Nasdaq Calypso

Collateral Configuration

Version 18

Revision 5.0

April 2025

Approved

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Private and Confidential

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Document History

Revision	Published	Summary of Changes
1.0	February 2024	First revision for version 18
2.0	April 2024	Updates for version 18 monthly release - Added access permission CancelContractAllocations.
3.0	June 2024	Updates for version 18 monthly release - Added CollateralConfig report.
4.0	July 2024	Updates for version 18 monthly release - Added margin call contract templates.
5.0	April 2025	Updates for version 18 monthly release - Added new fields for "Trade Inclusion" under Dates & Times panel.

This user guide describes the configuration of Margin Call Contracts as well as additional components required to generate margin calls.

For information on generating margin calls, please refer to the Calypso Collateral Management User Guide.

For specifics on Cover Distribution, please refer to the Cover Distribution User Guide.

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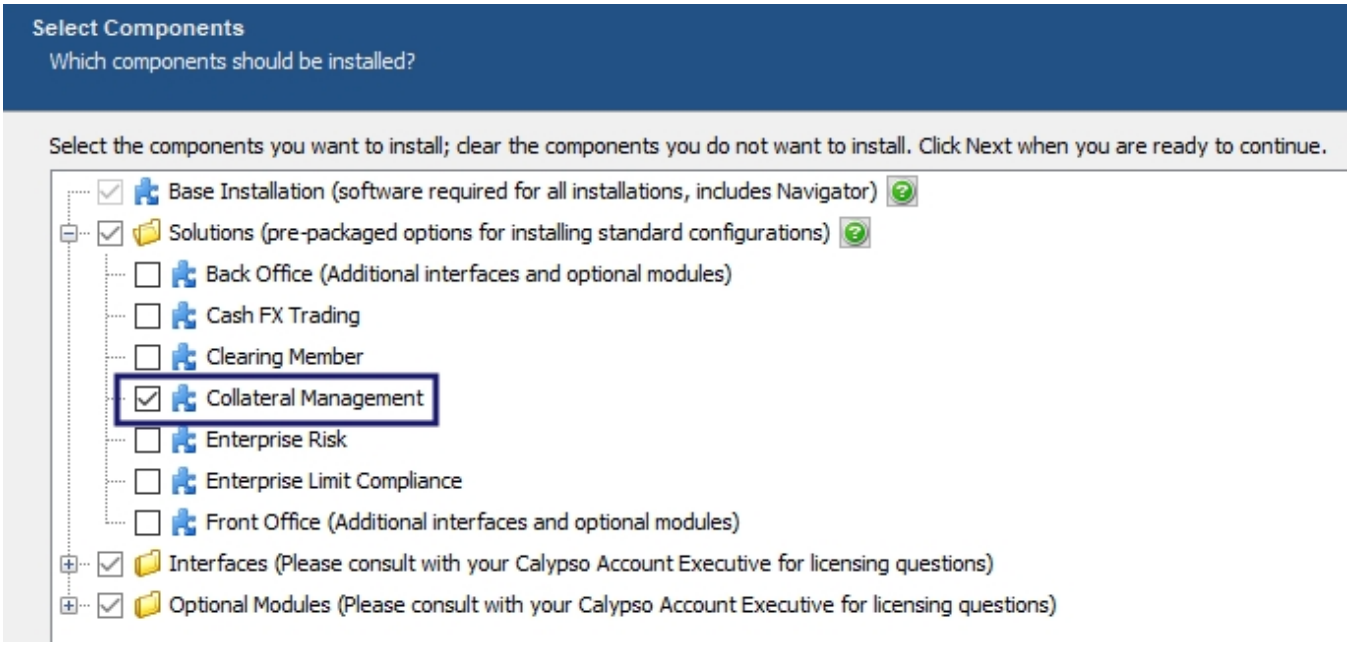
1. Installation Requirements

Below is a description of how to install Calypso's Collateral Management module.

1.1 Installation

The Collateral module is installed as part of the Calypso Installer when you select *Collateral Management* in the installer under *Solutions(pre-packaged options for installing standard configurations)*. Please refer to the Calypso Installation Guide for complete details.

When you run Execute SQL as part of your installation, all Collateral files will be already loaded, and any required upgrade process will be performed.



1.2 Upgrade Notes

The following information is important when upgrading from a previous version of the Collateral module.

» When migrating from Calypso version 12 SP3 or earlier, you will need to run the MCC_MIGRATION scheduled task. This scheduled task contains four attributes, Contract Notification Time, Contract Substitution Time, Contract Valuation Time and Dispute Aging.

Task Attributes	
Contract Notification Time	12:00pm
Contract Substitution Time	12:30pm
Contract Valuation Time	12:30pm
Dispute Aging	true

This scheduled task must be added to the *scheduledTask* domain.

» The scheduled task MARGIN_CALL is no longer used. For processing, use the COLLATERAL_MANAGEMENT scheduled task and for reporting, the REPORT scheduled task.

» For cover distribution, the COVER_DISTRIBUTION scheduled task functions like the COLLATERAL_MANAGEMENT scheduled task. For details on this scheduled task, refer to the Cover Distribution documentation.

1.3 Access Permissions

The following access permissions apply to Collateral functions.

Collateral Context

- Create/Modify/RemoveCollateralContext - Ability to create, modify and remove Collateral Context configuration

Collateral Manager

- AllowPrice/AllowReprice - Ability to price and reprice in Collateral Manager. A user/group can have neither permission, one or both.
- AllowEditDisputeAgeOffset / AllowEditDirectionalDisputeAgeOffset - Ability to edit the Dispute Age Offset and Directional Dispute Age Offset in Collateral Manager.
- CancelContractAllocations - Permission to use the "Cancel Selected Contracts allocations" and "Cancel all Contracts allocations" options in Collateral Manager.
- RemoveMarginCallEntry - Ability to remove a margin call entry

Collateral Pool, Clearing Service, Credit Rating Scenario, Liability Group, Concentration Rule, Eligibility Exclusion

- Create/Modify/RemoveMarginCallConfig - Ability to create, modify and remove configurations regarding Collateral Pool, Clearing Member Contract Configuration (Cover Distribution), Credit Rating Scenarios, Liability Groups, Concentration Rules and Eligibility Exclusions

Eligibility Exclusion

- EnforceCollateralEligibilityHardWarning - When this permission is set, a hard warning appears when a user attempts to allocate ineligible collateral. This permission needs to be added to the function domain value and set as a Restriction in the Access Permissions window.

  When set, if the Collateral Context warning type is set to HARD, while doing the allocation the hard warning will be displayed and the allocation will not happen. If the Collateral Context warning type is set to SOFT, the soft warning will be displayed. Based on the user selection, that allocation can happen.

Global Credit Rating Configuration

- Create/Modify/RemoveGlobalRatingConfiguration - Ability to create, modify and remove global credit rating configurations

Haircut

- Create/Modify/RemoveHaircutRule - Ability to create, modify and remove haircut rules

Margin Call Configuration

- Create/Modify/RemoveCollateralConfig - Ability to create, modify and remove Margin Call Configuration
- AuthorizeCollateralConfig - Ability to authorize margin call config modifications

Margin Call Credit Rating

- Create/Modify/RemoveMarginCallCreditRating - Ability to create, modify and remove margin call credit ratings

Margin Call Reports

- Max.Collateral - The value of this User attribute determines how many margin call entries are loaded in standalone margin call reports such as Margin Call Entries and Margin Call Allocation Entry.

  If the limit is reached and not all of the margin call entries are loaded, the user receives a warning in the Data Server log. There is no pop-up warning in the GUI at this time.

Optimization Configuration

- Create/Modify/RemoveOptimizationConfiguration - Ability to create, modify and remove an Optimization Configuration

Wrong Way Risk Group

- Create/Modifiy/RemoveWrongWayRiskGroup - Ability to create, modify and remove wrong way risk groups

1.4 Audit

The following classes can be added to the "classAuditMode" domain for recording the corresponding audit information:

BilateralEnry

ClearingService

CollateralConfig

CollateralContext

CollateralExposureContet

ConcentrationRule

EligibilityExclusionConfiguration

ETLJob

ExposureGroupEntry

GlobalRatingConfiguration

InterestStatementReconciliation

LiabilityGroupcontext

MarginCallCreditRatingConfiguration

MarginCallEntry

OptimizationConfiguration

TargetConfiguration

1.5 Authorization

The following classes can be added to the "classAuthMode" domain for enabling the Authorization mode:

ClearingService

CollateralConfig

CollateralContext

CollateralExposureContet

CollateralSource

ConcentrationRule

EligibilityExclusionConfiguration

ETLJob

ExposureGroupEntry

GlobalRatingConfiguration

LiabilityGroupcontext

MarginCallCreditRatingConfiguration

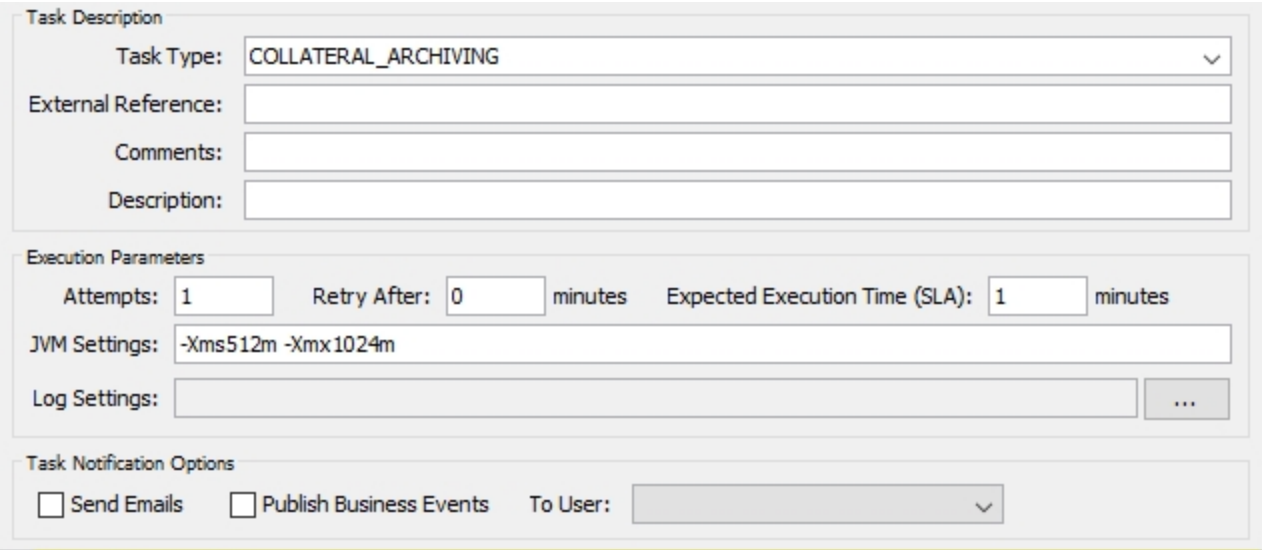
OptimizationConfiguration

TargetConfiguration

1.6 Collateral Archiving

Archiving of Collateral entries can be done via a scheduled task called COLLATERAL_ARCHIVING. This scheduled task archives all specified entries with a context, between two given process dates. There is one table name for each table being archived. All tables are named *"table_name"_hist*.

You need to specify From Days & To Days – Interval for the process date.



Common Attributes	
Task ID	
Processing Org	CALYPSO_LDN
Trade Filter	
Filter Set	
Pricing Environment	
Timezone	Europe/London
Valuation Time Hour	0
Valuation Time Minute	0
Undo Time Hour	0
Undo Time Minute	0
Valuation Date Offset	
From Days	1
To Days	60
Pricer Measures	
Business Holidays	
Task Attributes	
Template	Default
Collateral Context	default
Period Breakdown	1
Batch Size	3000

- *Template* - Used to specify the scope of contracts for which the collateral objects need to be archived. In the Template Manager of the Collateral Manager, users can specify a collateral static data filter. This feature allows for the archiving of VM contracts, while keeping IM contracts unarchived.

- *Collateral Context* - archive all entries in selected collateral context
- *Batch size* – specify the number of entries expected to be archived for each Period Breakdown, for example, Daily, Weekly or Monthly
- *Period Breakdown* - used to specify an archival frequency between the From Days and To Days

2. Defining Margin Call & Clearing Contracts

Margin Call Contracts are defined in the Margin Call Contract window which is accessed via **Configuration > Fees, Haircuts, & Margin Calls > Margin Call** (menu action `refdata.BOMarginCallConfigWindow`).

Clearing Member Contracts are defined through the Cover Distribution Manager by selecting **Window > Configuration > Clearing Member Configuration**.(menu action `refdata.clearing.ClearingMemberConfigWindow`).

2.1 Creating a Margin Call Contract

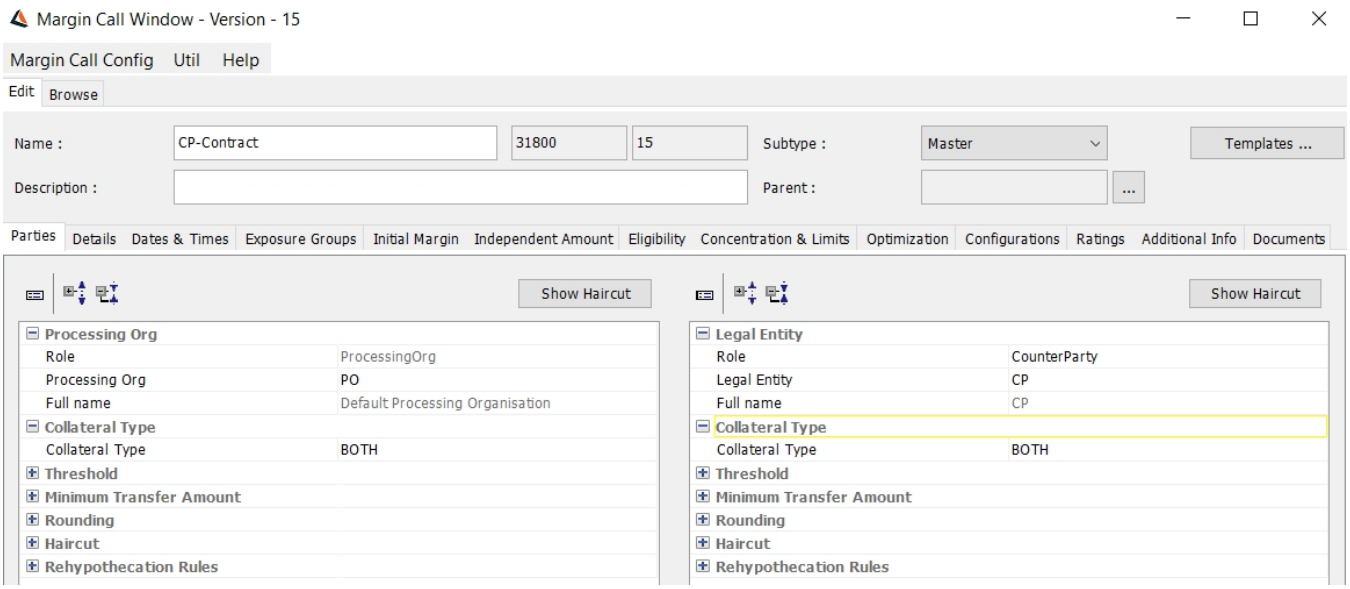
Select the Edit panel, and click **New** to create a new margin call contract.

Enter information into the fields of the various panels as applicable. The fields are described below.

- The margin call contract is defined between Party A, a processing organization, and Party B, a legal entity.
- Margin calls will be calculated for trades between Party A and Party B that satisfy the criteria defined in the margin call contract.
- At the top of many of the panels, there are toggle buttons for display purposes. They are:

 - Click to toggle the visibility of the Description area in the panel, which gives a brief description of the selected field.

 - Click either side of this toggle to either expand or collapse the fields in the panel



Click **Save** to save your changes. You can also click **Save As New** to save the margin call contract as a new margin call contract.

NOTE: If the Authorization mode is enabled, an authorized user must approve your entry.

Defining Margin Call Contract Templates

You can click **Templates** at the top of the window and save the current margin call contract as a template.

You can then load an existing template to define a new margin call contract.

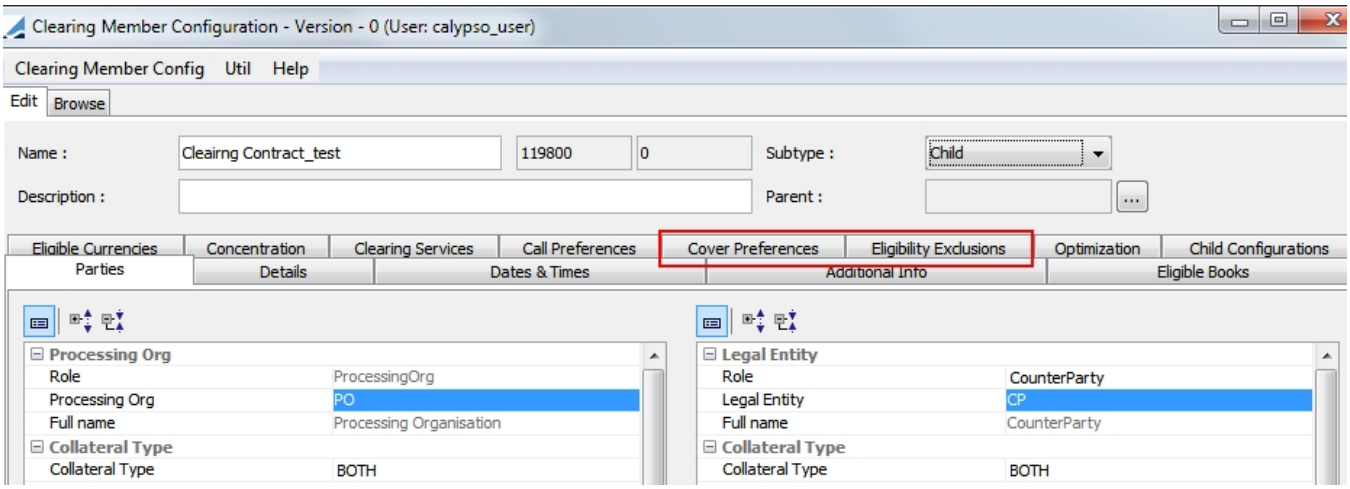
2.2 Creating a Clearing Member Contract

The Clearing Member contract is used for Cover Distribution.

- The clearing member contract is defined between a clearing house and a clearing member. There are at least two contracts involved in a cover distribution, a parent, which is the deposit contract (clearing house) and a child, which is the liability contract (clearing member).
- A deposit contract must be created first and then a child contract can be created and linked to the deposit contract.
- A cover distribution allocates assets from the deposit contract to the liability contract to cover exposures.
- When there isn't enough collateral in the deposit contract to cover the liability, a margin call is generated.
- At the top of many of the panels, there are toggle buttons for display purposes. They are:

 - click this button to toggle the visibility of the Description area in the panel, which gives a brief description of the selected field.

 - click either side of this toggle to either expand or collapse the fields in the panel



Cover Preferences and Eligibility Exclusions are only available for Child contracts

2.3 Margin Call Window Entry

Below is a description of the panels contained in the Margin Call and Clearing Member Contracts.

The fields of the Margin Call Contract are available as configurable columns in the Trade Browser when the value *CollateralConfig* is added to the *ExtentionTradeReportStyle* domain.

Fields Details

Fields	Description
Name	Designate a name for the contract
Id / Revision #	Unique id assigned by the system when the contract is saved. When the contract is saved, the revision number increases by one.
Description	Enter a description for the contract if desired.
Subtype	In the Margin Call contract, the subtype options are: Master(or parent), Child and Facade (master/parent contract with no margin call trades or margin call positions). See Facade Setup below for more information on Facades. In the Clearing Member contract (used for Cover Distribution) , designate whether the contract is a Deposit contract or a Child, which is a clearing member. (Subtype options Independent Amount and Initial Margin are used for Clearing only. For details on these options, refer to the Clearing module user guide.)
Parent	Click ... to select an existing contract. The current contract will inherit all the characteristic of the parent contract. The margin calls are calculated for a given hierarchy, and generated at the root contract level. For example, a root contract is defined between PO1 and CPTY1, and children contracts are defined between children of PO1 and children of CPTY1. The margin calls are calculated for all children and aggregated at the PO1/CPTY1 level. For detailed information on the Parent / Child relationships, refer to Setting up Parent/Child Contracts

2.3.1 Parties

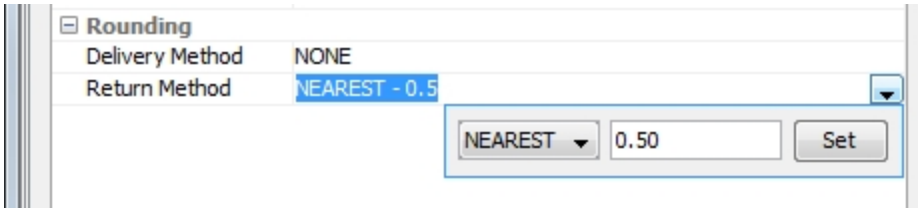
Fields	Description
Processing Org / Legal Entity	
Role	The left side of the contract will always be Processing Org and is not editable. On the right side, select the role for the legal entity for the contact.
Processing Org / Legal Entity	Select the processing organization or legal entity (counterparty) of the contract.

Fields	Description
Full name	The full name of the processing org or counterparty
Collateral Type	
Collateral Type	Select the type of collateral that can be used for the margin call: BOTH for cash and security margin calls, CASH for cash only margin call, or SECURITY for security only margin calls.
Threshold	
Type	The Threshold is the amount of exposure that a given party is willing to bear before calling collateral margins. When the processing org is receiving the exposure, Legal Entity Threshold applies, and the Counterparty will be paying the margin calls, so Legal Entity MTA and independent amount apply as well. When the processing org is paying the exposure, Processing Org Threshold applies, and the processing org will be paying the margin calls, so Processing Org MTA and independent amount apply as well. Select the type of threshold from the Type field: • AMOUNT — The threshold is an absolute amount. Enter the threshold amount in the Amount field. To always calculate a margin call, select AMOUNT and enter 0 in the Amount field. • BIGGEST / SMALLEST— Uses both AMOUNT and PERCENT. When this is selected, the following applies: – First calculate the Threshold amount using the Percentage setup, which is a percent calculation based on what is chosen in the Percentage Basis field. – This amount is compared with what is entered in the Amount field – The highest amount is used if BIGGEST is selected – The lowest amount is used of SMALLEST is selected • CREDIT RATING — The threshold is based on credit ratings prior to conversion to the Global Rating feature. Select this option until you have converted your data over to the Global Rating Configuration. Select **Util > View Previous Margin Call Credit Ratings** to view the margin Call Credit Rating Threshold report. You are not able to make any changes to this report. It is from this report that you can access the conversion tool to allow you to convert data to the Global Rating Configuration. For details refer to Conversion to Global Rating. • GLOBAL RATING — The threshold is based on credit ratings. [Note:: You first need to save the contract before you can setup thresholds on credit ratings]

Fields	Description
	Click **Ratings** at the top of the panel to specify the threshold based on credit ratings. This is done through the Margin Call Credit Rating Configuration window. For details on configuring credit ratings, refer to Margin Call Credit Rating Configuration. Note that the actual credit rating of the legal entities is specified using **Configuration > Legal Data > Entities**. • NEVER — Indicates that the threshold is never reached • PERCENT — The threshold is a percentage of the notional. Enter the percentage in the Percentage field and select a Percentage Basis. Depending on the Type selection, enter either an Amount, Currency, Percentage and /or Rating.
Amount	Enter an amount here after having selected Type: AMOUNT
Base Currency	When Type: AMOUNT is selected, select the currency of the threshold amount in the Currency field if you wish it to be something other than the base currency which is designated in the Eligible Currencies panel.
Percentage Basis	This field must be populated when Type: PERCENTAGE is chosen. The percentage is applied on what is selected in this field. • PRINCIPAL_AMOUNT — The percentage is applied on the sum of the underlying trades' Principal Amount • NOMINAL — The percentage is applied on the sum of the underlying trades' Nominal • SEC_FIN_LIABILITY— The percentage is applied on the sum of the underlying trades' SEC_FIN_LIABILITY pricer measure • SEC_FIN_SECURITY_CLEAN_VALUE — The percentage is applied on the sum of the underlying trades' SEC_FIN_SECURITY_CLEAN_VALUE pricer measure. • SEC_FIN_SECURITY_VALUE— The percentage is applied on the sum of the underlying trades SEC_FIN_SECURITY_VALUE pricer measure • MARGIN_CALL — The percentage is applied on the sum of the underlying trades MARGIN_CALL pricer measure
Percentage	Enter a percentage when Type: PERCENT is selected. You must also select a Percentage Basis.
Rating	The selections for Rating are HIGHER or LOWER. This designates whether the higher or lower credit rating will be used in the case where the legal entity is rated differently by one or more of the applicable agencies.
Value Basis	This field provides the ability to base the percentage on a net amount or a gross amount. This field is available when either Percentage or BOTH is selected in the Type field. The selection options are Net Value (which is the default) and Gross Value, which is the sum of the absolute value of the margin call value. For example, if there are two trades which have a margin call value of -100 and 300, the MTA/Threshold percentage is multiplied by 400 if

Fields	Description
	Gross Value is selected as the Value Basis.
Threshold Application	This field is used with the Margin Flow Approach (which is set up in the Independent Amount panel of the Margin Call contract. It should be set to IA Only for netted VM and IA contracts, and for non-netted IA. It should be set to MTM+IA for IM and non-netted VM contracts.
Minimum Transfer Amount	
Minimum Transfer Amount	The minimum transfer amount (MTA) is the amount that must be reached above the threshold before a margin call can actually take place. When the processing org is receiving the exposure, Legal Entity Threshold applies, and the Counterparty will be paying the margin calls, so Legal Entity MTA and independent amount apply as well. When the processing org is paying the exposure, Processing Org Threshold applies, and the processing org will be paying the margin calls, so Processing Org MTA and independent amount apply as well. Select the type of MTA from the Type field: • AMOUNT — The MTA is an absolute amount. Enter the MTA amount in the Amount field. To always calculate a margin call, select AMOUNT and enter 0 in the Amount field. • BIGGEST / SMALLEST - Uses both AMOUNT and PERCENT. When this is selected, the following applies: – First calculate the MTA amount using the Percentage setup, which is a percent calculation based on what is chosen in the Percentage Basis field. – This amount is compared with what is entered in the Amount field – The lowest amount is used if SMALLEST is selected – The highest amount is used if BIGGEST is selected • CREDIT RATING — The MTA is based on credit ratings prior to conversion to the Global Rating feature. Select this option until you have converted your data over to the Global Rating Configuration. Select **Util > View Previous Margin Call Credit Ratings** to view the margin Call Credit Rating MTA report. You are not able to make any changes to this report. It is from this report that you can access the conversion tool to allow you to convert data to the Global Rating Configuration. For details refer to Conversion to Global Rating. • GLOBAL RATING — The MTA is based on credit ratings. [Note:: You first need to save the contract before you can setup MTAs on credit ratings] Click **Ratings** at the top of the panel to specify the MTA based on credit ratings. This is

Fields	Description
	done through the Margin Call Credit Rating Configuration window. For details on configuring credit ratings, refer to Margin Call Credit Rating Configuration. Note that the actual credit rating of the legal entities is specified using **Configuration > Legal Data > Entities**. • NEVER — Indicates that the MTA is never reached • PERCENT — The MTA is a percentage of the notional. Enter the percentage in the Percentage field and select a Percentage Basis. Depending on the Type selection, enter either an Amount, Currency, Percentage and /or Rating.
Amount	Enter an amount here after having selected Type: AMOUNT
Base Currency	When Type: AMOUNT is selected, select the currency of the MTA amount in the Currency field if you wish it to be something other than the base currency which is designated in the Eligible Currencies panel.
Percentage Basis	This field must be populated when Type: PERCENTAGE is chosen. The percentage is applied on what is selected in this field. • PRINCIPAL_AMOUNT — The percentage is applied on the sum of the underlying trades' Principal Amount • NOMINAL — The percentage is applied on the sum of the underlying trades' Nominal • SEC_FIN_LIABILITY— The percentage is applied on the sum of the underlying trades' SEC_FIN_LIABILITY pricer measure • SEC_FIN_SECURITY_CLEAN_VALUE — The percentage is applied on the sum of the underlying trades' SEC_FIN_SECURITY_CLEAN_VALUE pricer measure. • SEC_FIN_SECURITY_VALUE— The percentage is applied on the sum of the underlying trades SEC_FIN_SECURITY_VALUE pricer measure • MARGIN_CALL — The percentage is applied on the sum of the underlying trades MARGIN_CALL pricer measure
Percentage	Enter a percentage when Type: PERCENT is selected. You must also select a Percentage Basis.
Rating	The selections for Rating are HIGHER or LOWER. This designates whether the higher or lower credit rating will be used in the case where the legal entity is rated differently by one or more of the applicable agencies.
Value Basis	This field provides the ability to base the percentage on a net amount or a gross amount. This field is available when either Percentage or BOTH is selected in the Type field. The selection options are Net Value (which is the default) and Gross Value, which is the sum of the absolute value of the margin call value. For example, if there are two trades which have a margin call value of -100 and 300, the MTA/Threshold percentage is multiplied by 400 if Gross Value is selected as the Value Basis.

