holder identified from the Mapping Table, the system looks up for a CounterParty SDI such as:

- Role = Counterparty
- Agent = Swift Sender
- Beneficiary = Processing Organization associated to the master account of the mapping table for that identifier
- Currency = Swift Currency
- Products is Empty or CustomerTransfer
- Valid for the Swift Settle Date

(This generic SDI defined for the PO with Role = CounterParty is also used for Payment Factory Statements where the subsidiary account number is not confirmed in the statement)

- If such a CounterParty SDI is found and if the Nostro Account from Tag 25 is a Payment Factory Account, then we create a sub-statement marked with CashStatementProcess = SubStatement.CashPoolingPF
- If such a CounterParty SDI is found and if the Nostro Account from Tag 25 is a Guarantee Fees Account, then we create a sub-statement marked with CashStatementProcess = SubStatement.GuaranteeFees
- If such a CounterParty SDI is found and if the Nostro Account from Tag 25 is a standard Nostro, then we create a sub-statement marked with CashStatementProcess = SubStatement.CashPooling
- If no CounterParty SDI is found for that identifier, the system looks up for a Processing Organization SDI such as:
 - Role = ProcessingOrg
 - Beneficiary = Swift Receiver
 - Agent = Swift Sender
 - Agent A/C = Account Mapping Identifier
 - Product is Empty or TransferAgent
 - Currency = Swift Currency
 - Valid for the Swift Settle Date

- If a Processing Organization SDI is found, we check if a transfer agent or simple transfers (when the P.O. Destination Account Holder set in the mapping table is different from P.O. Master Account Holder) already exist for that amount/date/ccy/account. If not, we create a sub-statement marked with CashStatementProcess = SubStatement.CashSweeping
- If no Processing Organization SDI is found and if the Nostro Account from Tag 25 is a standard Nostro Account, then we create a sub-statement marked with CashStatementProcess = SubStatement.Nostro

A new message workflow rule named "HandleCashPooling" should be used in order to block the not successfully processed sub-statement; this rule will raise exception in the TaskStation for issues in the mapping and SDI retrieving. The same rule will be used to reprocess these sub-statements once the issues have been manually fixed and will allow creating automatic trades based on the Account Mapping rules.

Calypso default implementation creates the trade depending on the sub-statement type (CashStatementProcess):

- **For SubStatement.Nostro**, we do not create any trade; this type of entry is automatically reconciled with existing transfers (matching)

- For **SubStatement.CashPooling** and **SubStatement.CashPoolingPF**, we create a CustomerTransfer trade such as:
 - CashStatementProcess Trade Keyword = 'Automatic CashPooling' when coming from a standard Nostro (Tag 25 Statement)
 - CashStatementProcess Trade Keyword = 'Automatic CashPooling PF' when coming from a Payment Factory Nostro (Tag 25 Statement)
 - CashStatementProcess Trade Keyword = 'Automatic Guarantee Fees' when coming from a Guarantee Fees Nostro (Tag 25 Statement)
 - CounterParty SDI = CounterParty SDI identified from Tag 61 or 86 matching the A/C field (or generic SDI for PO with Role CounterParty for Payment Factory Cash Pooling)
 - CounterParty = Beneficiary of the found CounterParty SDI
 - Book = Call Account Book (identified from the CounterParty SDI Currency = Swift Currency and Legal Entity/Account Holder = CounterParty)
 - Processing Organization SDI is retrieved based on GL Account identified from the statement Tag 25, Agent (= Swift Sender), Currency (= Swift Currency) and same Settle Method as the CounterParty SDI
 - Customer = CounterParty
 - Customer Account SDI = DDA Account SDI associated to the Call Account defined for that CounterParty and Swift Currency
- For **SubStatement.BankFee**, we create a Simple Transfer trade such as:
 - CashStatementProcess Trade Keyword = Automatic BankFee
 - Transfer Type = BANKFEE
 - Processing Organization = Swift Receiver
 - Book = derived from the Processing Organization LEAttribute DEFAULT_BOOK
 - CounterParty = derived from the Processing Organization LEAttribute DEFAULT_CPTY
 - Trade Keyword TradeSource = CashStatement
 - Trade Keyword TargetAccountId = Id of the GL Account (SimpleTransfer SDI Selector) to select the Nostro Account as set from the Statement Tag 25
- For **SubStatement.CashSweeping**, we lookup Transfer Agent (within the same PO) trades such as:
 - ProductType = TransferAgent
 - Status <> CANCELED
 - Processing Organization = Swift Receiver
 - Settle Date = Swift Settle Date
 - Internal Ref = "CASHSWEEPING-yyyyMMDD" (Settle Date)
 - CrossChecked Trade Keyword Empty
 - Currency = Swift Currency
 - Amount = Swift Amount
 - From/To Accounts are the same as the one from Tag 25 and the one linked to the Processing Organization SDI found in the previously described algorithm