Fields	Description
Rounding	
Delivery Method Return Method	Select the rounding method of the margin call from the Delivery Method / field. The Return Method is used when the PO is the paying party and the Delivery Method is used when the PO is the receive party. • NEAREST — To round the margin call amount up or down to the nearest multiple of the amount in the Amount field. • UP — To round the margin call amount up to the nearest multiple of the amount in the Amount field. • DOWN — To round the margin call amount down to the nearest multiple of the amount in the Amount field. • NONE — No rounding is applied. Enter the nearest amount to which you want to round in the field next to the selection. 
Haircut	
Haircut Rule	Select a haircut rule that applies to the margin call calculation for collateral. The collateral value is decreased by the haircut amount. In the Static Data Filter or Static Data Filter Tree used in the Haircut Rule, select a product currency and designate the Product Type as Cash or a security. A haircut rule allows defining haircut percentages based on collateral maturities. To display the Haircut Rule window, select **Util > Haircut Rule** from the Margin Call window. Refer to the Haircut documentation for more information on a basic set up for a haircut rule.
Haircut Type	Select Regular or Inverse. The *signedHaircut* domain value determines the behavior of this field. When this value is set to *true* (default behavior) the behavior is: *Regular = amount • (1+ haircut)* *Inverse = amount / (1 - haircut)* When the *signedHaircut* domain value is set to *false*, the behavior is: *Regular = amount • (1- haircut)* *Inverse = amount / (1 + haircut)* Note: This can be asymmetrical between the PO and LE.

Fields	Description
Apply 100% haircut on ineligible	When the field is selected, any collateral (cash or security) that is ineligible, will have a haircut of 100% applied to it. To determine eligibility and which haircut rule to apply, the system refers to the party receiving collateral: • If PO receives, PO eligibility and haircut are checked. • If CP receives, PO pays, and CP eligibility and haircut are checked When returning collateral, the initial haircut is always used. This field is asymmetrical, meaning it does not have to be the same for both the PO and CP. The checkbox is available at both the contract and exposure group level.
Exclude Trade Haircut	When checked, the haircut is excluded from exposure calculation. It is included otherwise. NOTE: This cannot be asymmetrical. It must be the same on both sides of the contract.
Termination / Settlement Currencies	Haircut reference currency for cross currency haircut. A haircut will be applied if the asset being delivered is not in the same currency as one of the designated currencies. This field can hold one or more currencies and is not mandatory. If there is no designation in this field, the Base Currency field is used for the cross currency haircut determination.
Rehypothecation Rules	
Enable Rehypothecation	Select this if securities and cash received as collateral can be rehypothecated. When this checkbox is selected, the *Collateral Rehypothecation* and *Accept Rehypothecated Assets* fields are displayed.
Collateral Rehypothecation	Select an option in the drop-down to indicate what type of collateral can be reused for this contract. You may select CASH, SECURITY, BOTH (cash and securities) or NONE at all. ▶ See Rehypothecation of Collateral for more information.
Accept Rehypothecated Assets	Select an option in the drop-down to indicate if the contract accepts rehypothecated assets. The contract can accept, CASH, SECURITY, BOTH (cash and securities) or NONE at all. ▶ See Rehypothecation of Collateral for more information.
Additional Legal Entities	
Additional Legal Entities	In this area you may enter additional legal entities for the Processing Org and/or the Legal Entity

2.3.2 Details Panel

In Bilateral contracts, the Details panel contains four panels within it, Details, Ad-Hoc Details, Triparty Details and Acadia Details.

Details

Fields	Description
Perimeter	
Perimeter Type	Select the perimeter type to filter which types of trades are loaded with the contract • Collateral Exposure Trade - load only collateral exposure trades for the contract • Trade Keyword - load only trades that have the contract's id defined in the trade keyword MARGIN_CALL_CONFIG_ID. • Default - load trades considering the other fields of the Perimeter If there is a trade without any keyword, it will only be accepted in Default mode. If the trade has a keyword, the trade will go in the margin call contract with the designated Id. If the designated Id is less than zero, the trade will not go into any contract. NOTE: You may run the COLLATERAL_EXPOSURE_INDEXATION scheduled task to link collateral exposure trades to the contract Id if the collateral exposure trades were created without the contract Id configured. (This is used for Cover Distribution only.)
Products	Click to select the product types to which this contract can be applied, or ALL. The product type can be a group of products. See **Configuration > Product > Group** (`refdata.ProductGroupWindow`) for information on creating groups of products. Note that the environment property USE_PRODUCT_GROUP should be set to true in order to allow specifying margin call contracts by product group. If you are using underlyings that are non-Calypso trades, select the product type Collateral Exposure. Refer to Collateral Exposure for more information.
Products Filter	Click to select a static data filter or static data filter tree to restrict the trades to which this contract can be applied, or NONE. Click the **Define SD** button to display Static Data Filter definition window.
Books	Select the book or books to which the contract can be applied.
Currencies	Click to select the currencies to which this contract can be applied, or ANY.
Exposure Type	Select the underlying products for the margin call here if one of the Products selected is Collateral Exposure.
Start Date / Time	Enter the date and time on which the contract is effective.
End Date / Time	Enter the date and time on which the contract will no longer be effective (these fields can be left blank if a closing date is not know or does not apply).
Effective Date	• TRADE DATE - Select if trades are to be applicable to the margin process from the trade date • SETTLE DATE - Select if trades are to be applicable from the settlement date. If trades are loaded by SETTLE DATE and the transfers are not settled (transfer status is defined in domain *transferFailedStatus*), they will appear with a dispute reason of "Failed Settlement" in the Margin Call Manager, and they will be included in the margin call computation. If the

Fields	Description
	transfer is settled, they will also be included in the margin call computation. • REAL_SETTLEMENT - Choose if trades are to be applicable from the real settlement date - In this case, if a trade or collateral has failed transfers (transfer status is defined in domain *transferFailedStatus*), the dispute status is set to "Failed Settlement" and they will be included in the margin call computation. If the transfer is settled, it will not be taken into account in the margin call computation. **[NOTE: REAL_SETTLEMENT is available and supported for Sec Finance products]** • SETTLE_DATE_OFFSET - The behavior of this effective date type is similar to SETTLE_DATE except that an offset is applied to the value date and trades can be excluded from exposure if maturity is between valdate and valdate + offset. This option allows for Repo trades to be included in exposure calculations based on the expected settlement of the repo trade while taking the margin call offset days into consideration. • TRADE_DATE_TO_REAL_SETTLEMENT - This is used to collateralize TBA bond trades between the trade date and the actual settlement date of the security, based on the settlement status of the underlying transfer on the TBA trade. When this option is chosen, a Settlement Offset field is exposed for entry. The value in this field is used in combination with the calendar defined on the Dates and Times panel to determine which trades have a settlement offset (in business days) greater than or equal to the Settlement Offset field. The trades meeting this criterion will be collateralized and loaded in Collateral Manager.
Agreement Workflow - Please refer to Calypso Acadia documentation for more information.	
Agreement Workflow Product	Product type used for Acadia Agreement Manager workflow.
Agreement Workflow Subtype	Subtype used for Acadia Agreement Manager workflow.
Collateral Agreement Status	Agreement status for Acadia Margin Agreement.
Workflow	
Product	Select a product type use for collateral workflow selection.
Subtype	Subtype used in the collateral workflow. You may select a specific workflow to use for this contract, which is defined in the collateral workflow. This list is populated from the *collateralType* domain value. For more information, see Collateral Manager Workflow or Cover Distribution Workflow.
Margin Call Generation Level - See Exposure Groups for details.	
Generate Margin Calls per Exposure	When designating a contract to use Exposure Groups , it is necessary to have *Generate Margin Calls per Exposure Group* selected in the Details panel of the contract. This field is selected by

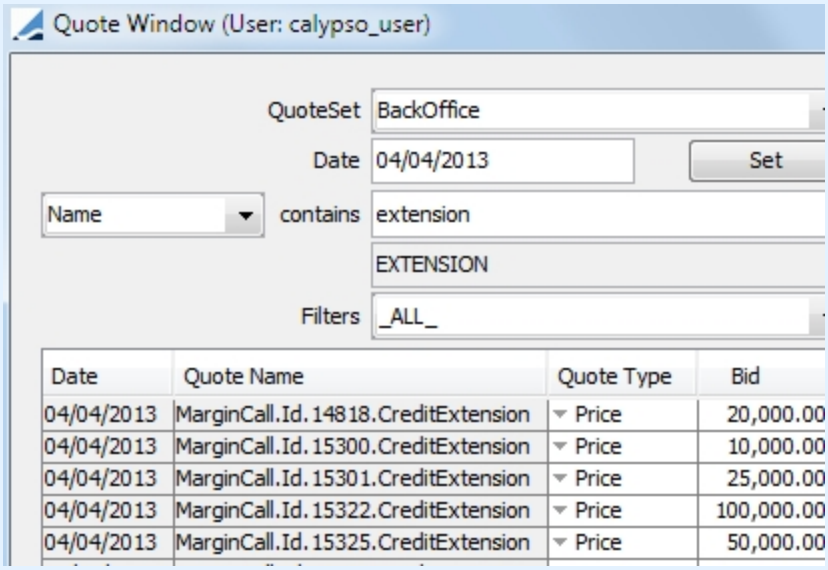
Fields	Description
Group	default in the margin call contract. • If this field is selected and there are NO Exposure Groups on the contract, Margin Calls will be generated at the contract level. • If this field is selected, and there ARE Exposure Groups on the contract, Margin Calls are generated at the Exposure Group level. Workflow actions can be applied at the master contract level as well as the Exposure Group level.
Distribute to Exposure Group	Indicates that Collateral will be distributed to Exposure groups.
Portfolio Based Distribution	Indicates that collateral is provided by the Exposure Groups rather than the PO's collateral being distributed to the Exposure Groups. This is used in conjunction with the Targeted-Allocation optimization solver.
Direction Based Inclusion	When selected, excludes net exposure of Exposure Group from the distribution process if it is not in the same direction as the master contract.
Details	
Status	When the contract is saved, the status will be set to OPEN. If the contract is closed in the Margin Call report window, the status will become CLOSED. NOTE: Closing a contract is available at the contract level only. A contract cannot be closed at the Exposure Group level.
Contract Type	Select the type of legal agreement that applies to the contract. Contract types are user-defined in the *legalAgreementType* domain.
Contract group	Select a currency group, defined in the Collateral Context window Currency Definition panel, to be associated with the contract.
Contract Direction	Choose the direction of the contract. The options are: • GROSS-POSITIVE: Only trades with positive MTM are displayed and included in the exposure calculation. Trades with MTM=0 are not displayed. Used for CP demanding margin from PO (or CP returning). The CP will not call on this. • GROSS-NEGATIVE: Only trades with negative MTM are displayed and included in the exposure calculation. Used for PO demanding margin from CP (or PO returning). The PO will not call on this. • GROSS-UNILATERAL-POSITIVE: Used to include the independent amount of all trades where the independent amount is positive, and trades with a positive exposure only. The Global Required Margin equals the independent amount of all trades plus the gross positive of all trades. For calls/returns, PO can call for a new margin, CP can call for a return margin but will never call for a new marign. • NET-UNILATERAL: A unilateral contract is where only one party will receive collateral.

Fields	Description
	– If the exposure and the independent amount are in the contract direction then exposure and independent amount are added together for the requirement – If there is only exposure and this is in the contract direction, then just the exposure is used for the requirement – If the independent amount is in the contract direction but the exposure is in the opposite direction, then only the independent amount is used for the requirement – If the exposure is not in the contract direction and there is no independent amount, then no collateral requirement is created – Independent amount should not be created in the opposite direction of the contract. If a trade has an independent amount that is not in the contract direction, this will be excluded from the collateral calculation • NET-BILATERAL
Secured Party	This available for selection when Unilateral is chosen for Contract Direction. Specify which party will receive collateral.
End of Day Pricing Environment	The pricing environment to use for an end of day, intraday and simulation allocation or cover distribution .
Intraday Pricing Environment	The Pricing Environment Type (e.g. EOD, ITD or SIM) is chosen in the Collateral Context Pricing tab. The Collateral Context associated with the Collateral Manager template determines which pricing scenario to use. The Collateral Context can also be changed in Collateral Manager.
Simulation Pricing Environment	
Include End Date Exposure	Select this box to include end date exposure in the margin calculation. This property is based off of the trade date (not the process date).
Exclude Delivery Date Accruals	If true, the Accrual calculated in the Collateral Manager is only computed until the Value Date, rather than Process Date which is the existing behavior. This attribute is false by default. This applies only to Repo and Sec Lending.
Ignore MTA on Returned Margin	If selected, the previous collateral will be returned when the Net Exposure changes sign. In this case, the MTA will only be applied to the New Margin. Otherwise, the MTA is applied to the sum of the Returned Margin plus the sum of the New Margin.
Ignore MTA on Returned Margin below Threshold	If selected, the previous collateral will be returned when the Net Exposure falls below the Threshold, or when the Net Exposure changes sign.
Rounding before MTA	Defines whether the rounding is applied before the check on the Minimum Transfer Amount (MTA) or not. If selected, rounding of the required margin will occur only once before it is compared to the MTA. If rounded margin > MTA, the required margin <>0, if rounded margin < MTA, required margin will be null.

Fields	Description
	In this scenario, it is possible to have a required margin not null even though it was below MTA before rounding If not selected, the Required Margin is first compared with the MTA. If the Required Margin exceeds the MTA, then rounding is performed as per the designated Rounding configuration. Then, that amount is again compared to see if a margin call is needed.
Position Type	Selecting ACTUAL bases the margin calculation on the current actual margin. THEORETICAL bases the calculation on retical margin. EXPECTED functions in a way that treats all outgoing margin call transfers as settled and all incoming transfers as not being available until a pre-defined number of days has passed after the value date. This date is set in the *xferAvailableDate* domain value.
Position Date	Select the date when the positions are to be loaded. • POSITION_DATE_DEFAULT is yesterday's positions • POSITION_DATE_LAST_KNOWN is today's positions • POSITION_DATE_PROCESS is the positions on the process date • POSITION_DATE_VALUE is the positions on the value date
Novation Date Based Inclusion/Exclusion	This field facilitates Collateral Policy CSA lookup. When chosen, the logic is as follows: • For Legacy CSAs - Trades booked and novated before the Regulatory Compliance Date are included. Trades novated after this date are excluded. • For Regulatory CSAs - Trades booked before the Start Date of the CSA but novated after the Regulatory Compliance date are included. Two additional fields are exposed when this option is chosen: • *Regulatory Compliance Date* - The date set here is used for the Novation Date Based Trade Inclusion/Exclusion logic. • *Regulatory CSA* - If selected, the contract is considered a regulatory CSA. If un-selected, the contract is considered a legacy CSA. NOTE: If the trade date is before the regulatory date and not partially terminated, it is subject to legacy CSA. If the trade date is before the regulatory date, and partially terminated before the regulatory date, it is subject to legacy CSA. If the trade date is before the regulatory date but partially terminated after the regulatory date, it is still subject to legacy CSA. If the trade date is after the regulatory date, it is subject to regulatory CSA regardless of whether it is partially terminated or not.
Adjustments	
Minimum Adjustment	Enter the minimum amount by which the margin call amount can be amended in the Margin Call report. Check the “Is Percentage” checkbox if the amount represents a percentage of the margin call amount. If this designated adjustment amount is breached, a warning is displayed in the Allocation window. The warning is generated by comparing the sum of all allocations

Fields	Description
	(executed and proposed) and the Global Required Margin. To ignore the minimum adjustment amount, enter 0 and check the “Is Percentage” checkbox.
Maximum Adjustment	Enter the maximum amount by which the margin call amount can be amended in the Margin Call report. Check the “Is Percentage” checkbox if the amount represents a percentage of the margin call amount. If this designated adjustment amount is breached, a warning is displayed in the Allocation window. The warning is generated by comparing the sum of all allocations (executed and proposed) and the Global Required Margin. To ignore the minimum adjustment amount, enter 100 and check the “Is Percentage” checkbox.
Trade Level Dispute	
Dispute Tolerance	Enter the dispute amount limit. When processing a dispute, if the dispute amount is less than or equal to the dispute tolerance, the dispute will be automatically resolved using the counterparty's amount. Check the "Is Percentage" checkbox if the amount represents a percentage of the margin call amount.
Contract Level Dispute	
Dispute Tolerance	• *Amount* - Enter the dispute amount limit. When processing a dispute, if the dispute amount is less than or equal to the dispute tolerance, the dispute will be automatically resolved using the counterparty's amount. • *Percentage* - Enter the dispute percentage. If only *Percentage* is defined, that value is used in the calculation. • *Percentage calculation base* - Choose on which the percentage has to be based. • *Type* - If both a dispute amount and a dispute percentage are defined, the dispute amount is compared with the calculation of the dispute percentage and the Smallest / Biggest will be used. None should only be selected if the amount OR percentage is defined, not both.
Track As Dispute	Available only when *Accept CP Amount in PO's Favor* is selected. When selected, the Counterparty’s amount is automatically taken as the Agreed Amount because it is in the PO’s favor. In Collateral Manager the *Dispute* flag is checked, the Dispute Status is *Partially Agreed* and the Agreed Amount is the Counterparty Amount.
Accept Undisputed Amount	When this option is flagged, if the difference between the Global Required Margin and the Counterparty Amount is less than the *Undisputed Tolerance,* the following things will automatically happen in Collateral Manager: • The Agreed Amount is set to the undisputed amount (which is the lowest of the two amounts) • The *Dispute* flag is checked • The Dispute Status is set to *Partially Agreed*
Undisputed Tolerance	Undisputed tolerance amount, used in *Accept Undisputed Amount*

Fields	Description
Percentage calculation basis	Choose on which amount the percentage has to be based.
Accept CP Amount in PO's Favor	Designates to automatically accept the counterparty amount to resolve a dispute if the amount is in the processing org's favor.
Method	You may either select NONE or ARITHMETIC MEAN as a method to calculate a margin call in the case of a dispute. If ARITHMETIC MEAN is selected, the two parties will 'split the difference' between the two amounts when under tolerance.
Response Time	Enter the time by which a response must be given to the dispute. (For information purposes only.)
Response Time Zone	Select the time zone that applies to the response time. (For information purposes only.)
Alternative Procedure	Select the alternative procedure in case of a dispute: NONE, SPLIT THE DIFFERENCE (the difference between Party A and Party B's calculated amounts is to be split and paid/received to/from each party), or OTHER. This is currently for information purposes only. You can display the dispute alternative procedure in the Margin Call Statement.
Resolution Time	Enter the time by which a resolution must be agreed upon. (For information purposes only.)
Resolution Time Zone	Select the time zone that applies to the resolution time. (For information purposes only.)
Dispute Aging Start	This field defines when dispute aging begins when a margin call is disputed in Collateral Manager. When *T+1* is selected, the Dispute Age column displays 0 on the first day of the dispute. When *T* is selected, the aging begins on the first day of the dispute, the Dispute Age column displays 1 on the first day of the dispute. *T+1* is the default setting.
Mirroring	
Mirror Contract	Select a mirror contract to for mirroring of Margin Call trades. ▶ For details on this, see Margin Call Trade Mirroring in the Calypso Collateral Management User Guide.
Call Generation (Clearing Member only)	
Generate a Call	Selecting this checkbox indicates that the call is generated at the current contract level. If this flag is not selected on either the Deposit or the Child contract, the call is done at the deposit level.
Distribute the call	Selecting this checkbox in a child contract will generate a call per uncovered liability if the call preference is eligible for this liability. If not, the liability call amount will be aggregated to the total call amount done at the child contract level. If the call preference is eligible for all uncovered liabilities, the total call amount will be equal to 0 and no allocation will be generated at contract level.

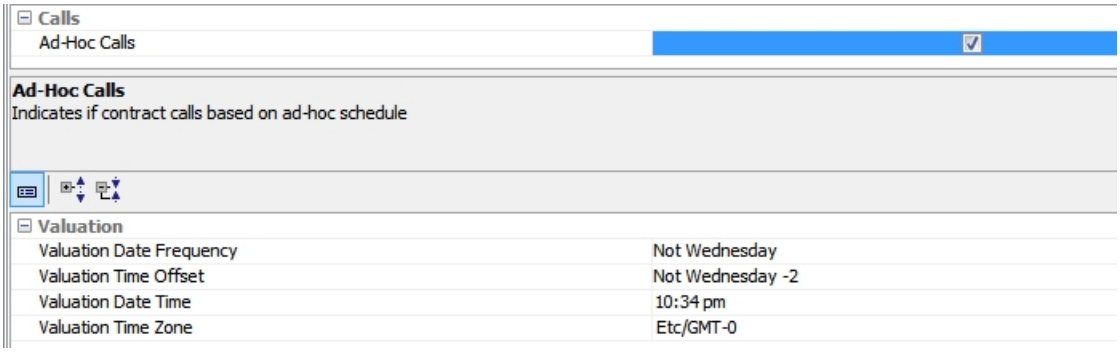
Fields	Description
Excess Buffer Requirement	The Excess Buffer is an additional amount of collateral that the clearing house requires the member to post.
Excess Buffer Auto-Call	If this is selected, a cash call is automatically generated when the excess buffer is breached. If it is not selected, a notification is sent to the member, indicating the amount of the buffer that has been used.
Use Credit Extension	Credit Extension is an amount of cash value that the Clearing House extends to the Clearing Member to allow them to register trades when they have insufficient available collateral. Selecting this checkbox indicates if a credit extension is permitted. When a Credit Extension is selected and the contract is saved, a new quote for that contract is saved which specifies the daily credit extension amounts.  Credit extensions are ignored during a final distribution. They are only recognized during an intraday distribution.
Credit Extension Call Percentage	This is a % of the Credit Extension, once the Clearing Member exceeds this % the Clearing House will call cash collateral from the Clearing Member. The Clearing Member will still be able to clear trades until 100% of the Credit Extension is used. For example, if the clearing member's credit extension is $10,000 with the Credit Extension Call % of 60. If the clearing member uses less than $6,000 of their extension the clearing house makes no call. If the clearing member uses $6,000 then the clearing member will call $6,000, but will still allow trades to be cleared for the remaining $4,000. Credit extensions are only applied for intraday distributions.

NOTE: Either a Credit Extension or an Excess Buffer would normally be applied to a contract, but not both at the same time.

Ad-Hoc Details

An Ad Hoc margin call is an option which allows contract valuation out of schedule on non-valuation days. Ad Hoc calls may have different Valuation Time Offsets (typically T-2 instead of T-1) and often have a specific Ad Hoc Minimum Transfer Amount to determine whether or not to generate a margin call on an off-schedule day. Any day that is not a Valuation Date is considered an Ad Hoc date.

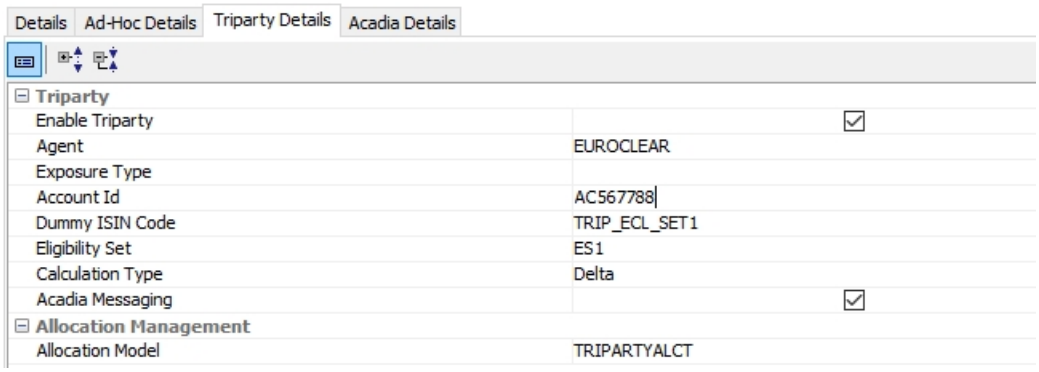
In the Ad-Hoc Details panel, you may indicate that Ad-Hoc calls are allowed for this contract. This flag is to be used in conjunction with the Ad Hoc Valuation designation in the Collateral Context window.



The fields in this panel function in the same way as the valuation fields in the Dates & Times panel, except they are specific to ad hoc margin calls in bilateral contracts only.

Triparty Details

This panel contains information related to triparty activity. Select *Enable Triparty* to designate that the contract is Triparty. When this is selected, additional fields are available for input.



NOTE: If the Acadia Messaging field is checked at the Exposure Group level, different calculations are applied. A Triparty contract uses Net Exposure calculation; A Triparty Acadia contract uses Delta calculation.

▶ For details related to this panel, please refer to Calypso Traiparty Services documentation and Calypso Acadia documentation.

ECMS Details

▶ Please refer to the ECMS section in the Calypso Collateral Management User Guide for details.

Acadia Details

The Acadia Details panel contains information related to generating AcadiaSoft messages.

▶ For details related to this panel, please refer to Calypso Acadia documentation.

2.3.3 Dates & Times

Fields	Description
Valuation	
Valuation Agent Type	Select PARTY A, PARTY B, BOTH, 3RD PARTY, or NONE.
Valuation Date Frequency	Click to select a date rule. This rule specifies the calendars as well as the date rolls to be used when the valuation date falls on a holiday. If a contract is not processed based on a schedule, then a daily date rule should be defined (by specifying a type of DAILY in the date rule configuration). A daily rule should have a date roll of Following. Date rules are defined using **Configuration > Definitions > Date Schedule Definitions > Date Rule**. You can may display the Valuation Date Frequency in the Margin Call Statement. This is a mandatory field.
Valuation Time Offset	Click to select a date rule used to specify the valuation offset. A valuation offset is an agreed number of days prior to the valuation date. The date rule in this field is typically relative to the Valuation Date Frequency date rule. For example, if the contract has a Valuation Date Frequency of each Monday, then the Valuation Time Offset date rule would be -1 business days relative to the Valuation Date Frequency. For contracts that are processed daily, the Valuation Date Frequency rule should define as type = DAILY and the Valuation Time Offset rule should be -1 day relative to the daily date rule. This is a mandatory field.
Valuation Time	Enter the time used to determine the date time on the Valuation Time Offset for trade inclusion. You can display the valuation time and time zone in the Margin Call Statement. This is a mandatory field.

Fields	Description
Valuation Time Zone	Select a time zone to be used in conjunction with the Valuation Time field. This is a mandatory field.
Quote Offset Days	Enter a number of offset days applied to the quote date.
Trade Inclusion (valid only for Effective Date - TRADE DATE)	
Trade Inclusion Time	Select the checkbox to enter the Trade Inclusion Time which is the same as the Valuation Time.
Trade Inclusion Time Zone	This field will be automatically updated based on the data extracted from the Valuation Time Zone field. This field cannot be edited.
Trade Inclusion Time Offset	This field will be automatically updated based on the date rule saved against the Valuation Time Offset field. This field cannot be edited.
Calendar	
Holidays	This is the holiday calendar used to compute the settlement of the margin call trade. The settlement offset of the margin call trade is computed using this calendar and the calendar of the underlying currency of the margin call trade.
Messages	
Notification Time	Enter the time by which notification of the margin call must be sent or received.
Time Zone	Select the appropriate time zone
Collateral Substitution	
Date Option	Enter “Next Settlement Date following receipt of the Transferee’s note of consent”, “Settlement Date following the date on which the Transferee receives the new collateral”, or enter the actual number of business days following the receipt of the note of consent or receipt of new collateral. This is currently for information purposes only. You can display the substitution date option in the Margin Call Statement.
Time	Enter the time by which the substitution must take place. This is currently for information purposes only. You can display the substitution time in the Margin Call Statement.
Substitution Time Zone	Enter the time zone that applies to the Collateral Substitution Time.

Settlement Offset

If desired, designate an offset for cash and securities for each party. You may also use Collateral Dates for the offsets by selecting the checkbox.

Collateral Dates

In this area, you may define rules to determine the settlement dates of the collateral. Refer to Setting Collateral Dates for information.

2.3.4 Exposure Groups

Exposure groups can be set up to meet IOSCO regulations including the 2-way movement of Initial Margin and Variation Margin currency silos. Exposure Groups are used for Bilateral functionality as well as Buy Side Fund Distribution. Please refer to Exposure Group Functionality for detailed information.

2.3.5 Initial Margin

This panel allows you to specify if the Margin Call Contract is associated with initial margin in the context of the Clearing activity. The Initial Margin Buffer panel is also available for Exposure Groups.

▶ Please refer to the Calypso Clearing Member Setup Guide for complete details.

2.3.6 Independent Amount

The independent amount is handled as a fee. Independent amounts can be either at the contract or trade level.

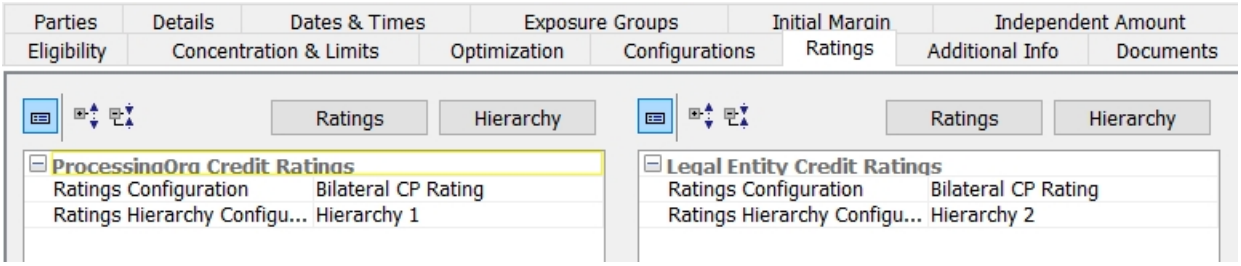
- Contract level Independent Amounts are credit rating based. They can be set up to be either a fixed amount or a percentage.
- Trade level Independent Amounts can be netted with the margin call contract (included in margin call calculations), or non-netted (excluded from margin call calculations).

NOTE: You first need to save the contract before you can setup the independent amount

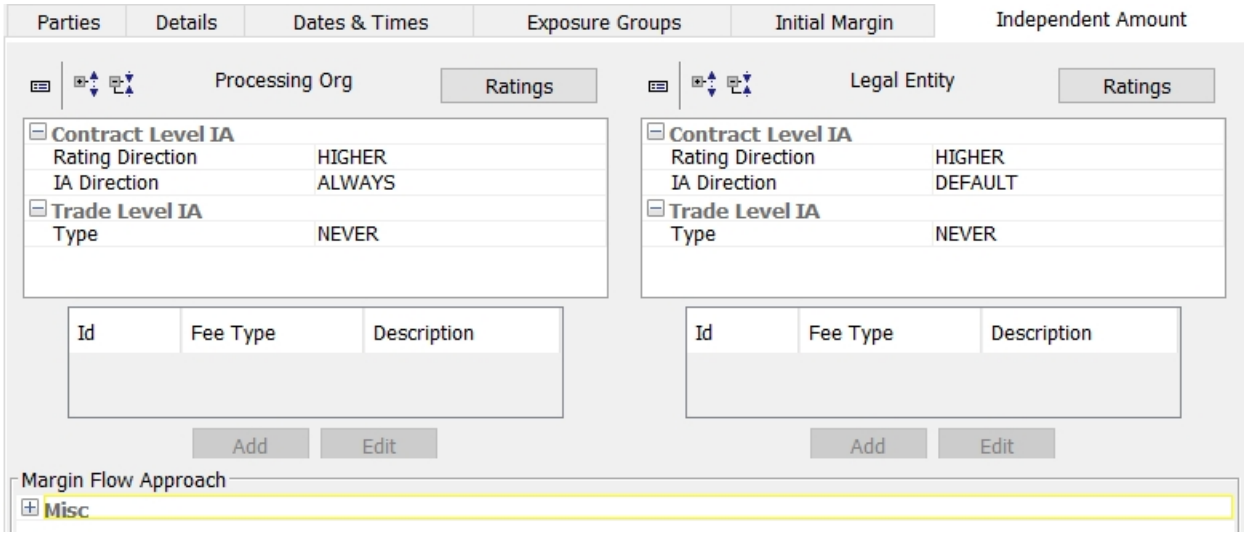
Contract Level Independent Amount

» Because a contract level Independent Amount is credit rating based, the following must be defined in the Ratings panel of the Margin Call Contract:

- Credit Rating Configuration for the processing org and/or legal entity
- Ratings Hierarchy Configuration for the processing org and/or legal entity
- Eligible Agencies (The options for this is populated from the *ratingAgency* domain value.)



» Choose Rating Direction and IA Direction for the processing org and/or the legal entity



The Rating Directions are:

- HIGHER - In the case of conflicting ratings, the highest rating will be used in order to determine the contract level Independent Amount that applies.
- LOWER - In the case of conflicting ratings, the lowest rating will be used in order to determine the contract level Independent Amount that applies.
- NONE - No contract level Independent Amount is applied. If the rating direction is NONE, there is no contract level Independent Amount even if an Independent Amount amount or percent is defined in the Margin Call Credit Rating Configuration.

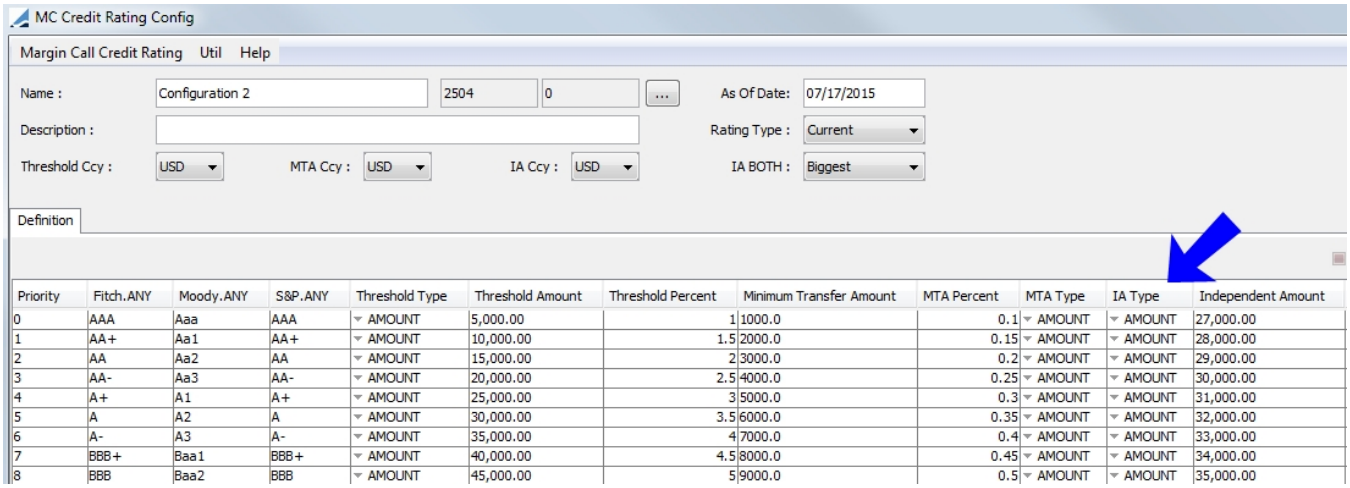
The IA Directions allow you to specify if an Independent Amount should always be included or not. The selections are:

- DEFAULT - The Independent Amount is included, depending on the sign of the exposure
- ALWAYS - The Independent Amount is always included
- NEVER - The Independent Amount is never included

NOTES:

- If one of either party is set to ALWAYS or NEVER, then the Independent Amount no longer depends on the exposure sign.
- If the IA Direction for both parties is DEFAULT, then this means that the IA is applicable to the party with the negative net exposure. If there are no underlying trades (or if the underlying trades happen to net to 0), then there is no paying party since the net exposure is 0. In this situation no IA value is populated since IA is not being computed for any party.
- If the IA Direction is DEFAULT for the PO, and ALWAYS for the CPTY, and if there are no underlying trades, then the LE IA Amount is populated and the Contract Level Independent Amount is populated with the LE IA Amount.
- If the IA Direction is ALWAYS for the PO, and DEFAULT for the CPTY, and if there are no underlying trades, then the PO IA Amount is populated and the Contract Level Independent Amount is populated with the PO IA Amount.
- If the IA Direction for both parties is ALWAYS, and if there are no underlying trades, then the PO IA Amount and the LE IA Amount are populated, the Contract Level Independent Amount is populated with the difference between PO IA Amount and the LE IA Amount.

» You can click the Ratings button to display the MC Credit Rating Config window. IA Type is one of the columns that can be displayed on this window.



Priority	Fitch.ANY	Moody.ANY	S&P.ANY	Threshold Type	Threshold Amount	Threshold Percent	Minimum Transfer Amount	MTA Percent	MTA Type	IA Type	Independent Amount
0	AAA	Aaa	AAA	AMOUNT	5,000.00	1	1000.0	0.1	AMOUNT	AMOUNT	27,000.00
1	AA+	Aa1	AA+	AMOUNT	10,000.00	1.5	2000.0	0.15	AMOUNT	AMOUNT	28,000.00
2	AA	Aa2	AA	AMOUNT	15,000.00	2	3000.0	0.2	AMOUNT	AMOUNT	29,000.00
3	AA-	Aa3	AA-	AMOUNT	20,000.00	2.5	4000.0	0.25	AMOUNT	AMOUNT	30,000.00
4	A+	A1	A+	AMOUNT	25,000.00	3	5000.0	0.3	AMOUNT	AMOUNT	31,000.00
5	A	A2	A	AMOUNT	30,000.00	3.5	6000.0	0.35	AMOUNT	AMOUNT	32,000.00
6	A-	A3	A-	AMOUNT	35,000.00	4	7000.0	0.4	AMOUNT	AMOUNT	33,000.00
7	BBB+	Baa1	BBB+	AMOUNT	40,000.00	4.5	8000.0	0.45	AMOUNT	AMOUNT	34,000.00
8	BBB	Baa2	BBB	AMOUNT	45,000.00	5	9000.0	0.5	AMOUNT	AMOUNT	35,000.00

The *IA Type* can be:

- BOTH - The AMOUNT value is compared with the PERCENT value and the value used is based on the IA BOTH setting.
- AMOUNT
- PERCENT - percent of the notional
- NEVER - no independent amount

When the selected IA Type is BOTH, the *IA BOTH* field is utilized. The options for this field are:

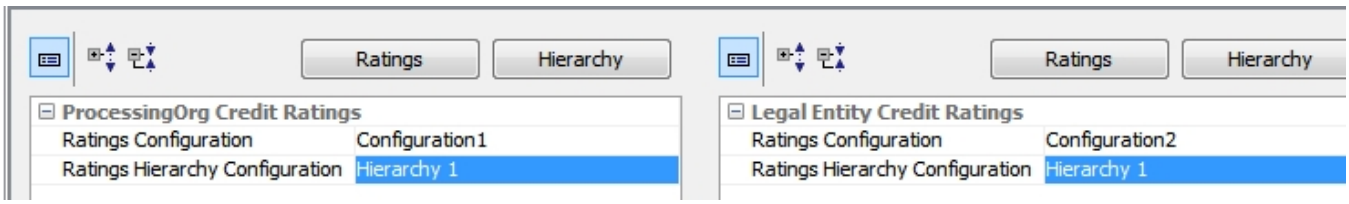
- *Smallest*: the system chooses the smallest value between the Amount and the Percentage value calculated
- *Biggest*: the system chooses the largest value between the Amount and the Percentage value calculated

This field is the same for the entire configuration. It is not possible to have one column set to Biggest and another to Smallest within the same configuration. The default value is Biggest.

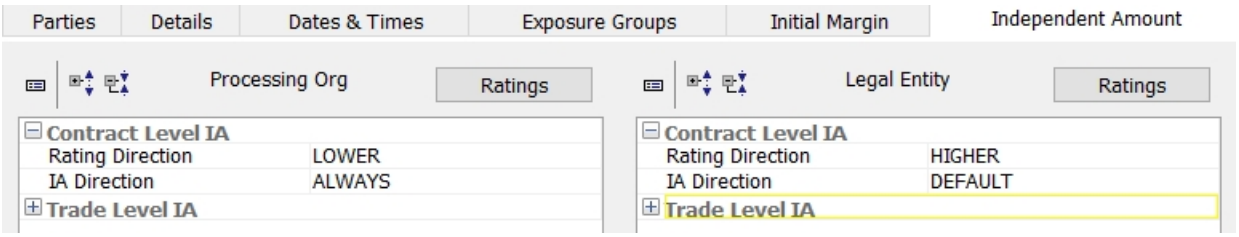
Below are two examples of contract level independent amounts:

Example 1

Ratings panel



Independent Amount panel



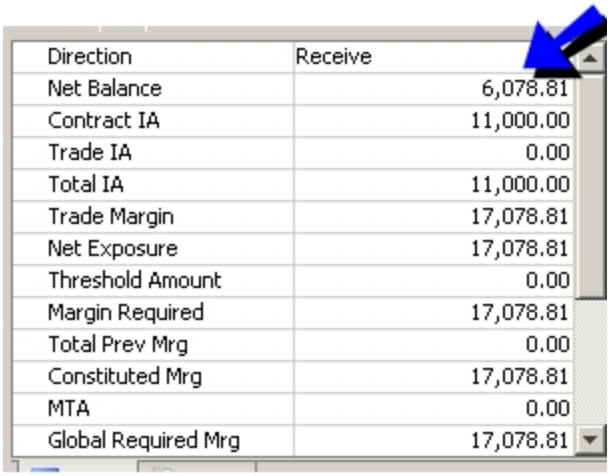
Processing Org Credit Ratings

Priority	Fitch.ANY	Moody.ANY	S&P.ANY	Threshold Amount	Threshold Currency	MTA	MTA Currency	IA	IA Currency	IA Percent	IA Type
0	AAA	Aaa	AAA	500,000.00	EUR	0	EUR	1,000	EUR	2	AMOUNT
1	AA+	Aa1	AA+	490,000.00	EUR	0	EUR	2,000	EUR	4	AMOUNT
2	AA	Aa2	AA	480,000.00	EUR	0	EUR	3,000	EUR	5	AMOUNT
3	AA-	Aa3	AA-	470,000.00	EUR	0	EUR	4,000	EUR	6	AMOUNT
4	A	A1	A+	460,000.00	EUR	0	EUR	5,000	EUR	7	AMOUNT
5	A	A2	A	450,000.00	EUR	0	EUR	6,000	EUR	8	AMOUNT

Counterparty Credit Ratings

Priority	Fitch.ANY	Moody.ANY	S&P.ANY	Threshold Amount	Threshold Currency	MTA	MTA Currency	IA	IA Currency	IA Percent	IA Type
0	AAA	Aaa	AAA	500,000.00	EUR	0	EUR	10,000	EUR	3	AMOUNT
1	AA+	Aa1	AA+	490,000.00	EUR	0	EUR	11,000	EUR	3	AMOUNT
2	AA	Aa2	AA	480,000.00	EUR	0	EUR	12,000	EUR	3	AMOUNT
3	AA-	Aa3	AA-	470,000.00	EUR	0	EUR	13,000	EUR	3	AMOUNT
4	A	A1	A+	460,000.00	EUR	0	EUR	14,000	EUR	3	AMOUNT
5	A	A2	A	450,000.00	EUR	0	EUR	15,000	EUR	3	AMOUNT

Collateral Manager - Margin Call Entry



Direction	Receive
Net Balance	6,078.81
Contract IA	11,000.00
Trade IA	0.00
Total IA	11,000.00
Trade Margin	17,078.81
Net Exposure	17,078.81
Threshold Amount	0.00
Margin Required	17,078.81
Total Prev Mrg	0.00
Constituted Mrg	17,078.81
MTA	0.00
Global Required Mrg	17,078.81

The Net Balance is greater than zero, so the Counterparty credit rating is used.

The Counterparty rating is:

Legal Entity	Seniority	Agency	Rating Type	Rating
CM	ANY	Moody	Current	Aa1
CM	ANY	S&P	Current	AA

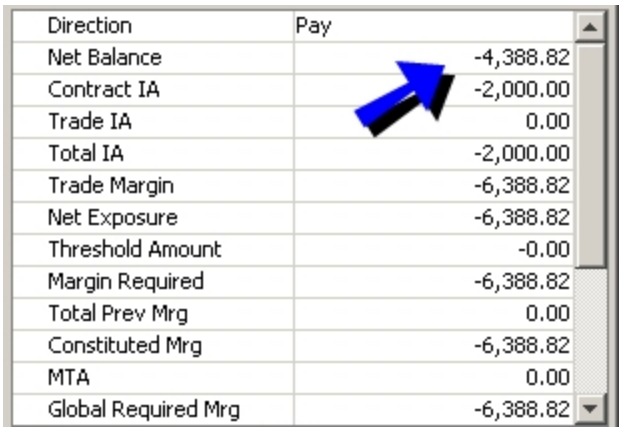
Since the contract rating is HIGHER, 11,000 is used.

Priority	Fitch.ANY	Moody.ANY	S&P.ANY	Threshold Amount	Threshold Currency	MTA	MTA Currency	IA	IA Currency	IA Percent	IA Type
0	AAA	Aaa	AAA	500,000.00	EUR	0	EUR	10,000	EUR	3	AMOUNT
1	AA+	Aa1	AA+	490,000.00	EUR	0	EUR	11,000	EUR	3	AMOUNT
2	AA	Aa2	AA	480,000.00	EUR	0	EUR	12,000	EUR	3	AMOUNT
3	AA-	Aa3	AA-	470,000.00	EUR	0	EUR	13,000	EUR	3	AMOUNT
4	A	A1	A+	460,000.00	EUR	0	EUR	14,000	EUR	3	AMOUNT
5	A	A2	A	450,000.00	EUR	0	EUR	15,000	EUR	3	AMOUNT

Example 2

(In this example, there is the same set up as the Example 1.)

Collateral Manager



Direction	Pay
Net Balance	-4,388.82
Contract IA	-2,000.00
Trade IA	0.00
Total IA	-2,000.00
Trade Margin	-6,388.82
Net Exposure	-6,388.82
Threshold Amount	-0.00
Margin Required	-6,388.82
Total Prev Mrg	0.00
Constituted Mrg	-6,388.82
MTA	0.00
Global Required Mrg	-6,388.82

The Net Balance is less than zero so the Processing Organization's Independent Amount is used.

The Processing Organization rating is:

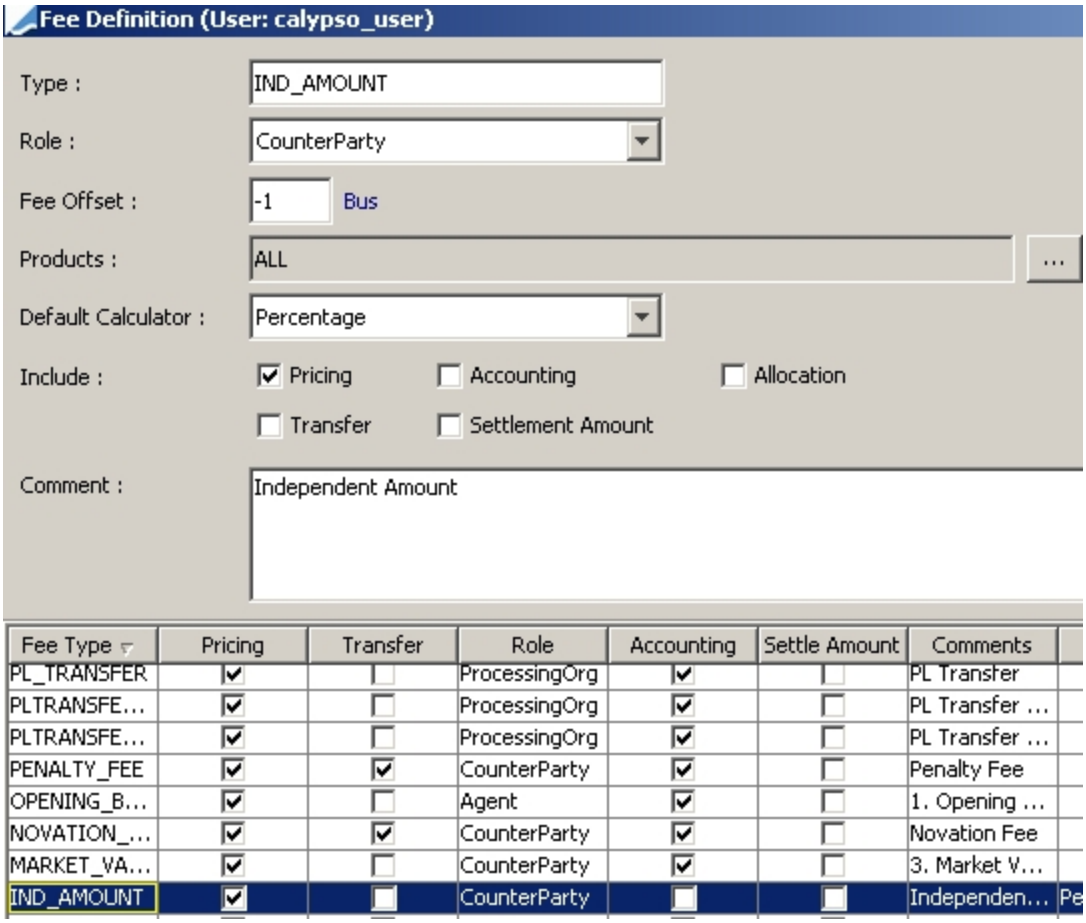
Legal Entity	Seniority	Agency	Rating Type	Rating
BRANCHE2	SENIOR_UNSECURED	Moody	Current	Aaa
BRANCHE2	SENIOR_UNSECURED	S&P	Current	AA+

Since the rating direction is LOWER, 2,000 is used.