- If no Trade found , then we create a new TransferAgent same characteristics as the one searched and marked it with the Trade Keyword CashStatementProcess = Automatic CashSweeping and TransferType = CASHSWEEPING
- If a Trade is found, then we just apply the action AMEND and set the CrossChecked Trade Keyword to true

When Mapping Rules are set with Account Holder of the Master Account \neq Account Holder of the Destination Account and both Account Holders are Processing Organizations (= Sweeping of Nostro Accounts belonging to two different Processing Organization of the same Group), then we lookup for a couple of Simple Transfer trades such as:

- ProductType = SimpleTransfer
- Status \neq CANCELED
- Processing Organization = Swift Receiver
- Settle Date = Swift Settle Date
- Internal Ref = "CASHSWEEPING-yyyyMMDD" (Settle Date)
- CrossChecked Trade Keyword Empty
- Currency = Swift Currency
- Amount = Swift Amount
- From/To Accounts associated to these deals are the same as the one from Tag 25 and the one linked to the Processing Organization SDIs found in the previously described algorithm
- If no Trade found , then we create two Simple Transfer trades (identical but opposite) saved between the DEFAULT_BOOK set on each PO (as LE Attribute) and the other PO with the Role CounterParty. The deals have the same characteristics as the one searched, and are marked with the Trade Keyword CashStatementProcess = Automatic CashSweeping and TransferType = CASHSWEEPING
- If a Trade is found, then we just apply the action AMEND and set the CrossChecked Trade Keyword to true on both Simple Transfers.

- The Transfer Engine then marks the Transfers generated with the XferAttribute ExpectedStatus = SETTLED for:
 - TransferAgent marked with CashStatementProcess Keyword = Automatic CashSweeping and CrossChecked keyword = true;
 - SimpleTransfer marked with CashStatementProcess Keyword = Automatic BankFee
 - CustomerTransfer marked with CashStatementProcess Keyword = 'Automatic CashPooling' or 'Automatic CashPooling PF'
- Using the out-of-the-box CheckToBeSettled transfer workflow rule, the transfers associated to these trades automatically go to a SETTLED Status, impacting the Settled BO Position
- Would the default implementation not be satisfying, the CashStatementHandlerFactory tries to retrieve a Handler respecting the following order:
 - Gateway - ExternalMessage Type - Sender Address Code

- Gateway - ExternalMessage Type - Sender Address Code Without branch
- Gateway - ExternalMessage Type
- Gateway - Sender Address Code
- Gateway - Sender Address Code Without branch
- ExternalMessage Type - Sender Address Code
- ExternalMessage Type - Sender Address Code Without branch
- Sender Address Code
- Sender Address Code Without branch
- If nothing is found then the Default implementation is used.

Creation of one Interface to customize the AccountMappingDialog

```
public interface AccountMappingDialogCustomizer {
    /**
     * @return the list of Mapping Type supported by the Customizer
     */
    public List<String> getMappingTypeDomain();
    /**
     * Allow to customize the Mapping Type.
     * Individual attributes can be updated/retrieve through the
    controller.getAttribute(attributeName)
     * and controller.setAttribute(attributeName, value) methods
     * @return The populated Panel for the given mapping type
     */
    public JComponent getMappingTypePanel(String mappingType,
    AccountMappingController controller);
}
```

This interface needs to be implemented in the apps.refdata.AccountMappingDialogCustomizerImpl.

The standard screen has two toggle Buttons: "Other Account" and "Same As Master". When the customizer handles new mapping, the "Same As Master" becomes a ToggleSplit Button (Combination of a Split and a MenuButton).

The Entries of the Menu will be the one provided by the Customizer + the standard "Simple Transfer" which existed already.

When selecting the split menu items (except for "Simple Transfer"), a custom Panel will be retrieved from the Customizer.

If the extra parameters are necessary for the mapping type, they will have to be stored/retrieved as AccountMapping attribute.

The communication with the dialog controller will be insured thanks to the setAttribute/getAttribute methods handled in the controller

Example provided:

calypsox.apps.refdata.AccountMappingDialogCustomizerImpl

Creation of API entries in the MT940CashStatementHandler in order to allow customization of the Trade creation

```
protected boolean customCashStatementProcessAttribute(AccountMapping mapping,
                                                    BOMessage miniMessage,
                                                    List errors) throws
MessageParseException {
    return false;
}

protected void customMiniMessageAttribute(SwiftMessage swift,
                                           BOMessage miniMessage,
                                           List errors) throws MessageParseException {
}

protected Trade customTradeCreation(BOMessage miniMessage, List errors)
```

These three methods allow doing the following:

- customCashStatementProcessAttribute: set a Special CashStatementProcess message attribute on the mini message (substatement message)
- customMiniMessageAttribute: allow to create temporarily attributes for special processing. these should then be reused in the customTradeCreation
- customTradeCreation: depending on the CashStatementProcess attribute, we should try to create the Trade, using the custom attributes created in customMiniMessageAttribute

Example provided:

calypsox.tk.util.swiftparser.cashstatement.MT940CashStatementHandler

Partial Match Option - Transfer workflow - example

The transfer workflow presented below is only an example to be used as a starting point. Clients must then adjust based on their business process, especially in terms of manual and automatic write-off.