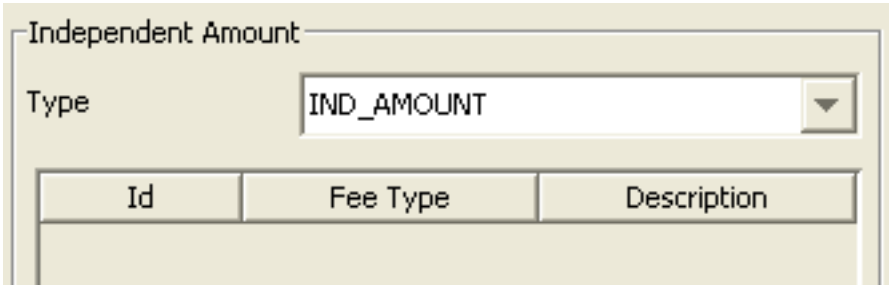
Priority	Fitch.ANY	Moody.ANY	S&P.ANY	Threshold Amount	Threshold Currency	MTA	MTA Currency	IA	IA Currency	IA Percent	IA Type
0	AAA	Aaa	AAA	500,000.00	EUR	0	EUR	1,000	EUR	2	AMOUNT
1	AA+	Aa1	AA+	490,000.00	EUR	0	EUR	2,000	EUR	4	AMOUNT
2	AA	Aa2	AA	480,000.00	EUR	0	EUR	3,000	EUR	5	AMOUNT
3	AA-	Aa3	AA-	470,000.00	EUR	0	EUR	4,000	EUR	6	AMOUNT
4	A	A1	A+	460,000.00	EUR	0	EUR	5,000	EUR	7	AMOUNT
5	A	A2	A	450,000.00	EUR	0	EUR	6,000	EUR	8	AMOUNT

Trade Level Independent Amount - Netted

- The pricer measure INDEPENDENT_AMOUNT allows for the retrieval of that fee in reports, and revalues the independent amount for subsequent margin calls.
- Define a fee type “IND_<name>” with or without the FeeGrid calculator, that does not generate transfers using **Configuration > Fees, Haircuts, & Margin Calls > Fee Definition**. This fee will be taken into account in the margin call calculation.



Once you have created the fee definition, select the fee from the Type field in the Independent Amount section.



If you do not specify a fee grid, the fee amount will have to be entered manually on the trades.

Trade Level Independent Amount - Non-Netted

» Select "NON NETTED" from the Type field, and click ... It creates a sub-contract of the margin call contract with subtype "Independent Amount" - In the sub-contract, define the independent amount as described for "Netted

Independent Amount" - It can be manual or computed from a fee grid. The independent amount contract can be subject to Threshold, Minimum Transfer Amount, and Rounding conventions as needed.

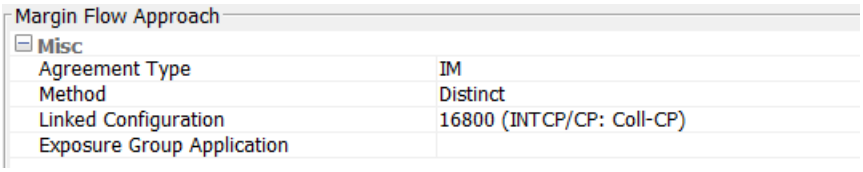
Fee Grid Definition (Optional)

You can click **Add** to define the Fee Grid with the following attributes:

- MARGIN_CALL_CONTRACT_ID = Contract id that uses the fee grid.
- MARGIN_CALL_PAYER_ROLE = Role of the independent amount payer: ProcessingOrg or CounterParty.
- MARGIN_CALL_AUTO_RECALCULATE = True to recalculate the margin call when the fee is modified at the trade level, or false otherwise.

Margin Flow Approach

Calypso's Margin Flow Approach is used for managing Reg IM and IA together. Possible Agreement Types are VM, Netted (VM +IA), IM NR (Non-netted IA) and IM.



There are three methodologies for this: Distinct, Greater and Allocated.

- Distinct
- Greater Of: All Agreement Types can be used. If IM is set up as an Exposure Group, select and Exposure Group Application. For VM, no linking is required.
- Allocated: All Agreement Types can be used. For VM, no linking is required

The Threshold Application field in the Parties panel of the contract is used with the Margin Flow Approach. It should be set to IA Only for netted VM and IA contracts and for non-netted IA. It should be set to MTM + IA for IM and non-netted VM contracts.

Collateral Manager fields

Collateral Manager fields that correspond to these configurations are:

- IA Post Threshold - *IA–Threshold*.
- MFTA - Margin Flow Transfer Amount
  - Greater:

    VM&IA or IA contract = greater of the Margin Required and the IMIA offset

IM contract: If Abs(MFTA of IA) > Margin Required of IM contract then = -MFTA of Netted VM&IA contract + Required Margin IM contract; otherwise it is 0

- Allocated / VM&IA or IA contract:

  If Margin Required of IM contract < IA post threshold of IA contract, *-Margin Required of IM contract*

  If Margin Required of IM contract > IA post threshold of IA contract, *-IA Threshold of IA contract*

- **Revised IA** - on VM&IA or IA contracts, this is *IA post Threshold + MFTA*
- **Margin Required Post MFA** - on VM&IA or IA contracts = *Margin Required + MFTA*

The table below describes this is as well.

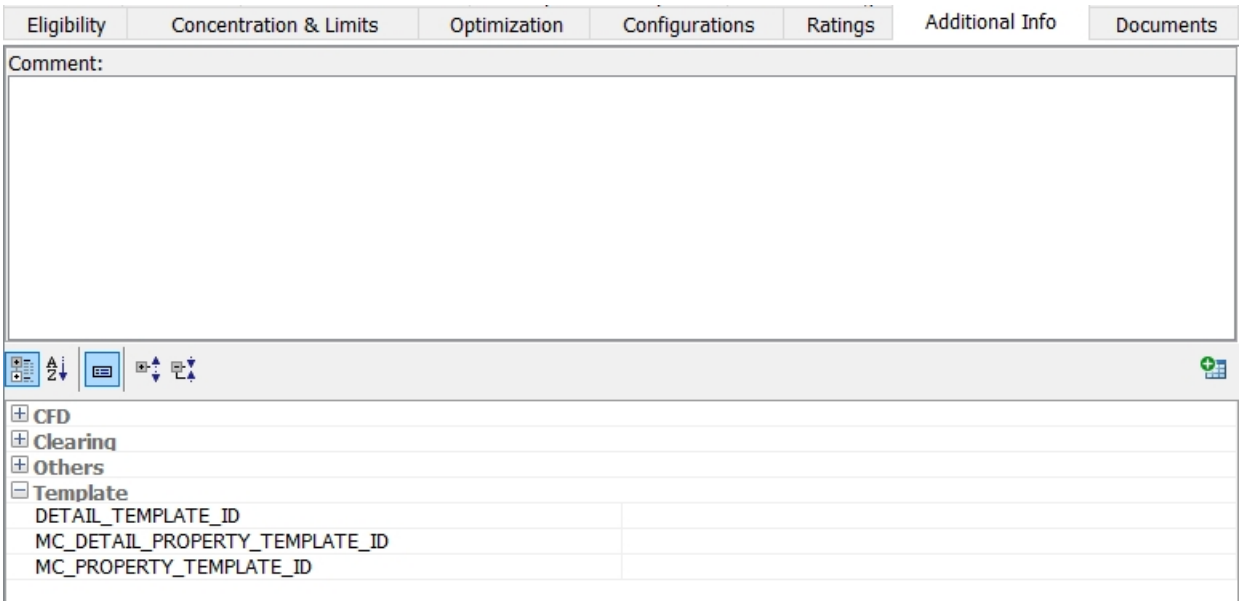
	Mcc Type	IA Post Threshold	MFTA	Revised IA	Margin Required Post MFA
Greater	IA	IA Threshold	–IA post Theshold	IA post Threshold + MFTA	Margin Required + MFTA
	IM	N/A	If abs value of MFTA VM&IA contract > Margin Required of IM contract, then =–MFTA of VM&IA contract + Required Margin IM contract Otherwise, 0	N/A	Margin Required + MFTA
Allocated	IM	N/A	N/A	N/A	N/A
	IA	IA – Threshold	If Margin Required of IM contract < IA post threshold of IA contract, then =–Margin Required of IM contract If Margin Required of IM contract > IA post threshold of I A contract, then =– IA Threshold of IA contract	IA post Threshold + MFTA	Margin Required + MFTA

The following additional Collateral Manager fields are not Margin Flow specific but are affected by its implementation:

- **Trade Margin** - IA post Threshold + MTM
- **Constituted Margin** - refers to new Margin Required (MFA)– Total Previous Margin
- **Return / New Margin** - To determine the return and new margin and their rounded values, the Margin Required post MFTA is compared with the Previous Margin

2.3.7 Additional Info

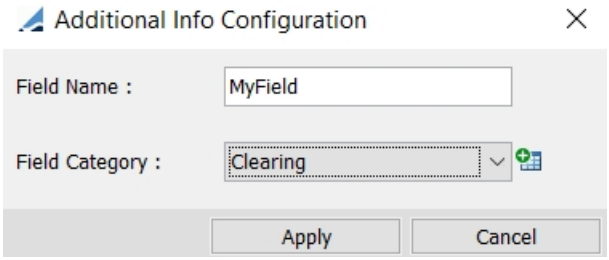
You can select the Additional Info panel to enter a comment for the contract and to set margin call contract attributes (fields).



Out-of-the-box attributes are described below.

By default the attributes are associated with a category: CFD, Template or Others.

You can create new fields and new categories by clicking  .



- Enter a field name.
- Click  to add a new category and select the new category.
- Click **Apply** when you are done.

Fields are added to the domain "mccAdditionalField".

The available values of a given field can be defined in the domain "mccAdditionalField.<field>".

Example: Domain "mccAdditionalField.MARGIN_TYPE" contains available values for the field MARGIN_TYPE.

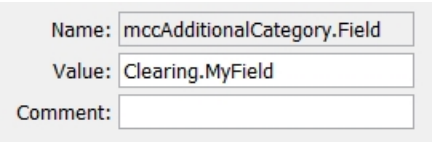
If such domain does not exist, the field is a free text field.

Categories are added to the domain "mccAdditionalCategory".

Mapping between new fields and new categories is added to the domain "mccAdditionalCategory.Field" in the form:

Value = <category>.<field>

Example:



If you want to move an existing field to a different category, you need to add it to the domain "mccAdditionalCategory.Field".

Example:

Value = Clearing.CCP will move the field CCP from the Others category to the Clearing Category.

Out-of-the-box Attributes (Fields)

Fields	Description
CFD	
BOTH_MARGIN	For CFD margin call contracts, if this is true with a negative variation margin (VM), NB will be negative. If this is false, with negative VM, NB will only show deposit annex (initial margin) with positive VM, NB will be positive.
NO_MARGIN	For CFD margin call contracts, if this is true, NB will show only the deposit annex (initial margin). If this is false and the variation margin is negative, NB will show only the deposit annex (initial margin). If the variation margin is positive, NB will be positive.
RST	For CFD margin call contracts. In this field, define the legal entity (short name) that the provider will pay the dividend to if the provider has a long position.
Template	
DETAIL_TEMPLATE_ID	Contains the ID of the default template to load the Margin Call Details report - It is automatically set, when you choose **Report > Link Template** to Contract in the Margin Call Details report.
MC_DETAIL_PROPERTY_TEMPLATE_ID	Contains the ID of the default template to load the Margin Call Property template.

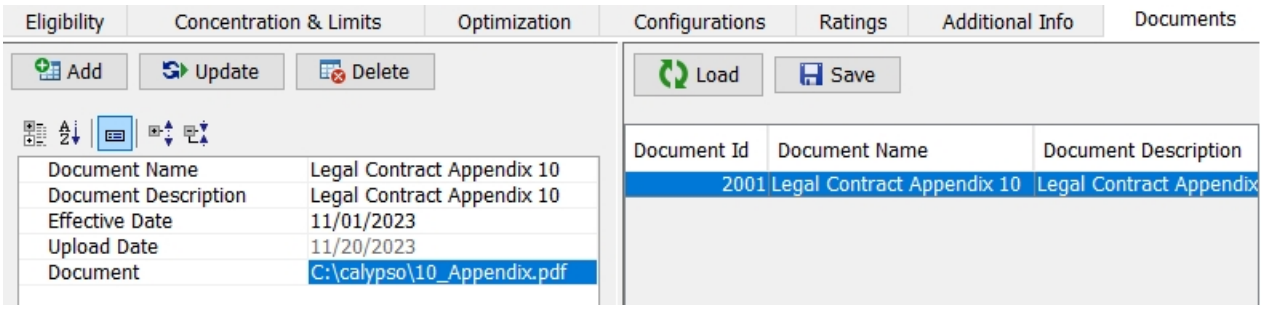
Fields	Description
MC_PROPERTY_TEMPLATE_ID	Contains the ID of the default template to load the Margin Call Details Property template.
Others	
ACCOUNT_NAME	Account name
ALWAYS_ROUND_RETURN_MARGIN	This must be set to True to perform rounding on a returned margin call. When this is set, the returned margin will be rounded to UP or DOWN as per the Rounding setup on the contract.
CCP	These attributes are related to the Clearing module. Refer to the Clearing documentation for more information.
CCP_ORIGIN_CODE	
CCP_REFERENCE	
CCP_SEGREGATION_ACCOUNT	
CLIENT_TRANSFERS	This setting decides if client transfers will impact the margin call position for that contract. The values can be: • *Exclude* (client transfers will be excluded from the Margin Call position except for Interest Bearing trades) • *Include as Client* (client transfers will be included in the Margin Call position as a Client position) • *Include as Internal* (client transfers will be included in the Margin Call position as an Internal position) The default is *Include as Client*
CVA_COLLATERAL_POLICY	This field selects the Collateral Policy used to assign a risky curve for calculation of proxied CVA pricer measure.
DISPUTE_COMMENT_MANDATORY	True if a dispute comment is mandatory when resolving a dispute. Default is false.
EXCLUDE_ACCOUNT_FROM_INTERACOUNTXFER	Domain name used to exclude a Margin Call contract from the Inter Account Transfer.
EXCLUDE_REPO_INTEREST	Set this to True to exclude interest on Repo trades from the margin calculation. Set to False if the Repo interest is to be included. Default is False.
EXCLUDE_SECLENDING_INTEREST	Select true to exclude interest on the SecLending trade from the margin calculation. Select false if you would like the SecLending interest to be included. Default is false.
HAIRCUT_ON_CLEAN_PRICE	When set to Yes, the haircut will be applied on the clean price instead of the dirty price. The default, or value for no entry is No.

Fields	Description
IGNORE_ALLOW_EX_DIVIDEND	When this is set to True, the ALLOW_EX_DIVIDEND pricing parameter is ignored. This is used when a GILT bond falls under the ex-dividend period.
IM_IMPORT_CURRENCY	Governs how margin numbers are imported, either in their requirement currency or the native currency.
INCLUDED_VM_FLOWS	Comma separated list of transfer types explicit to this Margin Call contract. If the list is empty, the contract will accept any transfer not listed on another of this LE's VM Margin Call contract.
INCLUDE_CLIENT_TRANSFERS	If set to true, Client Transfers will be included in the Margin Call position for the contract.
INTEREST_DAILY_ROUNDING	When set to true, daily interest amounts are rounded then summed. When not set, un-rounded daily interest is summed and then the total is rounded. This only applies to margin call calculation and not to interest bearing.
INTEREST_DATERULEONLY	Select true for interest to be computed based only on frequency of the date rule attached to the margin call contract regardless of positive or negative MTM moves. Select false for interest to be computed based on frequency UNLESS there is a switch in the MTM move.
IS_SETTLE_DATE_ACCRUAL_CALC	When set to true, the accrual of previous positions is not affected (shown in the Netted Positions panel), but the accrual will change in the Allocation panel (in Collateral Manager). Both the bond settle offset days and the contract settle offset will be considered. The calculation is val date + maximum (settle date offset of contract OR settle date offset of bond). The default setting is false or left blank.
RECON_INTEGRATION	Used to define integration type for reconciliation on margin call entries. This includes reconciliation of bilateral and cleared VM flows. FCM and internally calculated VM flows are shown in Collateral Manager to cross verify the final call amount. The choices for this field are *Collateral-Bilaterial-VM*, *Collateral-Cleared-VM-ETD* or *Collateral-Cleared-VM-OTC*. Based on the selected integration type, the system looks for the *Recon.Integration.<integration type>* domain to get the mandatory fields. ⓘ **NOTE: The Reconciliation panel is visible after you set Value = true for the domain value "UseCollateralManagerReconciliation" - its default value is set as false.** ▶ Please refer to the Calypso Reconciliation Service documentation for additional information.
Reinvest Coupon	Used for Corporate Action management. If set to true, then an additional

Fields	Description
	Corporate Action trade counterparty linked to the margin call contract will be created to impact the margin call position.
Reinvest Principal	This works similarly to Reinvest Coupon except it is for a redemption event in order to reinvest the principal.
RISK_CCY	If a currency is present in this field, the FX haircut will be based on the static data filter or static data filter tree. The static data filter or static data filter tree can contain cash and securities.
SLM	Stress Loss Margin When set to True, SLM PL measure (PL type as None) will be considered in calculation. When set to False, SLM PL measure is not considered. Note: The *Collateral.Multiplier* domain must contain the value of *Buffer* for the SLM attribute to work properly.
SEND_STATEMENT	
SEPARATE_VM_SETTLEMENT	A value of True designates this Margin Call contract as contributing to the Separate Settlements section of the Client statement. Any other value will associate the Margin Call contract with the Financial Summary section.
SFTR_REPORTING	Set to true if the contract is eligible for SFTR reporting. Refer to Calypso SFTR documentation for details on Securities Financing Transaction Regulation.
SLM	This attribute is used for Stress Loss Margin. The options are: • True - SLM PL measure (PL type as None) will be considered in calculation • False (or blank) - SLM PL measure is not considered NOTE: The Collateral.Multiplier domain must contain the value of Buffer for the SLM attribute to work properly.
USE_RECONCILIATION	Select true if Reconciliation should be used on the contract.
USE_RAW_PRICE	This attribute allows collateral valuation to be defined using the raw quote price. Set to False by default.
CVD_ROUNDING_DECIMAL	The amount set in this field is used to round all values in the Cover Distribution calculation. If the field is left blank, the rounding is done based on the Currency definition.

2.3.8 Documents

You can add documents to the margin call contract from the Documents panel.



Displaying Existing Documents

You can click **Load** on the right-hand side to load existing documents associated with the margin call contract.

You can double-click the document to open it.

Adding Documents

To add a document to the margin call contract, enter a document name, description and effective date then select the document from the Document field. Then click **Add**.

The document is added to the right-hand side.

Click **Save** to save the document. The document is saved to <user home>/AppData/Local/Temp.

You can double-click the document to open it.

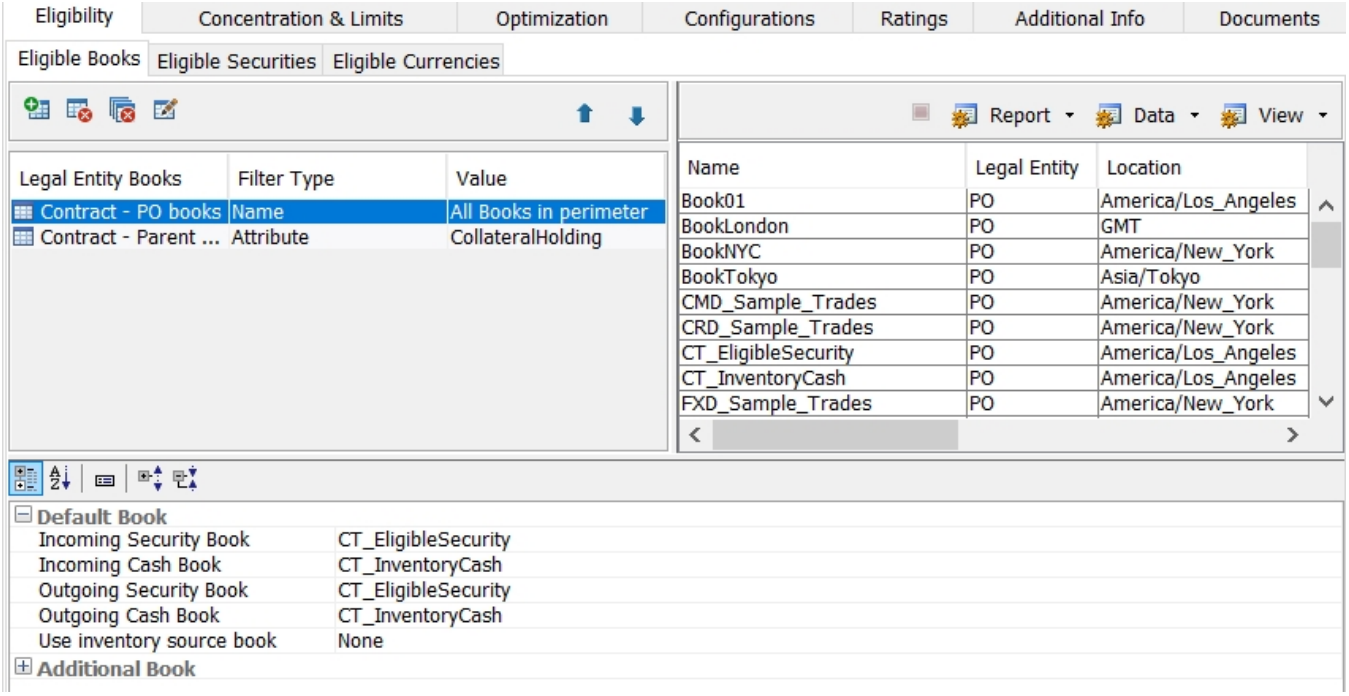
2.3.9 Eligibility

The Eligibility panel contains:

- Eligible Books - Select the books eligible for allocation
- Eligible Securities - Select the securities available as collateral
- Eligible Currencies - Mandatory for Cash margins. At least one deliverable currency must be defined

Eligible Books

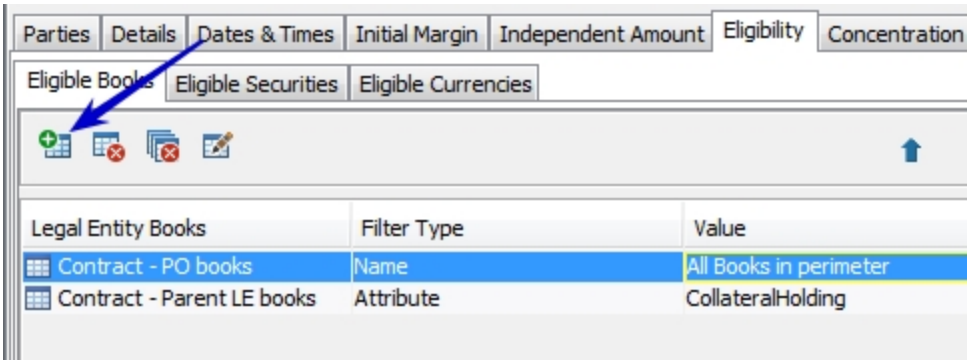
In the Eligible Books panel, the books eligible for allocation are defined. This is also where the default book is defined.



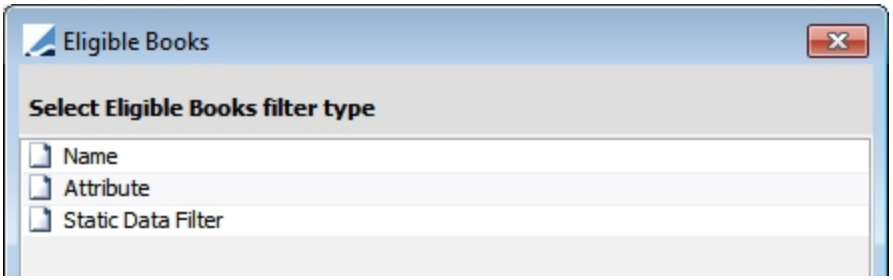
Defining books in this panel is a two step process. The first step requires you to designate which of the following books are eligible for allocation. The selection options are:

- Contract - PO books: Books belonging to the PO of the margin call contract
- Contract - Parent LE books: Books belonging to the parent legal entity of the contract
- Parent contract - PO books: Books belonging to the PO of the parent contract
- Parent contract - Parent LE books: Books belonging to the parent legal entity of the parent contract
- Sibling contracts - PO books: Books belonging to the PO of other children margin call contracts

Step 1 - Click  to add Legal Entity Books.

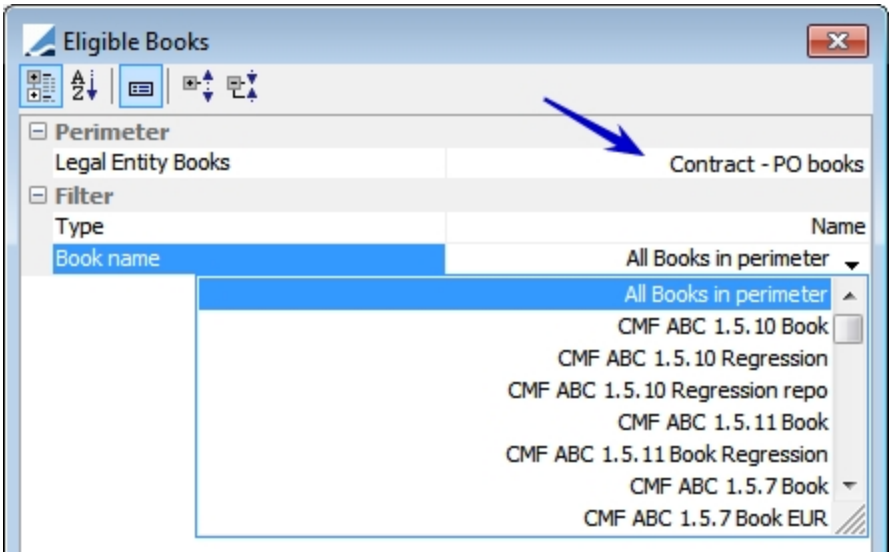


Step 2 - You may filter the eligible books by Name, Attribute or Static Data Filter or Static Data Filter Tree.



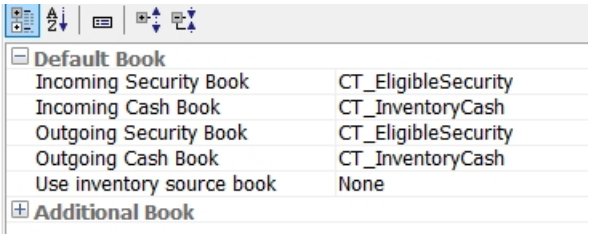
Step 3 - Choose the perimeter for the books in the Legal Entity Books field. The various perimeters are detailed above.

For type name, you may select all eligible books in the perimeter.



Step 4 - Specify the default book for Incoming Security, Incoming Cash, Outgoing Security and Outgoing Cash. It is also possible to designate that the inventory source book be used for cash, securities, both or not at all. A designation in this field overrides the default book selections.

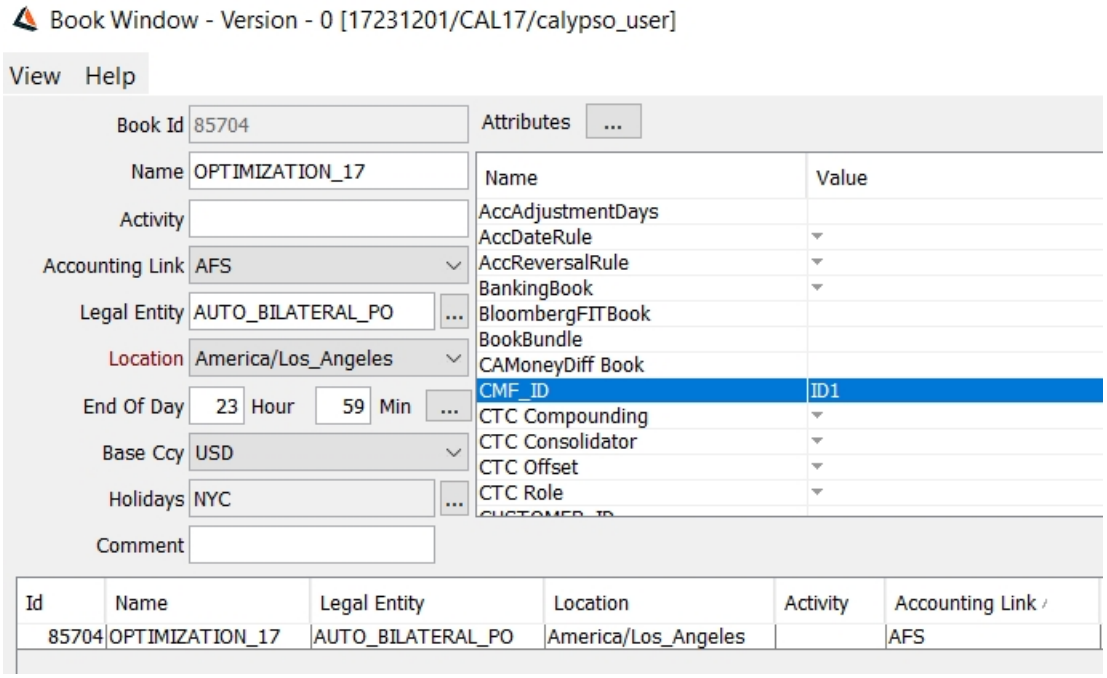
Only books that belong to the PO (or one of its parents), and have the attribute *CollateralHolding* set to True, are available for selection.



(LE_HOLDING_BOOK) is not used.

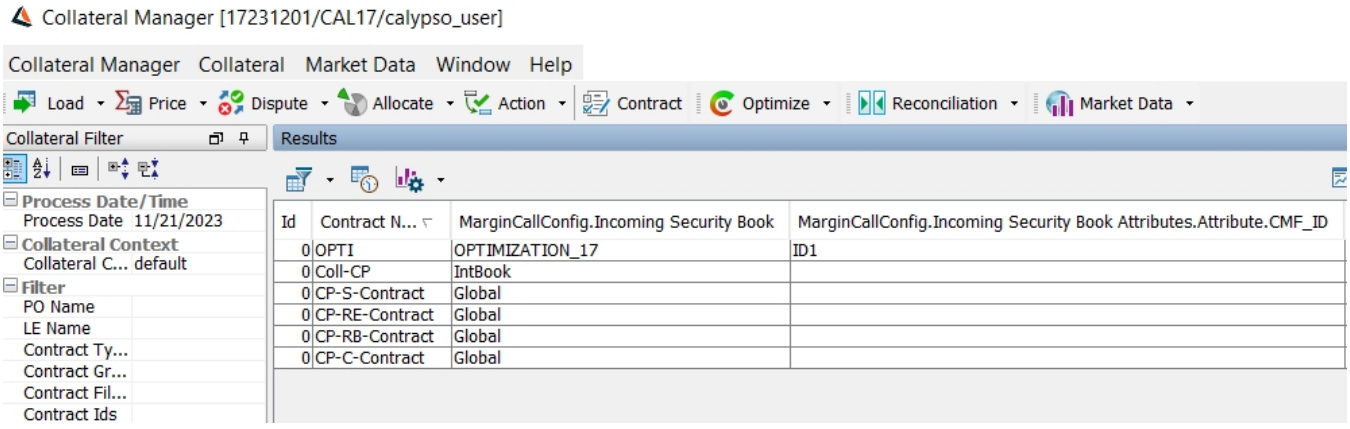
Eligible Book Attributes

Attributes chosen in the Book window of an eligible book can be added as columns in Collateral Manager and Collateral reports and notifications.



Book Attribute setting in Book Window

- Eligible Book attribute CMF_ID set as ID1



Column display in Collateral Manager Results

- Column MarginCallConfig.Incoming Security Book Attributes.Attribute.CMF_ID shows ID1.

Eligible Securities

For security margins, select the securities available as collateral.

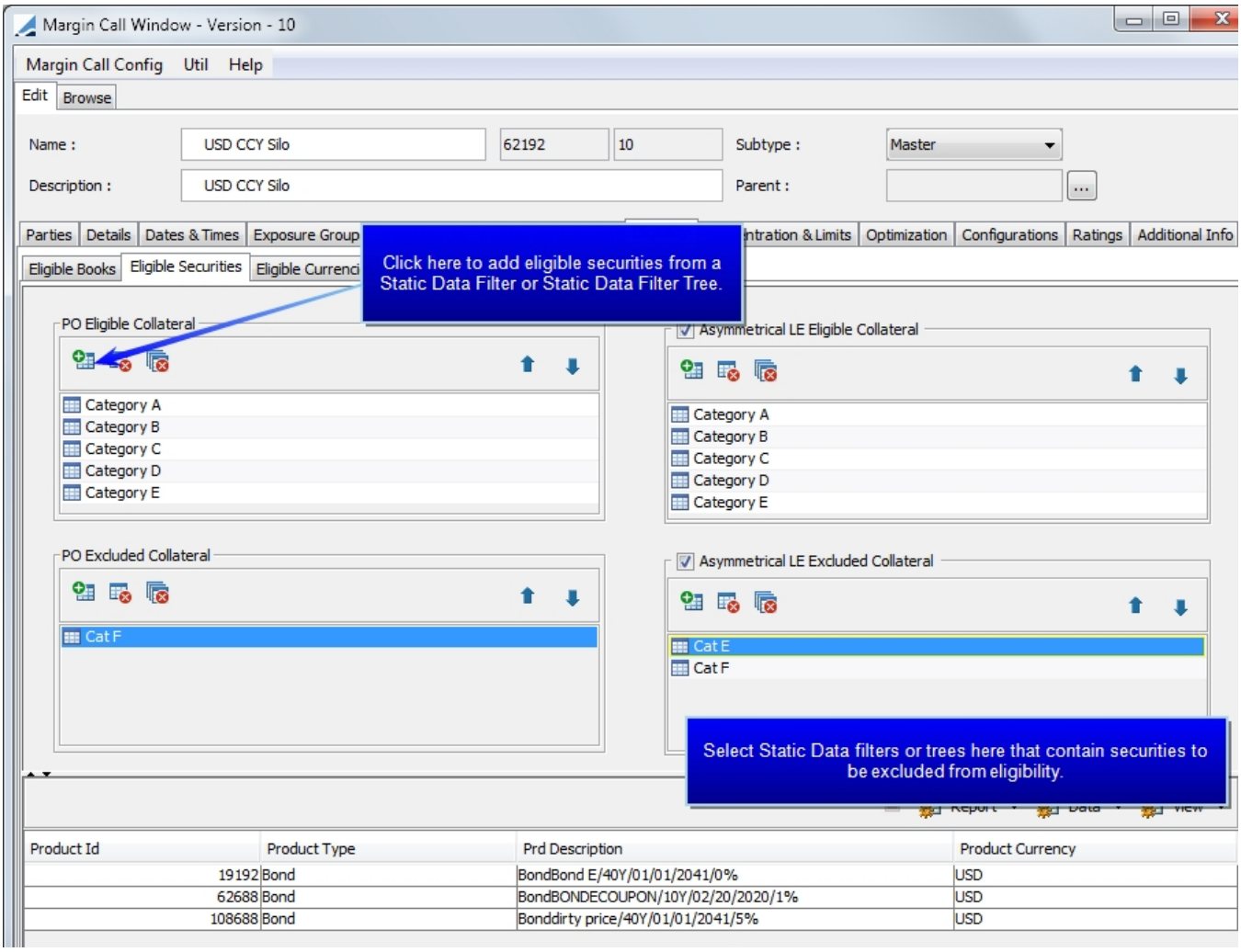
In order to specify eligible securities to use for collateral, you must have a static data filter or static data filter tree set up that covers all of the eligible securities that you would like to use for collateral. The Static Data Filter window is available through **Configurations > Filters > Static Data Filter**.

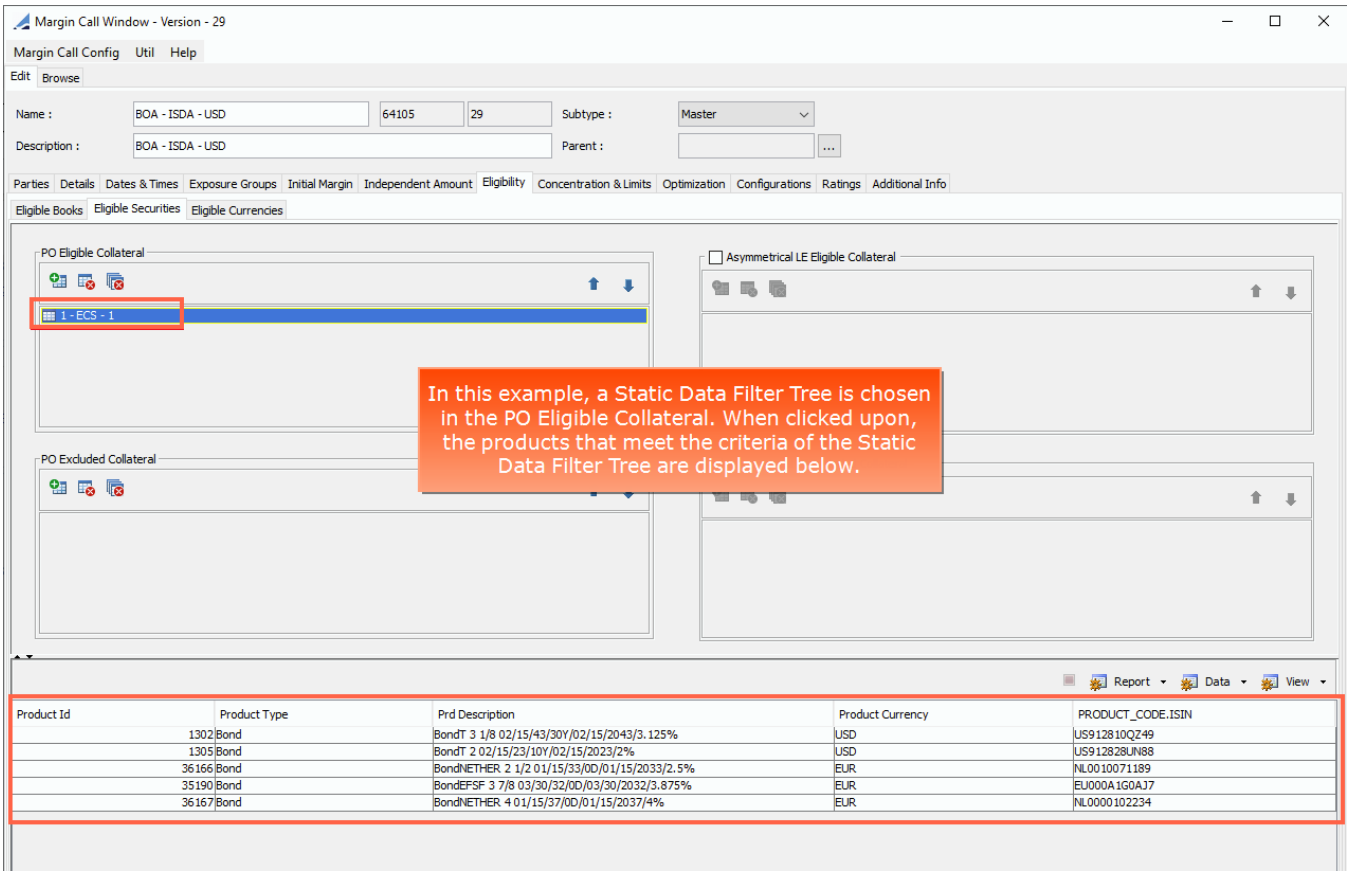
To view the Static Data Filter Tree window, in the Calypso Navigator, add a menu item for the Static Data Filter Tree window (menu action `refdata.StaticDataFilterTreeWindow`).

The static data filter must have a Product Type defined. If using a static data filter tree, the root static data filter must include Product Type in its criteria.

▶ See Static Data Filter for information on creating Static Data Filters and Static Data Filter Trees.

It is possible to flag the PO and LE to share the same Eligible Securities or to enable each to have their own list of Eligible Securities. For the PO and LE to have their own sets of securities, select the *Asymmetrical LE Eligible Collateral* flag and/or *Asymmetrical LE Excluded Collateral* flag.

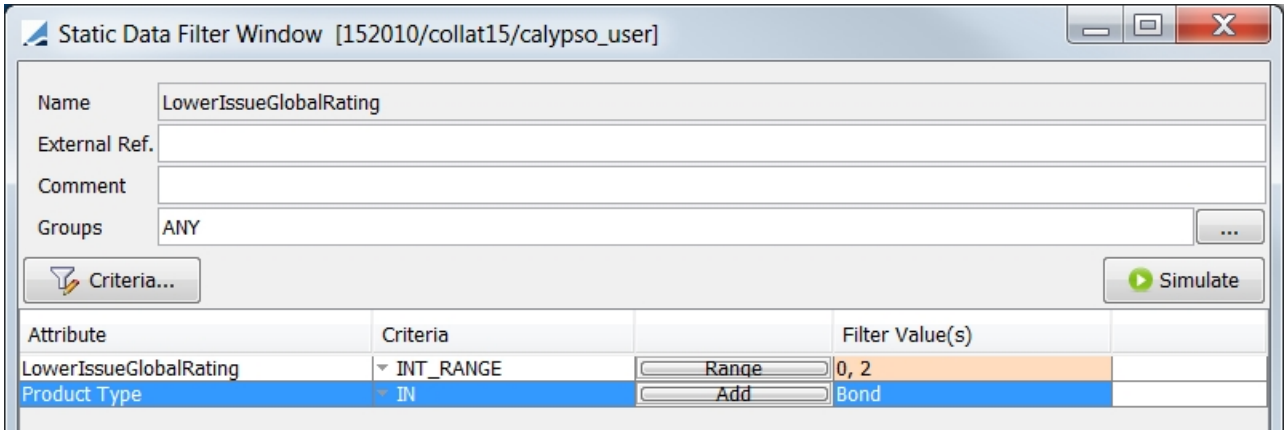

Margin Call Window - Version - 10
Margin Call Config
Util
Help
Edit
Browse
Name :
USD CCY Silo
62192
10
Subtype :
Master
Description :
USD CCY Silo
Parent :
Parties
Details
Dates & Times
Exposure Group
Optimization
Configurations
Ratings
Additional Info
Eligible Books
Eligible Securities
Click here to add eligible securities from a Static Data Filter or Static Data Filter Tree.
PO Eligible Collateral
Category A
Category B
Category C
Category D
Category E
Asymmetrical LE Eligible Collateral
Category A
Category B
Category C
Category D
Category E
PO Excluded Collateral
Cat F
Asymmetrical LE Excluded Collateral
Cat E
Cat F
Select Static Data filters or trees here that contain securities to be excluded from eligibility.
Product Id
Product Type
Prd Description
Product Currency
19192
Bond
BondBond E/40Y/01/01/2041/0%
USD
62688
Bond
BondBONDECOUPON/10Y/02/20/2020/1%
USD
108688
Bond
Bonddirty price/40Y/01/01/2041/5%
USD



Static Data Filter Tree chosen in PO Eligible Collateral

- It is possible to exclude products from eligibility using a static data filter or static data filter tree in the Excluded Collateral section. This exclusion overrides whatever is defined as eligible collateral above. For example, you may have a filter containing government bonds but wish to exclude bonds from certain countries.
- Additionally, an Exclusions column can be added to the Allocation window. A hard warning can be configured for this exclusion functionality using the *EnforceCollateralEligibilityHardWarning* access permission.
- There are three static data filters that can be used to improve filtering based on rating agencies. For the filters to work, the rating acceptance criteria must be the same for all agencies. For example, securities are eligible if rated at least AA- by S&P or Aa3 by Moody's. These static data filters can then be used in the **Margin Call Contract > Eligibility > Eligible Securities** definition. The filters are found in the Static Data Filter window under Product > Rating > Global Rating.
  - *LowerIssueGlobalRating*: Ratings must be within the range defined. If both ratings are provided, the lowest rating will be used. If a rating is missing or an 'ignored value', the available rating is used.
  - *LowerIssuerGlobalRating*: Ratings must be within the range defined. If both ratings are provided, the lowest rating will be used. If a rating is missing or an 'ignored value', the available rating is used.
  - *LowerIssueThenIssuerGlobalRating*: The system first refers to the issue rating. If the issue rating is within the range defined, it is accepted. If both are provided, the system refers to the lower rating. If only one is provided, the available rating is used

The system only refers to the issuer rating if there is no issue rating or there is an 'ignored rating'. When referring to the issuer, the rating must be within the range defined for the filter to be accepted. If both are provided, the system refers to the lower rating. If only one is provided, the available rating is used.

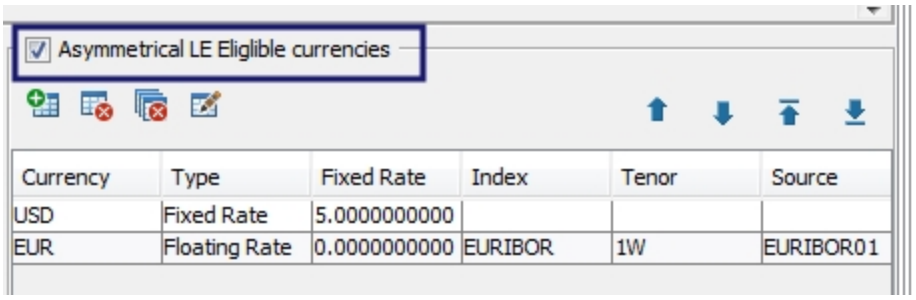


In this case, the contract accepts bonds with a Global Rating Valule of 0, 1 or 2 and the system accepts the lowest rating.

NOTE: When selecting a static data filter for a security, the filter should be associated with the group ANY or Margin Call.

Eligible Currencies

It is possible to flag the PO and LE to share the same Eligible Currencies or to enable each to have their own list of Eligible Currencies. For the PO and LE to have their own sets of currencies, select the *Asymmetrical LE Eligible currencies* flag.



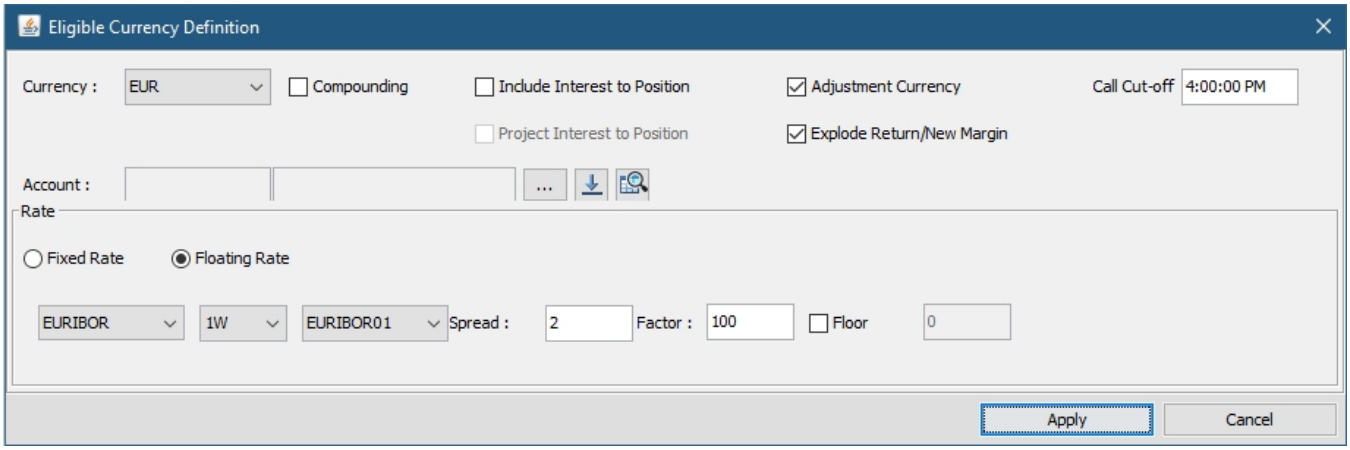
[NOTE: For cash margins, you MUST define at least one Eligible Currency]

Fields	Description
Contract Currency	

Fields	Description
Base Currency	Select the default currency for margin calls.
Collateral Policy	The Collateral Policy is not used in the valuation of margin call contracts. It is used when pricing trades associated with a margin call contract for selecting the appropriate discount curve. Collateral policies are defined in the domain *CollateralPolicy*. Select a policy as needed. In the Pricer Configuration, curves can be defined by collateral policy. Please refer to Calypso Collateral Pricing documentation for details.
Settlement Cut-Off	Defines the time frame (when compared to currency Settlement Cut-Off time) within which a warning should appear when the user is saving a margin call trade with that currency. Set time in minutes. To allow for the Trade Date and Settlement date to be the same date, set this to zero.
Minimum Repay Threshold *(Cover Distribution)*	This threshold is used in conjunction with the Auto Repayment flag on the Eligible Currency Definition window. This threshold value is expressed in the contract currency and each currency balance is converted to the contract currency and compared against this threshold when determining if Auto Repayment is to be executed. This is used only for final distributions in Cover Distribution.
Interest	
Interest Type	Define the Interest Payment Type
Interest Date Rule	If the interest is to be calculated on a regular basis, click ... to select a date rule. Date rules are defined using **Configuration > Definitions > Date Rule Definitions**.
Interest Date Rule Only	Select if you want the interest to be compounded only based on the frequency defined above. De-select if you want to compute interest based on frequency , unless there is a switch of sign in the mark to market move.
Roll Interest to Principal	Check to roll the interest into the margin call position. It creates a position of class *Margin_Call* and type *Rolled_Interest* for the computed interest. This *Rolled_Interest* position is added to the computation of the exposure on the following day. Note: To see rolled interest reflected on Netted Positions and Global Required Margin, add the value ROLLED_INTEREST to the *flowType* domain.
Cash Margin Call Account	If you select this checkbox and Orderer Role = Client, the Cash margin call will also be generated to a dedicated account, allowing separate interest payments. ▶ See Paying Interest Separately for complete setup details.
Security Margin Call Account	If you select Cash Margin Call Account, and Orderer Role = Client, the Security margin call will also be generated to a dedicated account, allowing separate interest payments. This setting should NOT be selected if using MT569 import method to generate margin calls. ▶ See Paying Interest Separately for complete setup details.

Fields	Description
Orderer Role	This is used to set the role (client or customer) of the legal entity in the case of Cash Margin Call Account and/or Security Margin Call Account is selected.

To add a deliverable currency, select  in the Eligible Currencies portion at the bottom of the window to display the Eligible Currency Definition window.

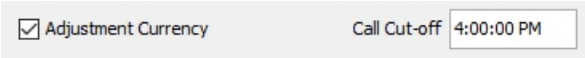


Select the desired information and click **Apply**. The fields of this window are described below.

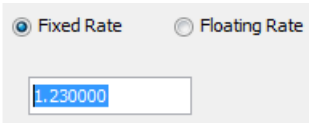
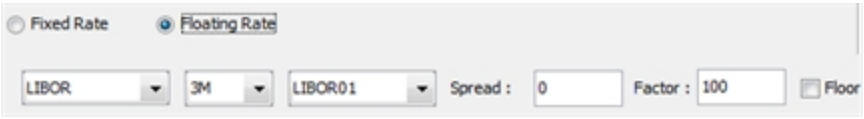
Repeat as needed for other deliverable currencies. They will be available for selection when computing margin calls.