Orig Status	Action	Resulting Status	Different User	Use STP	Product Type	Rules	Processing Org	Filter
CANCELED	UNMATCH	CANCELED	false	false	ALL		ALL	
CANCELED	UPDATE	CANCELED	false	false	ALL		ALL	
FAILED	AUTOMATCH	SETTLED	false	false	ALL		ALL	
FAILED	CANCEL	CANCELED	false	false	ALL		ALL	
FAILED	MANUALMATCH	SETTLED	false	false	ALL		ALL	
FAILED	PARTIAL_SETTLE	SPLIT	false	false	ALL		ALL	
FAILED	SETTLE	SETTLED	false	false	ALL		ALL	
FAILED	SPLIT	SPLIT	false	false	ALL		ALL	
FAILED	UPDATE	FAILED	false	false	ALL		ALL	
FAILED	WRITEOFF	WRITEOFF	false	true	ALL		ALL	WriteOff
HELD	AUTHORIZE	VERIFIED	false	false	ALL		ALL	
HELD	CANCEL	CANCELED	false	false	ALL		ALL	
HELD	UPDATE	HELD	false	false	ALL		ALL	
INVALID	ASSIGN	CANCELED	false	true	ALL	ApplyDefaultSDI	ALL	
INVALID	CANCEL	CANCELED	false	false	ALL		ALL	
INVALID	UPDATE	INVALID	false	false	ALL		ALL	
MATCHED	UNMATCH	UNMATCHED	false	false	ALL		ALL	
NONE	NEW	INVALID	false	false	ALL	CheckSDI	ALL	
NONE	NEW	PENDING	false	false	ALL	CheckCorrectSDI, PropagateTradeKeyword	ALL	
PENDING	AMEND	PENDING	false	false	ALL		ALL	
PENDING	ASSIGN	CANCELED	false	false	ALL		ALL	
PENDING	AUTHORIZE	VERIFIED	false	true	ALL	CheckNetting	ALL	
PENDING	CANCEL	CANCELED	false	false	ALL		ALL	
PENDING	EXECUTE	SPLIT	false	false	ALL	SecurityNetting	ALL	
PENDING	EXECUTE	VERIFIED	false	false	ALL	SetKnownFlag	ALL	
PENDING	SPLIT	SPLIT	false	false	ALL		ALL	
PENDING	UNSPIT	CANCELED	false	false	ALL		ALL	
PENDING	UPDATE	PENDING	false	false	ALL		ALL	
SETTLED	CANCEL	CANCELED	false	false	ALL		ALL	
SETTLED	UNMATCH	VERIFIED	false	false	ALL		ALL	
SETTLED	UPDATE	SETTLED	false	false	ALL		ALL	
SPLIT	UPDATE	SPLIT	false	false	ALL		ALL	
SUBSTITUTED	CANCEL	CANCELED	false	false	ALL		ALL	
SUBSTITUTED	UNSUBSTITUTE	VERIFIED	false	false	ALL		ALL	
UNMATCHED	UNMATCH	UNMATCHED	false	false	ALL		ALL	
VERIFIED	AMEND	PENDING	false	false	ALL	CheckKnownFlag	ALL	
VERIFIED	ASSIGN	CANCELED	false	false	ALL		ALL	
VERIFIED	AUTOMATCH	SETTLED	false	false	ALL		ALL	
VERIFIED	CANCEL	CANCELED	false	false	ALL		ALL	
VERIFIED	FAIL	FAILED	false	true	ALL	CheckToBeFailed	ALL	
VERIFIED	HOLD	HELD	false	false	ALL		ALL	
VERIFIED	MANUALMATCH	SETTLED	false	false	ALL		ALL	
VERIFIED	PARTIAL_SETTLE	SPLIT	false	false	ALL		ALL	
VERIFIED	SETTLE	SETTLED	false	true	ALL	CheckToBeSettled	ALL	
VERIFIED	SPLIT	SPLIT	false	false	ALL		ALL	
VERIFIED	SUBSTITUTE	SUBSTITUTED	false	false	ALL		ALL	
VERIFIED	UNMATCH	VERIFIED	false	false	ALL		ALL	
VERIFIED	UNSPIT	CANCELED	false	false	ALL		ALL	
VERIFIED	UPDATE	VERIFIED	false	false	ALL		ALL	

Static Data Filter Window [111100/release/calypso_user]

Name: WriteOff
Attributes...
Simulate...

Comment:
Pending Modifs

Groups: ANY

Attribute	Criteria	Filter Value(s)
XFER_ATTRIBUTE.WriteOff	LIKE	true