NOTE: To modify a deliverable currency, select a currency, and either double-click on the row or click  . Modify the fields appropriately and click **Apply**.

Fields	Description
Currency	Select a deliverable currency, and specify how the interest on margin calls in this currency will be calculated. It is mandatory to specify at least one deliverable currency. Note that it is optional to specify how interest on margin calls is computed, in particular if you want to pay the interest separately from the margin calls. ▶ See Paying Interest Separately for details. ***Compounding*** Check the "Compounding" checkbox to compound the interest. ***Include Interest to Position*** Check the "Include Interest to Position" checkbox to include the interest on cash margins in the Margin Call position. Interest is computed on the Actual position. ***Project Interest to Position*** This only applies if "Include Interest to Position" is checked.

Fields	Description
	In this case, the interest added to the position is computed on the Theoretical position rather than the Actual position. ***Adjustment Currency*** When checked, the margin calls are calculated in the corresponding currency by default. If it is not checked for any currency, the margin calls have to be created manually using **Margin Call > Allocation** in the Margin Call Manager. When an Adjustment Currency is specified, the Cash Margin column will populate in the Margin Call Manager with the adjusted currency amount. You must also be sure that the *AutoAdjust* workflow rule is assigned to the appropriate workflow action. Example: PRICED_PAY - AGREE_EXPOSURE - EXPOSURE_AGREED Both the workflow rule and the "Adjustment Currency" checkbox are necessary for the currency amount to be adjusted automatically. ***Call Cut-off*** The *Call Cut-off* field is available only if the *Adjustment Currency* checkbox is checked. A cutoff time should be entered.  The cutoff is applied to the adjustment currency. Because multiple currencies can be flagged as an Adjustment Currency, the currencies are allocated based on the order in which they are defined in the Eligible Currencies panel and whether the first currency in the list has a holiday. If the first currency in the list has a holiday, a call is generated with the next currency in the list. If only one currency in the list has a holiday, a call is generated with the next currency in the list. If only one currency is an Adjustment Currency and it has a holiday, the margin call is generated on the next business day. If a currency has Adjustment Currency selected but no cutoff time, it is only considered for a holiday scenario. For example: GBP ccy, adjustment ccy - YES, cutoff time 4pm EUR ccy, adjustment ccy - YES, cutoff time 6pm USD ccy, adjustment ccy - YES, cutoff time 5pm JPY ccy, adjusment ccy - YES, cutoff time NULL If it is before 4pm, GBP is used.

Fields	Description
	If it is after 4pm but before 5pm, USD is used. If it is after 5pm but before 6pm, EUR is used. If it after 6pm, a call is generated in GBP for tomorrow unless tomorrow is a holiday for GBP. If that is the case, it is generated in EUR because it is the second currency in the list. JPY would not be considered at all since it has no time. However, it would be considered if the first 3 currencies were on holiday. ***Explode Return/New Margin*** Provides the ability to explode the New Margin and Return Margin into two different allocations. If set to true, the system generates allocations as described below. This checkbox is available only if the Adjustment Currency checkbox is selected. The following behavior is for no dispute, dispute/partially agreed or fully disputed/resolved by PO: • *New Margin* – A cash allocation is created with the type Margin using the New Margin value. If New Margin > 0, the direction is Receive. If New Margin < 0, the direction is Pay. • *Return Margin* – A cash allocation should be created with the type Return using the Returned Margin value. If Return Margin is > 0, the direction is Receive. If Return Margin is < 0, the direction is Pay. • *New Margin + Return Margin* – There are two cash allocations. A cash allocation is created with the type Margin using the New Margin value. If New Margin > 0, direction is Receive. If New Margin < 0, direction is Pay. Also, a cash allocation is created with the type Return using the Return Margin. If the Return Margin > 0, the direction is Receive. If the Return Margin is < 0, the direction the direction is Pay. There are three workflows used to accommodate the three auto adjust options. These workflows should use a full STP workflow. When using these workflows rules, there is no need to open the Allocation window. The Margin Call entry goes through the workflow transition anatomically. The workflow rules are: *AutoAdjust*, *AutoReturn* and *AutoReturnAndAdjust*. These rules should be added to a transitions such as: EXPOSURE_AGREED - ALLOCATE - ALLOCATED ALLOCATED - VALIDATE - VALIDATED **NOTE: Currently, the Auto Adjustment feature is not available for dispute cases. This functionality will be available in a future release.** ***Auto Repayment*** This feature is available for Clearing Member Configuration. Select this option to repay excess cash collateral in the deposit contract for any deposit currency which is above the Minimum Repay Threshold. This is applicable for Final Distribution only. ***Fixed Rate***

Fields	Description
	Select the Fixed Rate radio button and enter a rate for the currency that will be used to calculate interest on the margin calls.  ***Floating Rate***  For a Floating Rate, select the radio button and choose the reference index, tenor, and source. Enter the spread and factor if needed.

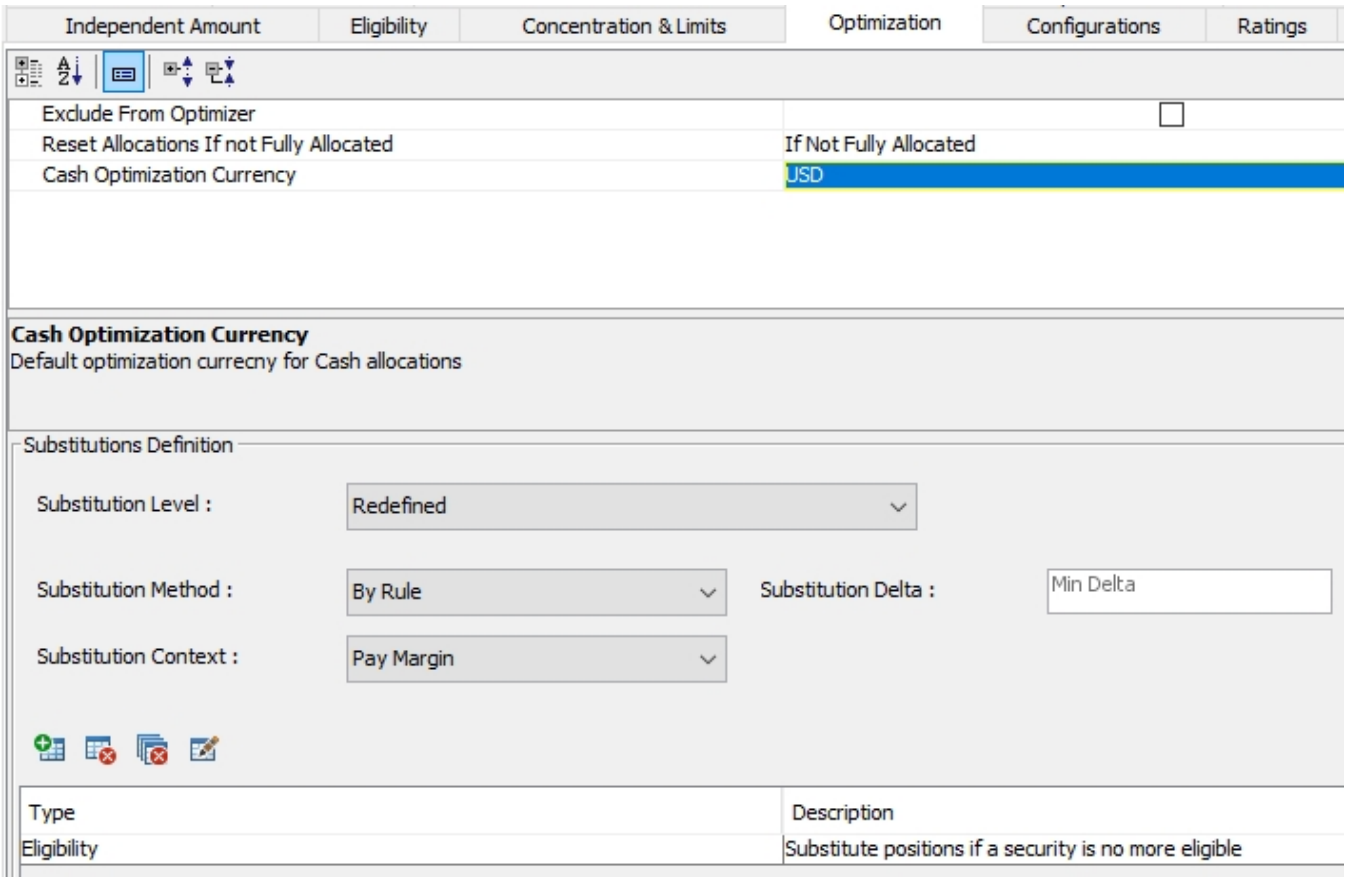
2.3.10 Concentration & Limits

This panel allows you to add Concentration Rules to the Margin Call or Clearing Member Contract.

▶ See Concentration Limits and Margin Call Contracts for detailed information on entering information here.

2.3.11 Optimization

The Optimization panel allows you to designate certain functions related to the optimization of collateral, which is done in the Collateral Manager.



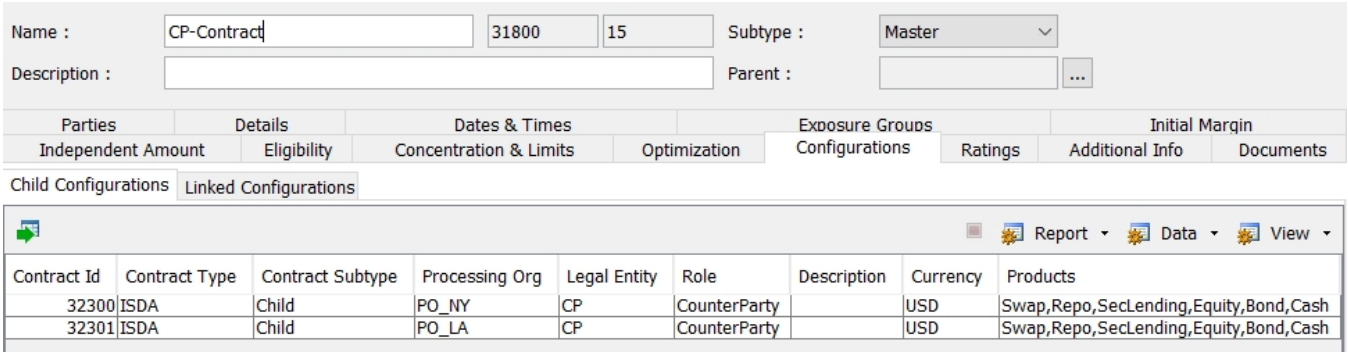
Fields	Description
Exclude From Optimizer	Select this check box to exclude the contract from optimization.
Reset Allocations If Not Fully Allocated	This defines whether the optimizer can partially allocate margin call contracts or not. It affects contracts that accept SECURITY only. This may also be set as an Optimization Constraint. The options are: • Never - The optimizer will be allowed to do partial allocations of contracts • If Not Fully Allocated - The optimizer resets allocations (does not suggest any allocations) if the contract is not fully allocated due to insufficient inventory (i.e. there is an remaining margin)
Cash Optimization Currency	When gathering a list of eligible assets for a contract, when fetching eligible cash, the system checks whether an optimization currency is defined. If there is, then the optimizer behaves as if this is the only eligible currency so that it will use this currency over another currency with a lower weight in the Target configuration when there is no non-cash collateral available, or as the adjustment currency when filling the remaining margin. The currencies listed are the LE eligible currencies.

Fields	Description
Substitution Level	Select the level of substitution desired for this contract. You may choose to either inherit the substitution method from the Optimization configuration, or define a method to be used specifically for this contract.
Substitution Method	When *Redefined* is selected as the Substitution Level, this drop-down box is displayed. You may select either *Never*, *By Rule* or *Always*. Refer to optimization substitution for more information. When *By Rule* is selected, designate the rule or rules in the area at the bottom of the window.
Substitution Context	In relation to either the *By Rule* or *Always* Substitution Methods, select to substitute either when the contract is paying a margin OR paying or receiving a margin.

2.3.12 Configurations

Child Configurations

Within this panel contains the Child Configurations panel. This panel displays all of the child contracts associated with currently selected parent contract. You may double-click on the child contract to open its contract window.



The parent contract is displayed in the Name field and the child contracts are displayed in Child Configurations

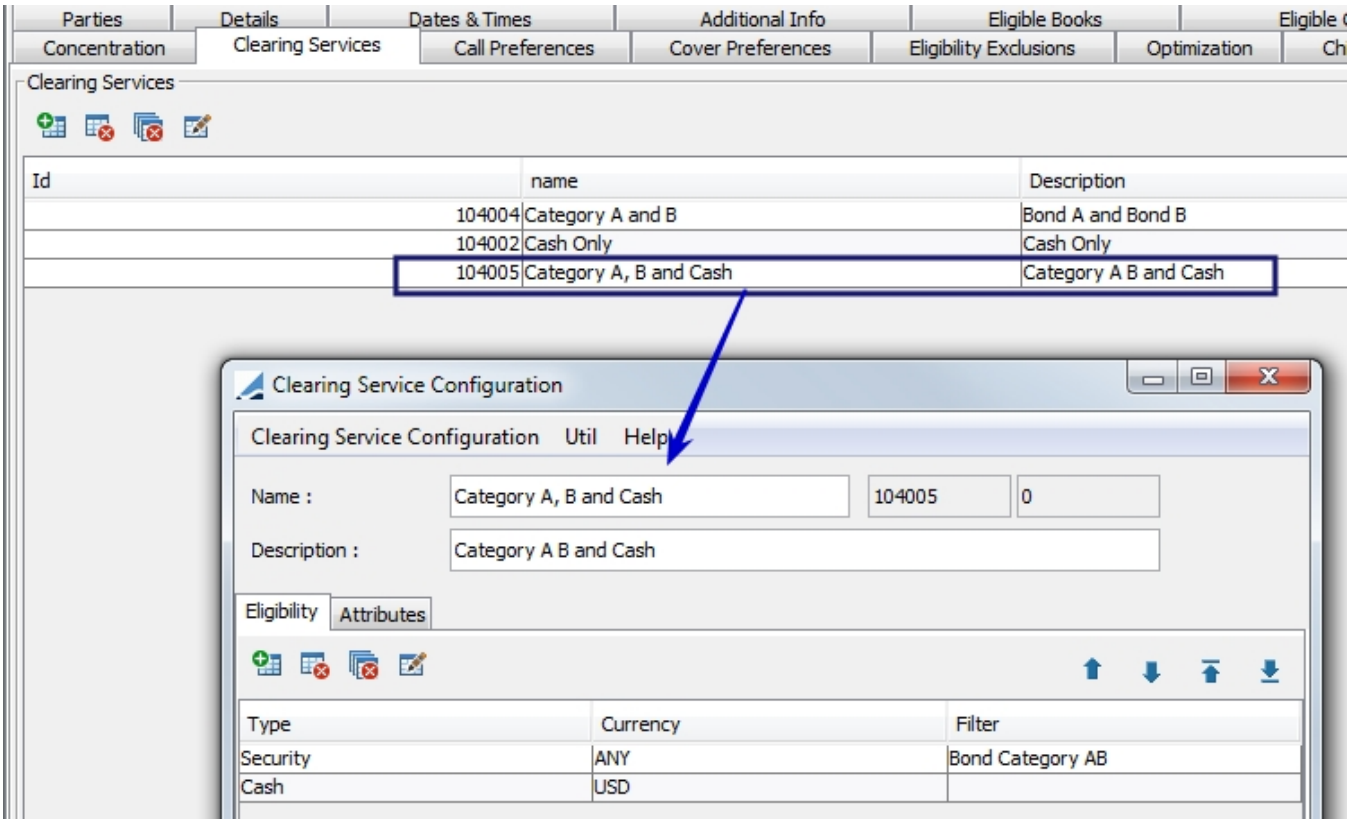
Linked Configurations

This panel is used for IM/VM and VM/IM movement of excess collateral between accounts. For details on how this panel is used, refer to the Calypso Clearing documentation.

2.3.13 Clearing Services

This panel is used to define the subscriptions to the clearing services for Cover Distribution. Clearing services on the deposit contract are used to determine eligibility for lodging assets. It is not necessary to define clearing services on the child liability contract because the eligibility for any exposure is defined by the liability group to which it belongs. Each liability group specifies the applicable clearing services, and each clearing service contains an eligibility set.

This is available in the Clearing Member contract only.

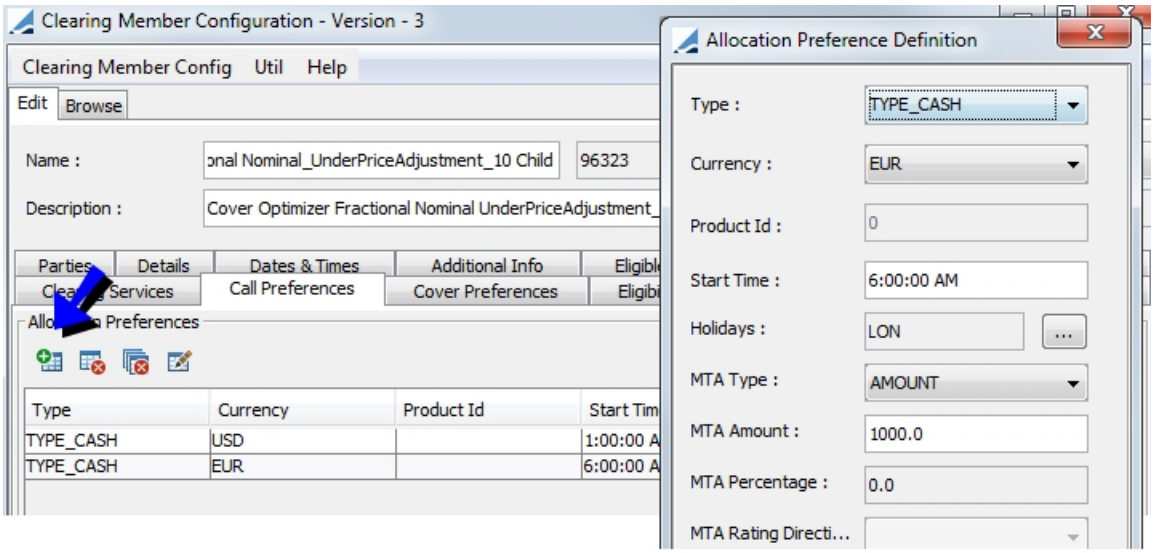


Category A, B and Cash clearing service can take securities filtered with a specified static data filter and USD cash

- Click  to add a new clearing service.
- Excess Buffer can be set up as a clearing service.
- In the Clearing Service Configuration window, designate the eligibility requirements and attributes associated with the clearing service.

2.3.14 Call Preferences

In this panel, you can define the preferred assets to use when there is a margin call necessary because there is not enough deposit available to cover the liability in a cover distribution situation. This is available in the Clearing Member contract only for Deposit contracts. This type of designation allows you to specify the type of call that you desire at a designated time.



» Click  to create a new Call Preference and enter the fields below.

» Then click **Apply**.

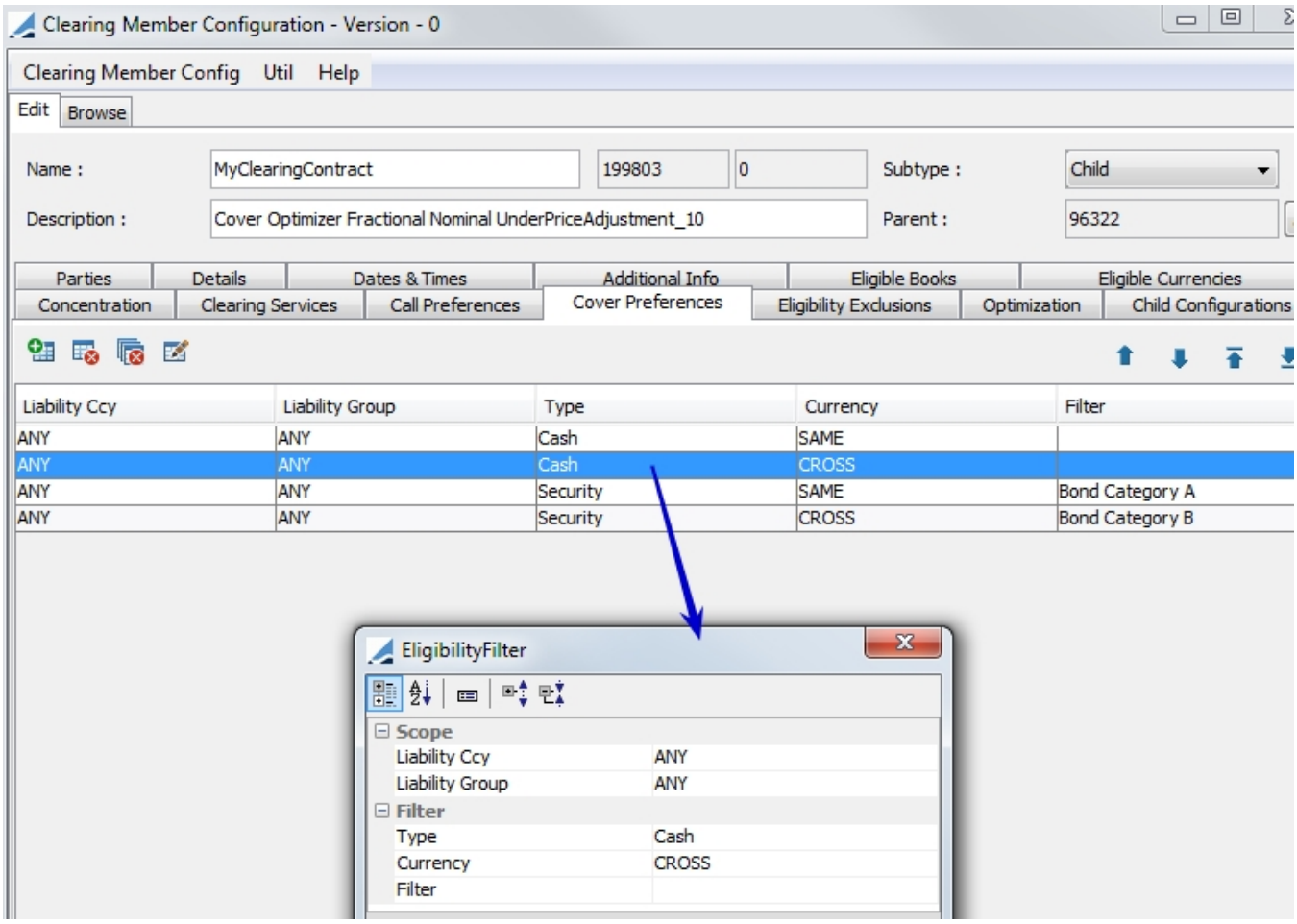
Field	Description
Type	Select either TYPE_CASH or TYPE_TRIPARTY
Currency	If TYPE_CASH is selected, specify the currency of the call.
Product Id	System defined id number of the definition in the case of TYPE_CASH. For TYPE_TRIPARTY, enter the product id, as they are modeled as bonds.
Start Time	The earliest time that the call can occur
Holidays	Specify observed holidays, automatically populates default holiday calendar for the designated Currency.
MTA Type	Minimum transfer amount type. • AMOUNT — The minimum transfer amount is absolute. Enter the minimum transfer amount in the Amount field. To always calculate a margin call, select AMOUNT and enter 0 in the Amount field. When Amount is selected, select the currency of the transfer amount in the Currency field if you wish it to be something other than the base currency which is designated in the Eligible Currencies panel. • CREDIT RATING — The minimum transfer amount (MTA) is based on credit ratings prior to conversion to the Global Rating feature. Seslect this option until you have converted your data over to the Global Rating Configuration.

Field	Description
	Select **Util > View Previous Margin Call Credit Ratings** to view the Margin Call Credit Rating Threshold Report. You are not able to make any changes to this report. It is from the report that you can access the conversion tool to allow you to convert data to the Global Rating Configuration. For details refer to Conversion to Global Rating. • GLOBAL RATING — The minimum transfer amount (MTA) is based on credit ratings. [Note: You first need to save the contract before you can setup MTAs on credit ratings] Click **Ratings** at the top of the panel to specify the threshold based on credit ratings. This is done through the Margin Call Credit Rating Configuration window. For details on configuring credit ratings, refer to Margin Call Credit Rating Configuration. • MC_PERCENT — The MTA is a percentage of the total margin call. Enter the percent in the Percentage field. • PERCENT — The MTA is a percentage of the threshold amount. Enter the percentage in the Percentage field. Depending on the Type selection, enter either an Amount, Currency, Percentage and /or Rating. The selections for Rating are HIGHER or LOWER. This designates whether the higher or lower credit rating will be used in the case where the legal entity is rated differently by one or more of the applicable agencies.
MTA Amount	The minimum transfer amount (MTA) is the amount that must be reached above the threshold before a margin call can actually take place.

2.3.15 Cover Preferences

In this panel, you can designate which liabilities to cover in which order. These cover preferences can then be called upon in the Collateral Allocation Rule designation in the Optimization configuration.

This is available in the Clearing Member contract only for Child contracts.



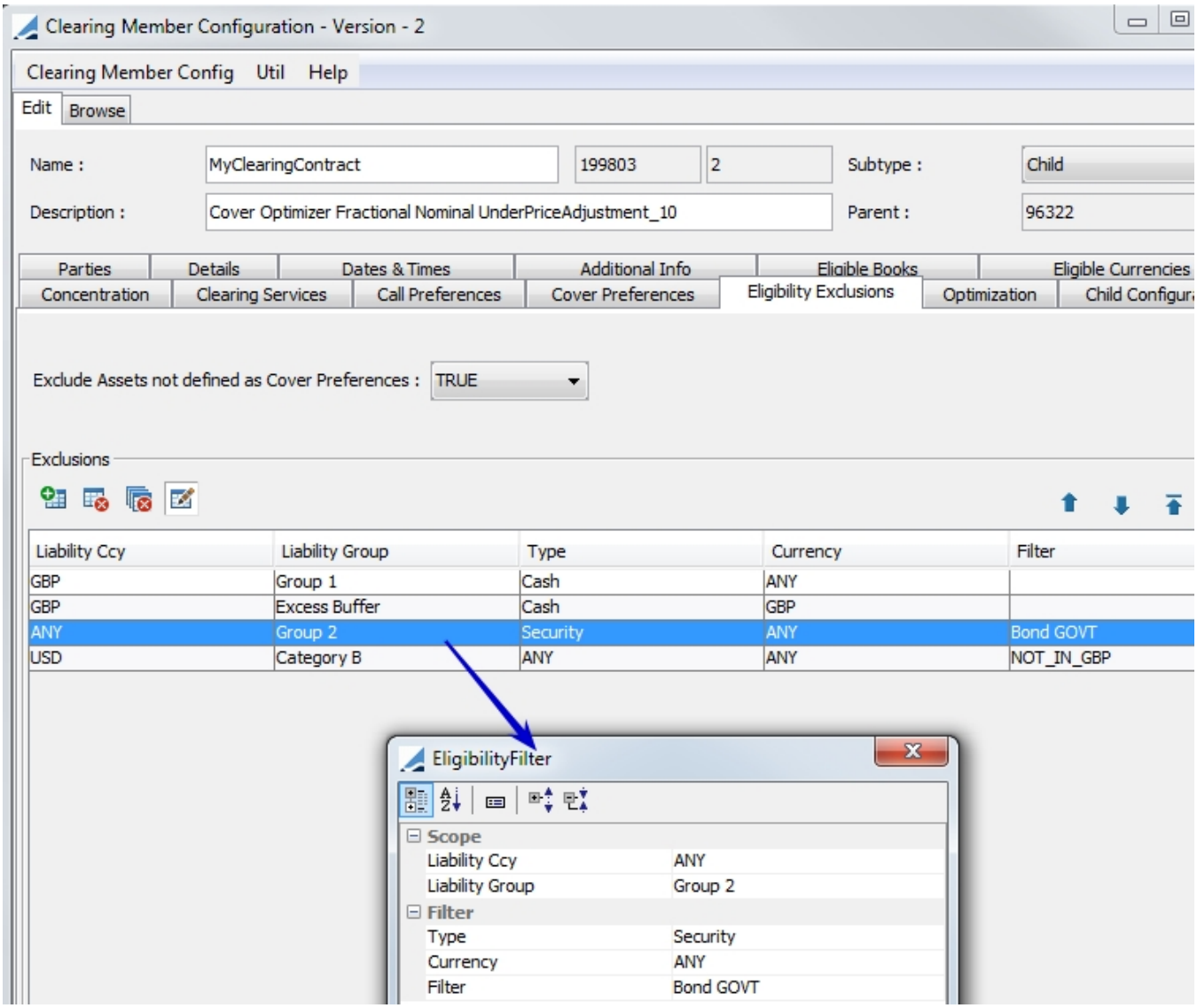
In the above example, cash in the same currency as the liability and any liability group will be used first to cover. Then, cash in any other currency and any liability group. After that, securities will be used in the same currency as the liability, followed by securities in any other currency.

2.3.16 Eligibility Exclusions

The Eligibility Exclusions panel enables you to specify what type of cash or security that CANNOT be used to cover a liability. In this panel, you are able to specify the Liability Currency, Liability Group, Liability Type, Cover Currency as well as a Static Data Filter or Static Data Filter Tree.

▶ See Static Data Filter for information on creating Static Data Filters and Static Data Filter Trees.

You are also able to specify if assets should be excluded if they are not defined as Cover Preferences.



In the above example:

- For the Liability Currency GBP and for the Liability Group *Group 1*, Cash is not eligible to be used to cover
- For the Liability Currency GBP and for the Liability Group *ExcessBuffer*, GBP is not able to be used to cover
- For any Liability Currency in the Liability Group *Group 2*, government bonds are not eligible to be used to cover.
- For the Liability Currency USD and the Liability Group *Category B*, GBP is the only currency eligible.

2.3.17 Ratings

Credit Rating configuration is completed through the Ratings panel. For detailed information on this panel, please refer to Margin Call Credit Rating.

This panel is used in bilateral contracts only.

2.4 Util Menu

Below is a description of the menu options in the Util window.

Collateral Context

Displays the Collateral Context window, which allows you to add product specific columns that are accessible in the Underlying panel of Collateral Manager.

Concentration Rule

A concentration rule is a group of concentration limits.Select this option to display the Concentration Rule Configuration window.

Haircut Rule

The Haircut Rule window allows you to define rules to apply haircut percentages based on security maturities. Select this option to display the Haircut Rule window. for more information on this window, refer to the Trading Env documentation.

Global Rating Configuration

Displays the MC Rating Config window. In this window, you can create margin call credit rating configurations as well as set global rating configurations which can include multiple credit rating agencies.

Optimization Configuration

The collateral optimization function of Calypso allows you to allocate collateral payment by making the best use of the inventory. Select this option to display the Collateral Optimization Configuration window.

Collateral Exposure Context

The Collateral Exposure portion of Calypso's Collateral Management module allows you to use trades for collateral management purposes which have been created or processed in a system other than Calypso. Select this menu option to display the Collateral Exposure Context window.

View Previous Margin Call Credit Ratings

This displays a window that allows you to migrate to the Global Credit Rating configuration, if you have a credit rating configuration in a previous version.

Clearing Service Configuration

Eligibility for securities is represented at a clearing service level. With the clearing service configuration, you may have different eligibility sets for different clearing services for different markets within the same contract.

Liability Group Configuration

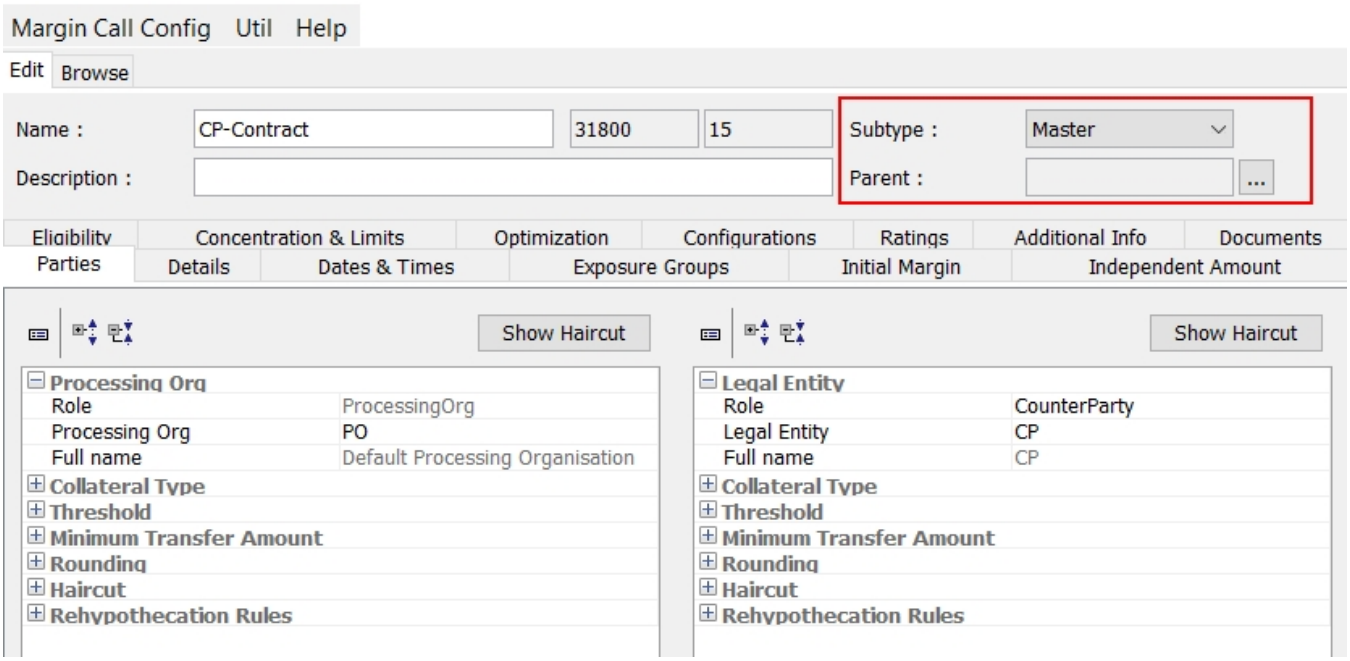
Liability groups are collections of liabilities that have been combined together for cover distribution purposes.

2.5 Setting up Parent/Child Margin Call Contracts

Below is an illustration of how the Parent / Child relationship works with margin call contracts.

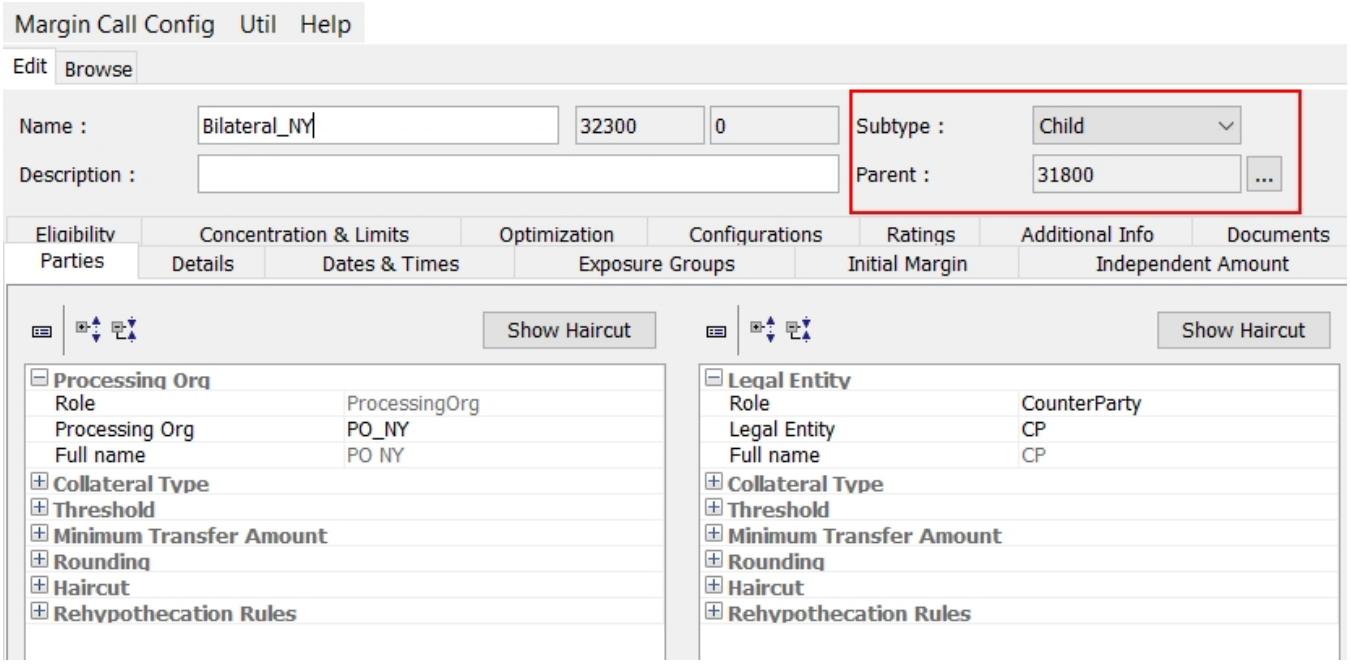
The legal entities used in this example are: PO (parent processing org), PO_NY and PO_LA (children) as well as CP (counterparty).

Step 1 - A parent contract has been created using the two parent legal entities. This contract will define the behavior of the margin call.



Step 2 - A new contract has been created, this time using the child processing org (PO_NY).

Before adding any details to this contract, select the parent contract from the Parent field.

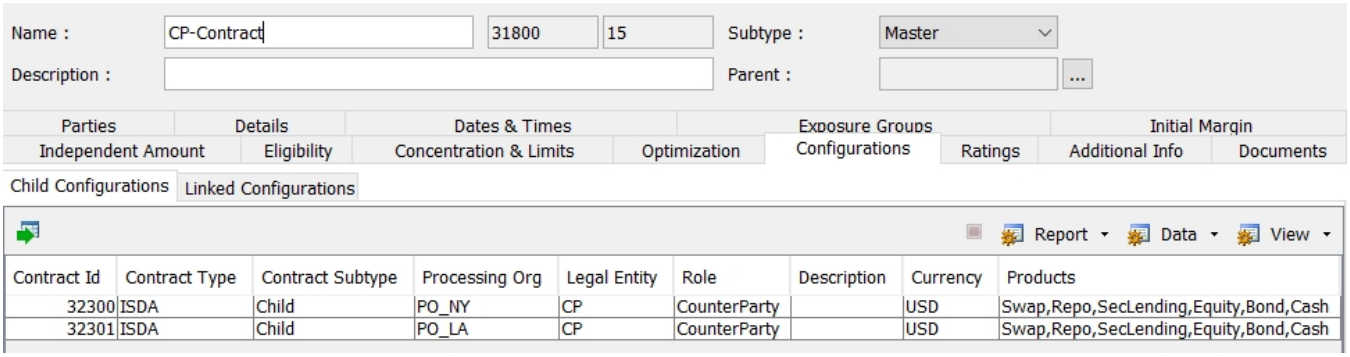


The Processing Org is the child PO

A contract was also created with child processing org PO_LA .

After the parent contract is selected, most of the information on the child contract can still be edited and differ from the parent contract in many ways.

Step 3 - In the Configurations > Child Configurations panel of the parent contract, you are able to view all of the child contracts of the parent.

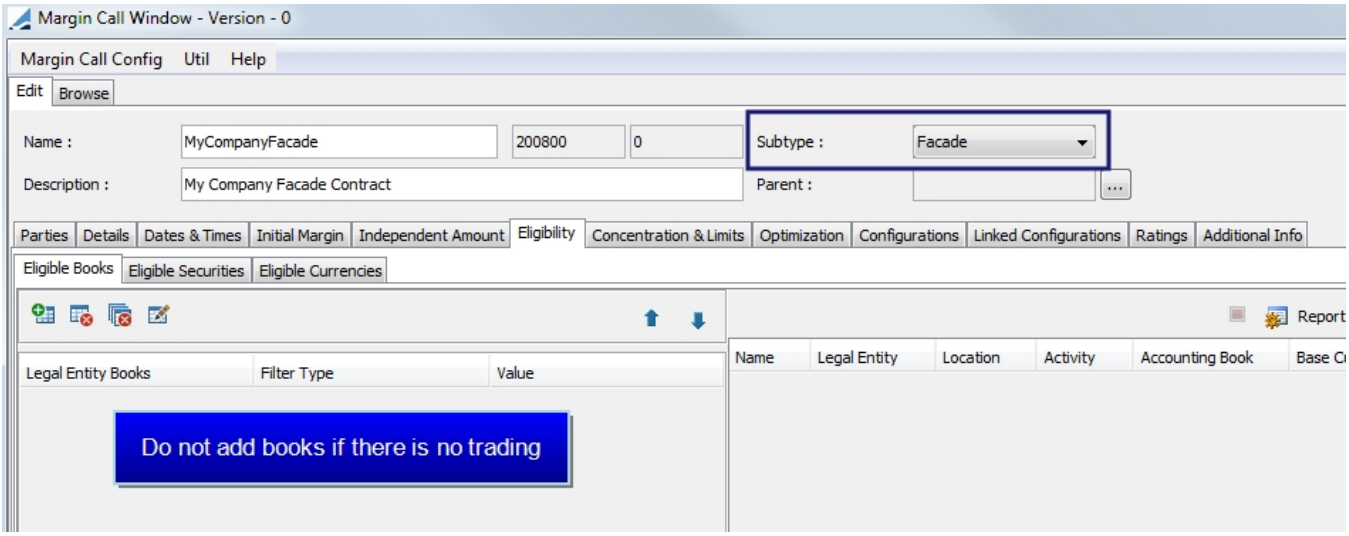


Step 4 - If you open the Collateral Manager (**Processing > Collateral Management > Collateral Manager**) and select the parent contract Id, you will see that the trades of all of the children organizations are included in the margin call process.

2.6 Facade Setup

In some cases, it may be necessary to internally segregate management of certain collateral activities among different entities. However, this segregation does not need to be viewed on the outside, clients will only deal with one entity, the facade. The Facade setup allows margins to be allocated at the trading level separately using the Child contracts, while the exposure is rolled up to the global level using the Facade contract.

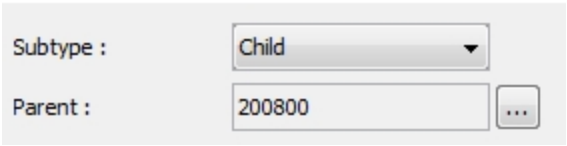
» The Facade contract must be designated as Subytype: Facade. If no trading is done on the PO of the Facade contract, the Eligible Books panel must remain empty.



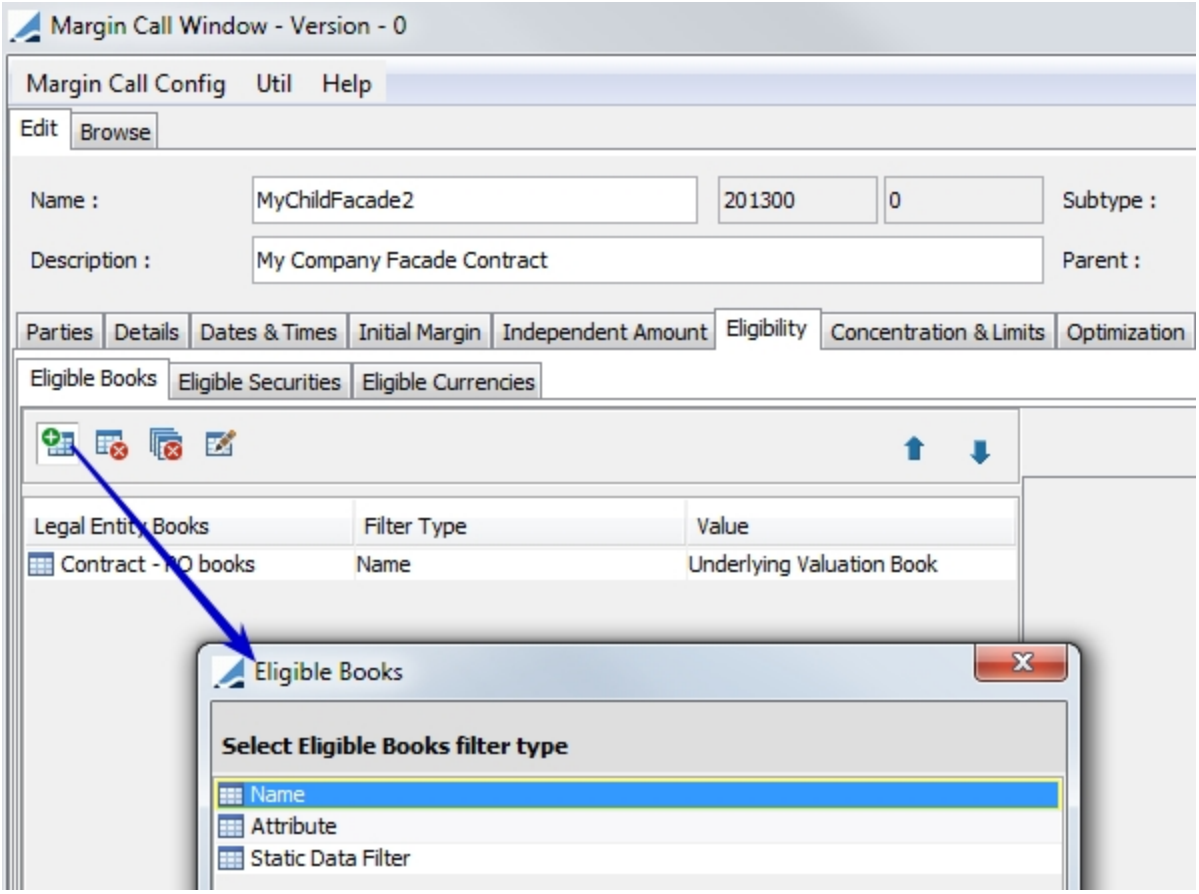
Facade Margin Call contracts:

- summarize the activity of the child contracts
- hold contract information such as MTA, rounding, etc...
- generated notifications and statements

» The child contracts in a facade setup must have the parent contract input as the Parent.

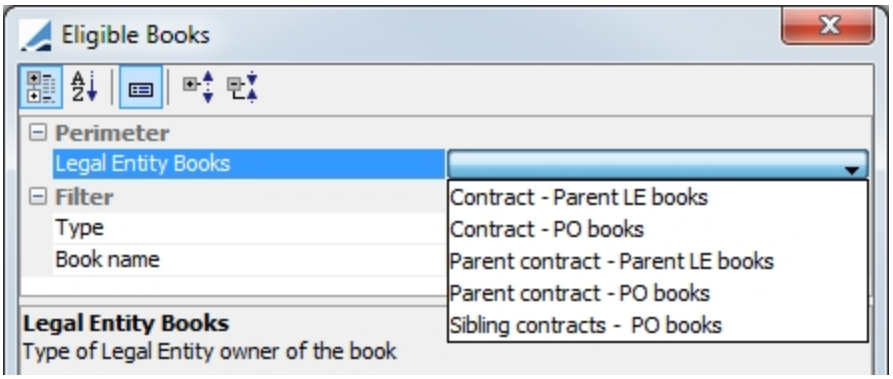


» In the Eligible Books panel, eligible books must be defined for the contract's allocation.

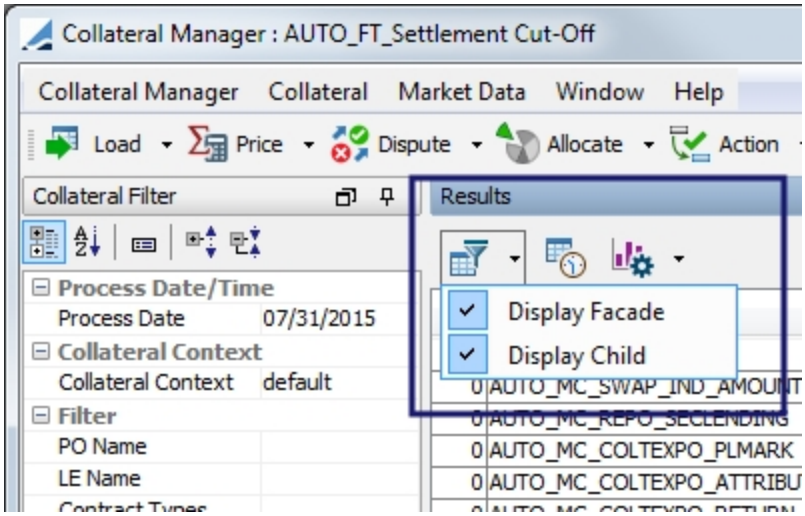


Books can be selected for eligible based on belonging to the:

- Contract - Parent LE books (books belonging to the parent (at the LE level) of the PO of the contract)
- Contract - PO books (books belonging to the PO of the contract)
- Parent contract - Parent LE books (books belonging to the parent (at the LE level) of the PO of the facade contract)
- Parent contract - PO books (books belonging to the PO of the facade contract)
- Sibling contracts - PO books (books belonging to the PO of the sibling contract)



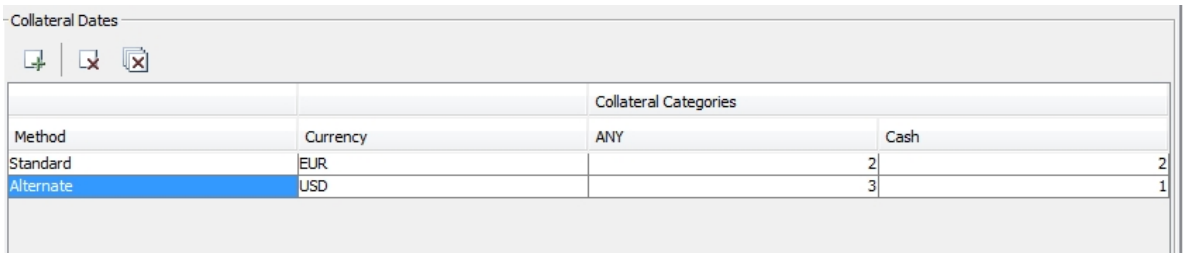
- All allocations are done at the child level.
- In Collateral Manager, it is possible to view facade contracts only, child contracts only or both facade and child contracts using the filter in the Results panel.



2.7 Setting Collateral Dates

You can define rules to determine the settlement dates of the collaterals.

Load a contract and select the Dates & Times panel. In the Collateral Dates area, click to add a collateral date rule.



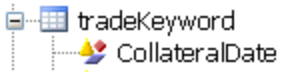
- Select a method: Standard, Alternate, Maturity or Interest.

  You can set a standard collateral date (Default – The lag applies to the trade date), an alternate collateral date (Decided on a trade by trade basis – The lag applies to the trade date) for the same criteria, or a maturity collateral date (Decided on a trade by trade basis – The lag applies to the maturity date). For example the standard for USD cash would be 3 days lag, the alternate for USD cash would be 4 days lag.

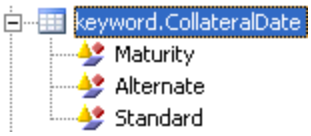
  By default, the standard collateral date will be computed unless the trade keyword CollateralDate is set to Alternate or Maturity, in which case the alternate collateral date or maturity collateral date will be computed.

  The following settings are recommended if you plan to use the Alternate method:

  1. Add CollateralDate to the domain *tradeKeyword*.

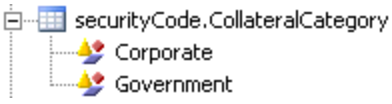
  

  2. Create the domain *keyword.CollateralDate* with values Alternate, Standard, and Maturity.

- Select a currency – You can set different offsets per currency.
- For each collateral category (Cash, or a Security Category, or ANY security category), enter the number of days between the settlement date and the trade date of the corresponding collateral.

  Security categories are specified on the product code CollateralCategory on the collateral definitions. The available values for the product code CollateralCategory must be defined in the domain *securityCode.CollateralCategory* – For example , the collateral categories Corporate and Government could be defined.

  If a USD security has the CollateralCategory set to Corporate, the settlement date will be “trade date + 2 days”, if the CollateralCategory is not set, the settlement date will be “trade date + 3 days”.

  Note that the trade date of the collateral (margin call trade) is the “Process Margin Call for” date of the Margin Call Manager.

- The Interest method is used to change Settle Dates in bulk. There is no logic behind this method type as it is used by the Back Office to determine the settle date of Interest trades. It is possible to save more than one Interest method per contract if the offset is different for different currencies.

  For example:

  Interest/EUR/1day offset

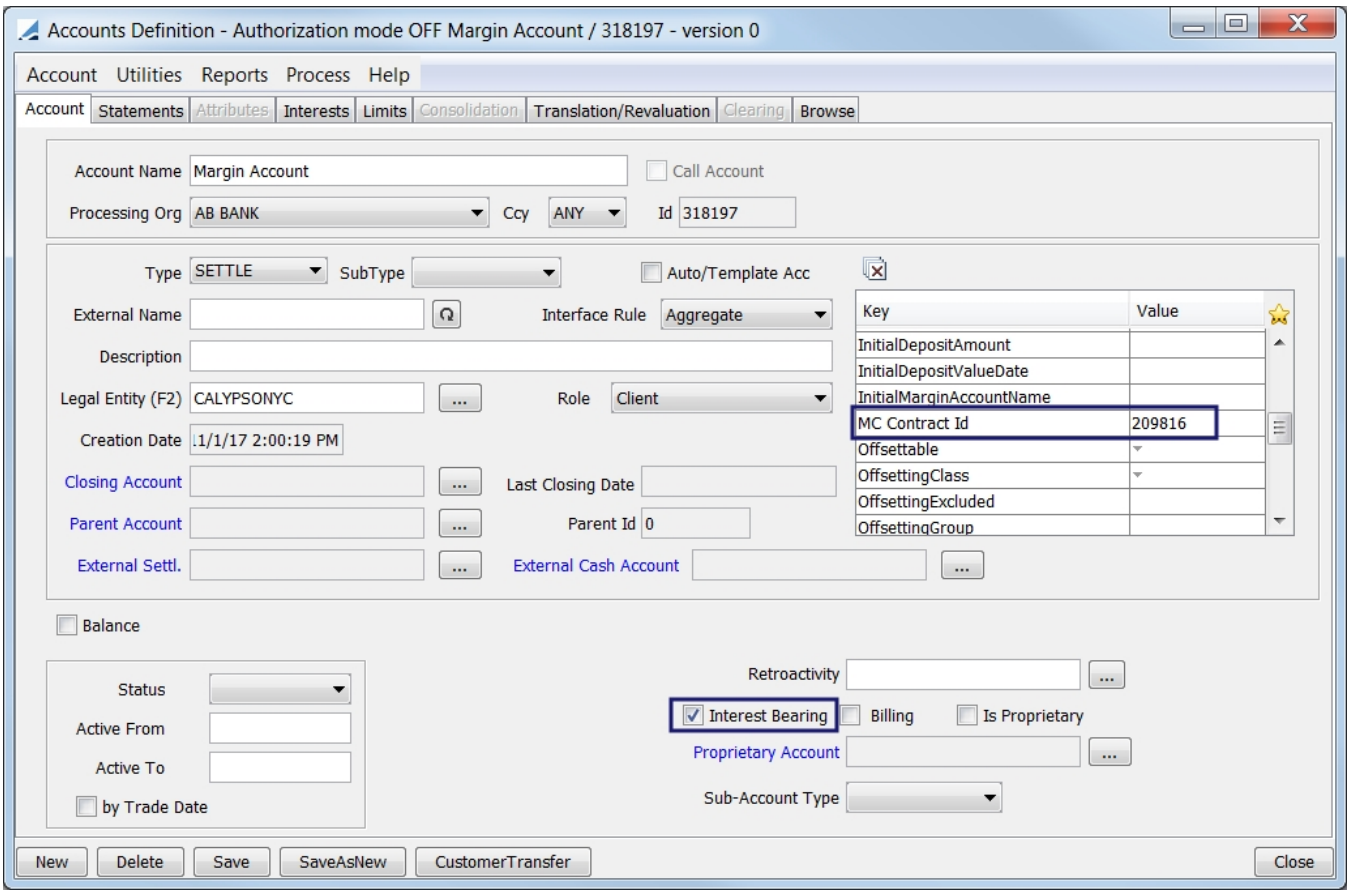
  Interest/USD/2 days offset

  Interest/GBP/3 days offset

2.8 Paying Interest Separately

When you elect to pay interest separately, the interest will not be computed by the Collateral Manager. The margin call will populate a specific settlement account, and interest will be computed on this account through the interest bearing process by generating interest bearing trades

In order for the INTEREST transfer to be taken into account in the Margin Call position, the Margin Call contract Id needs to be set on the Interest Bearing account attribute *MC Contract Id*. This can be found in the attribute panel in the Accounting Definition window (**Configuration > Accounting > Accounts**).

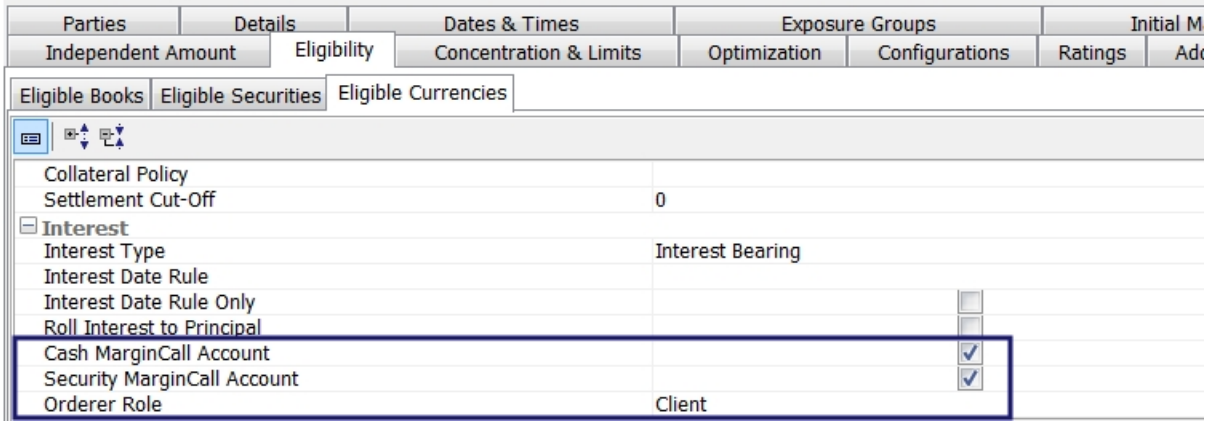


If the MC Contract Id attribute is not listed, it can be added from **Utilities > Add Property Domain**. After adding it, click the ☆ to add it to the list of favorites.

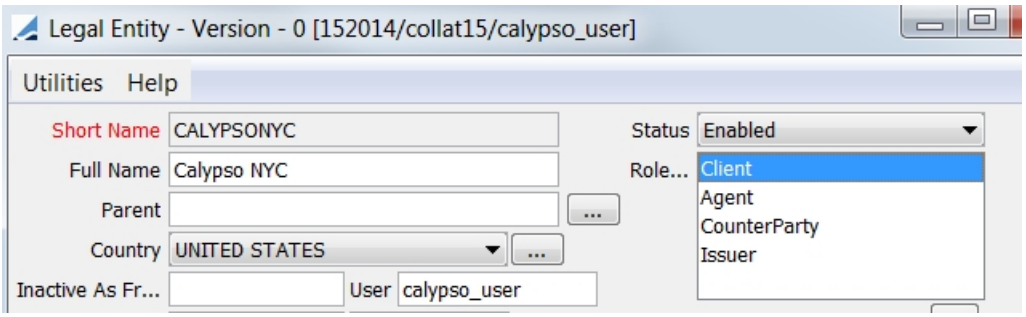
Step 1 - In the Eligible Currencies panel, set the following fields:

» For Cash margins, set the *Cash MarginCall Account* to true

- For Security margins, set the *Security MarginCall Account* flag to true
- Set *Orderer Role* to Client or Customer. then add that role to the counterparty of the margin call contract.

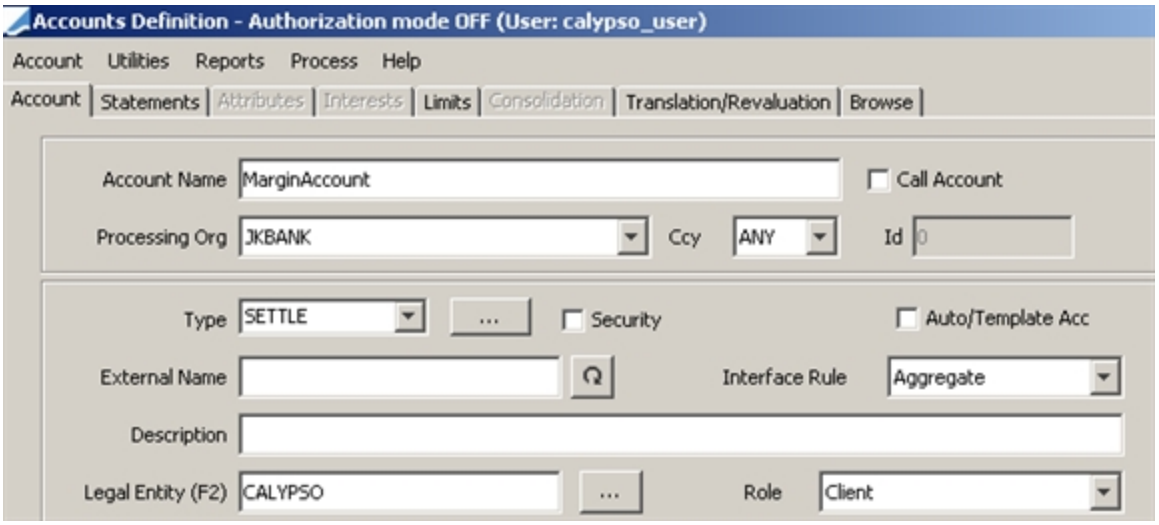


Then, add that role to the counterparty of the margin call contract.



Step 2 - Create a settlement account for the counterparty's role defined in ORDERER_ROLE, and associate DDA settlement instructions.

Sample Settlement Account

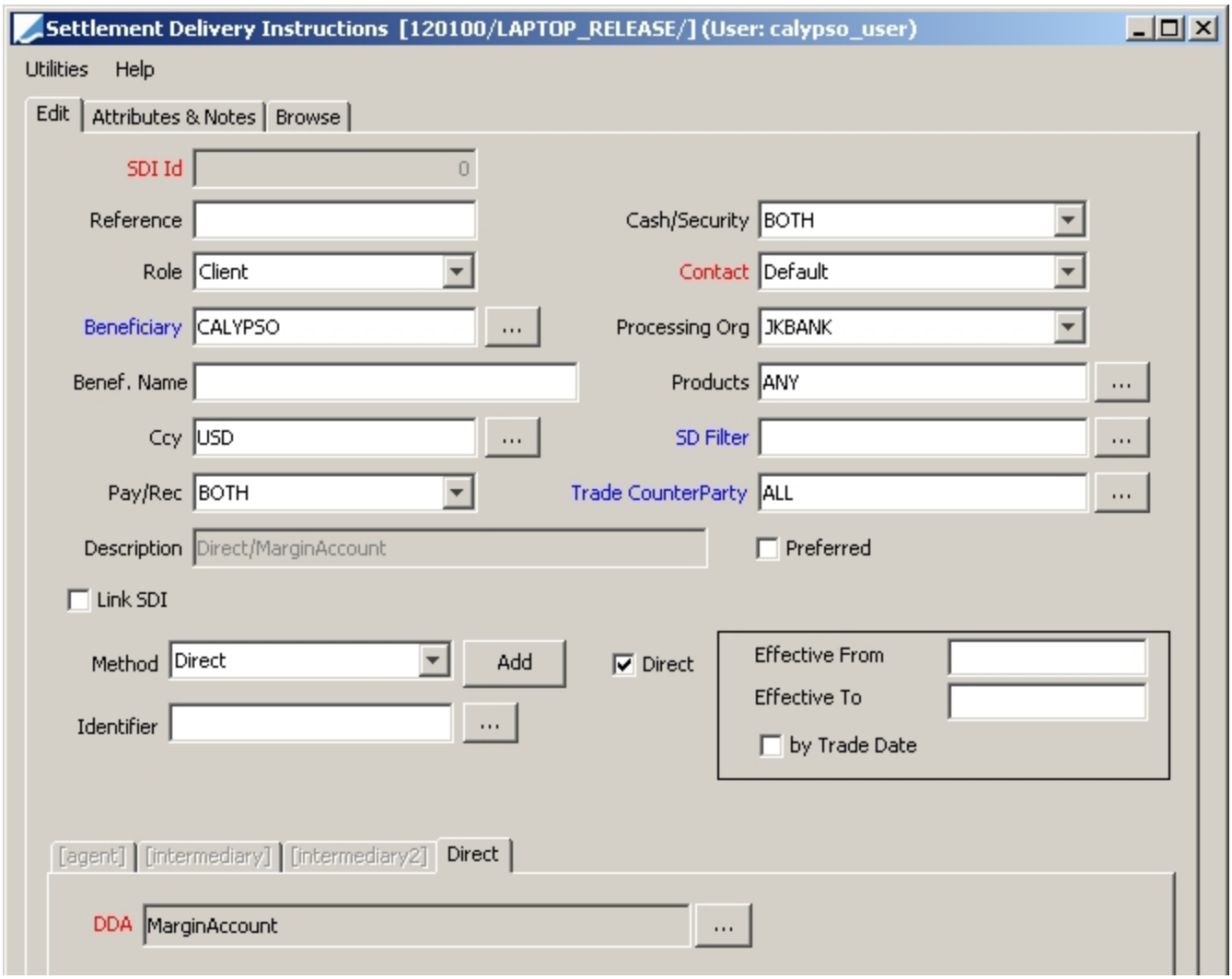


When interest is recapitalized back into the Interest Bearing account, this interest can be used as collateral on the Margin Call Contract to cover exposures/liabilities.

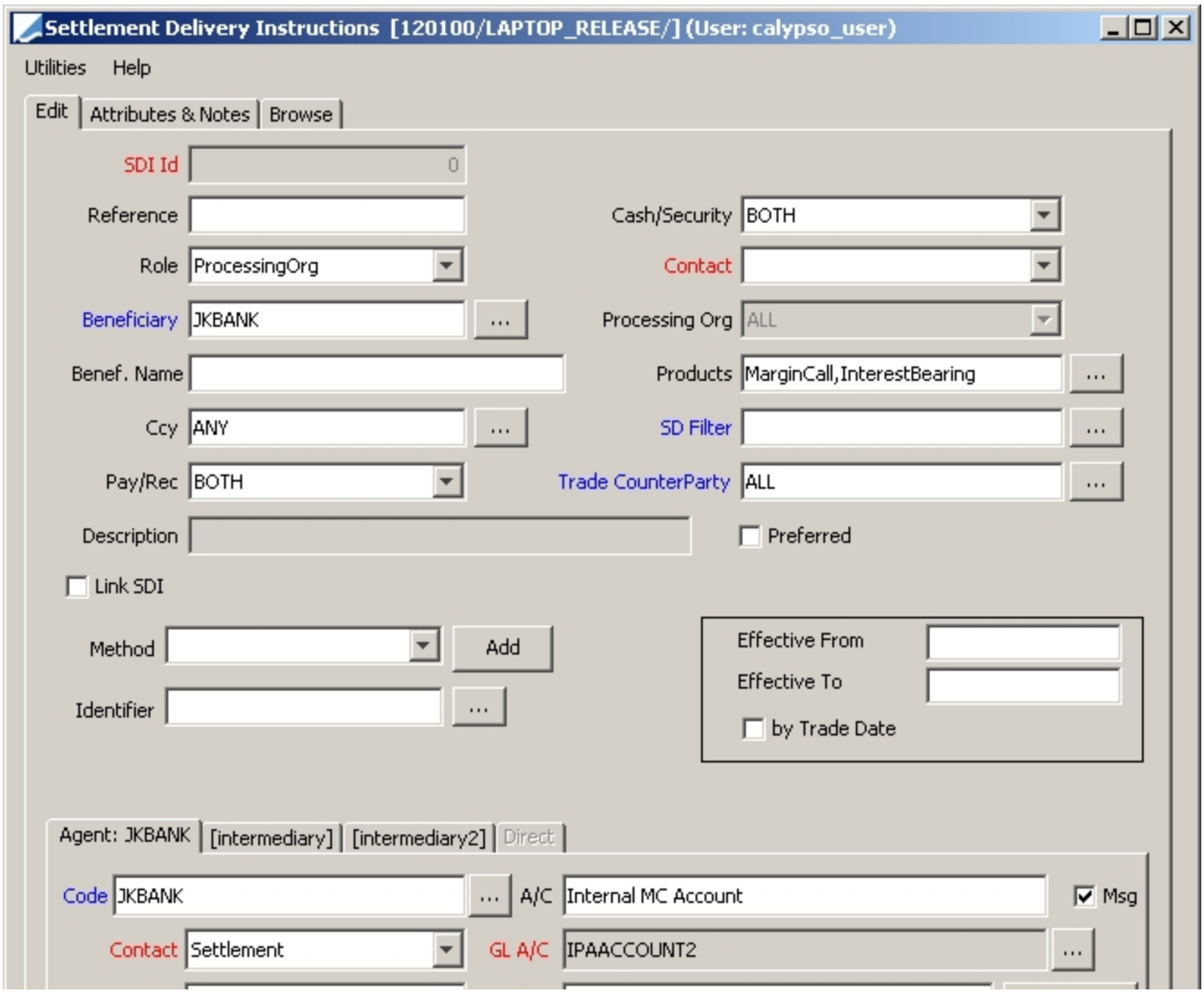
In order for the INTEREST transfer to be taken into account into the Margin Call position, you need to set the Margin Call Contract ID on the Interest Bearing account attribute “MC Contract Id”, when you click **Properties/Attributes (F4)**.

If the account is Interest Bearing, and the capitalization frequency is specified, and the “MC Contract Id” attribute is populated, then the MarginCall transfer attribute is populated on the INTEREST transfer with the Margin Call Contract ID, and is therefore included in the Margin Call position.

Sample DDA SDIs for the Counterparty with role Client



Sample DDA SDIs for the ProcessingOrg.



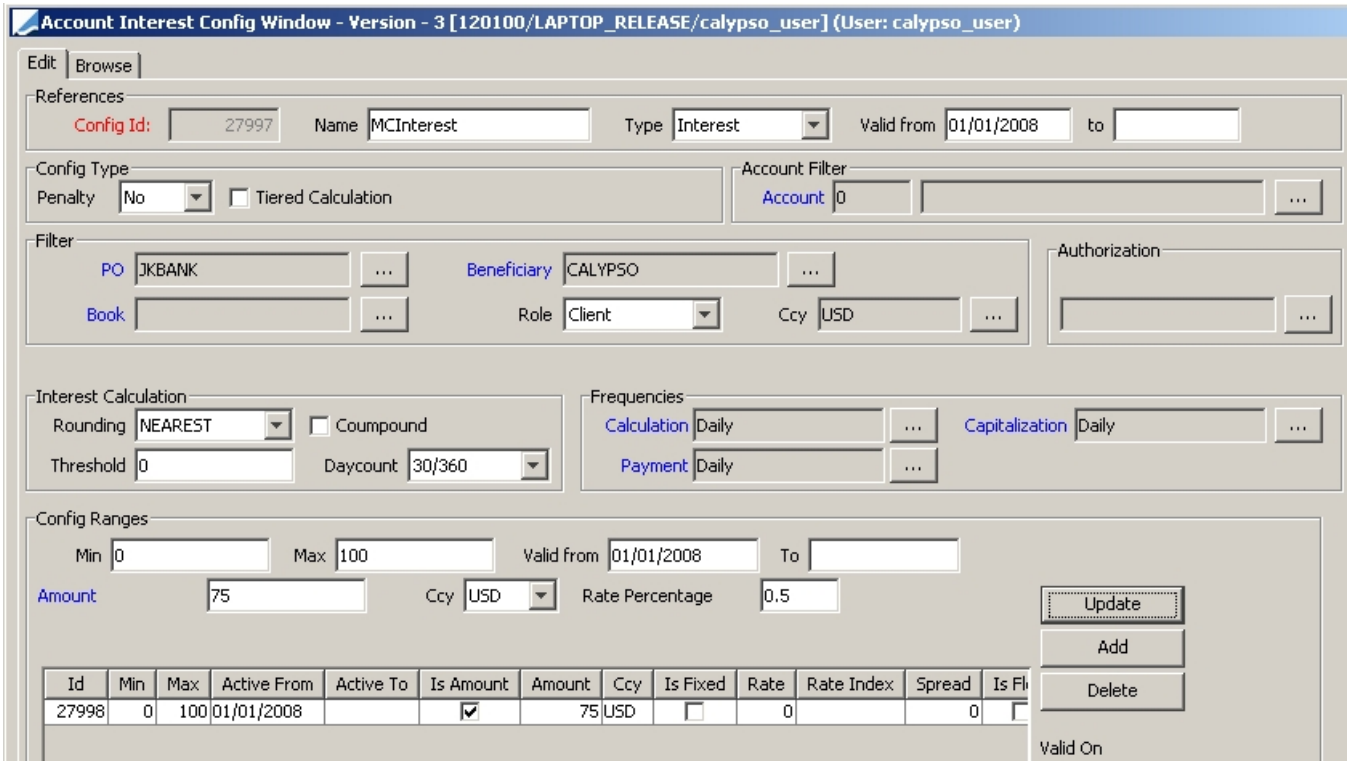
As a result, the margin call will populate the settlement account. You have then access to all cash management functions on the settlement account, including the possibility of generating interest bearing trades.

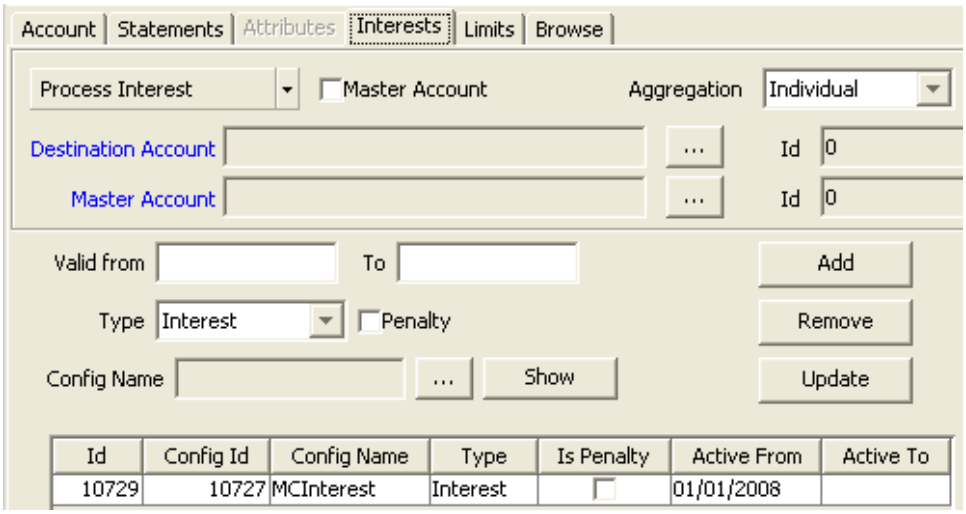
Two transfers are created: one through the agent between the processing org and the counterparty role Counterparty, and one DDA transfer between the processing org and the counterparty's role defined in ORDERER_ROLE. If you want to automatically SETTLE the DDA transfer when the Agent transfer settles, add the transfer workflow rule "ApplyLinkedDDA" on the transition VERIFIED – SETTLE - SETTLED. It will automatically move the DDA transfer to SETTLED (You may also set the rule on the transition SETTLED – UNSETTLE – VERIFIED in case you need to unsettle the agent transfer – It will unsettle the DDA transfer as well).

You need to have the Inventory engine running in order to populate the Margin Call account with the margin calls.The Inventory position shows a Margin_Call position on the counterparty's role CounpterParty, a Client position on the counterparty's role defined in ORDERER_ROLE (margin call account), an Internal position on the processing org (margin call account).

Step 3 - Create interest bearing rules, and associate those with the margin call account - Interest baring trades will be generated based on those rules.

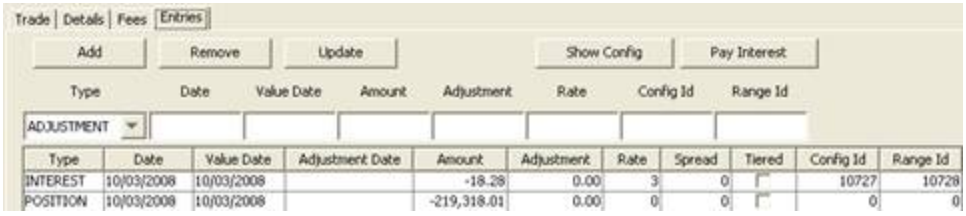
Sample Interest Bearing Rules





Step 4 - You can generate the interest using the ACCOUNT_INTEREST scheduled task, or by clicking **Process Interest** in the Account Definition window, Interests panel.

In the Entries panel, you can view the position used to compute the interest, and you can perform manual adjustments.



You can click **Pay Interest** to transfer the interest to another account – This is the same as running the scheduled task ACC_TRANSFER_INTEREST. It generates a simple transfer between the accounts, and the account identified by the legal entity / role selected in the Pay Interest dialog.

If you set the transfer workflow rule ApplyActionLinkedXfer on the transitions VERIFIED – SETTLE – SETTLED and SETTLED – UNSETTLE – VERIFIED, both the interest payment, and the interest transfer will be settled at the same time.

▶ Refer to the *Calypso Cash Management User Guide* for complete information on transferring interest.

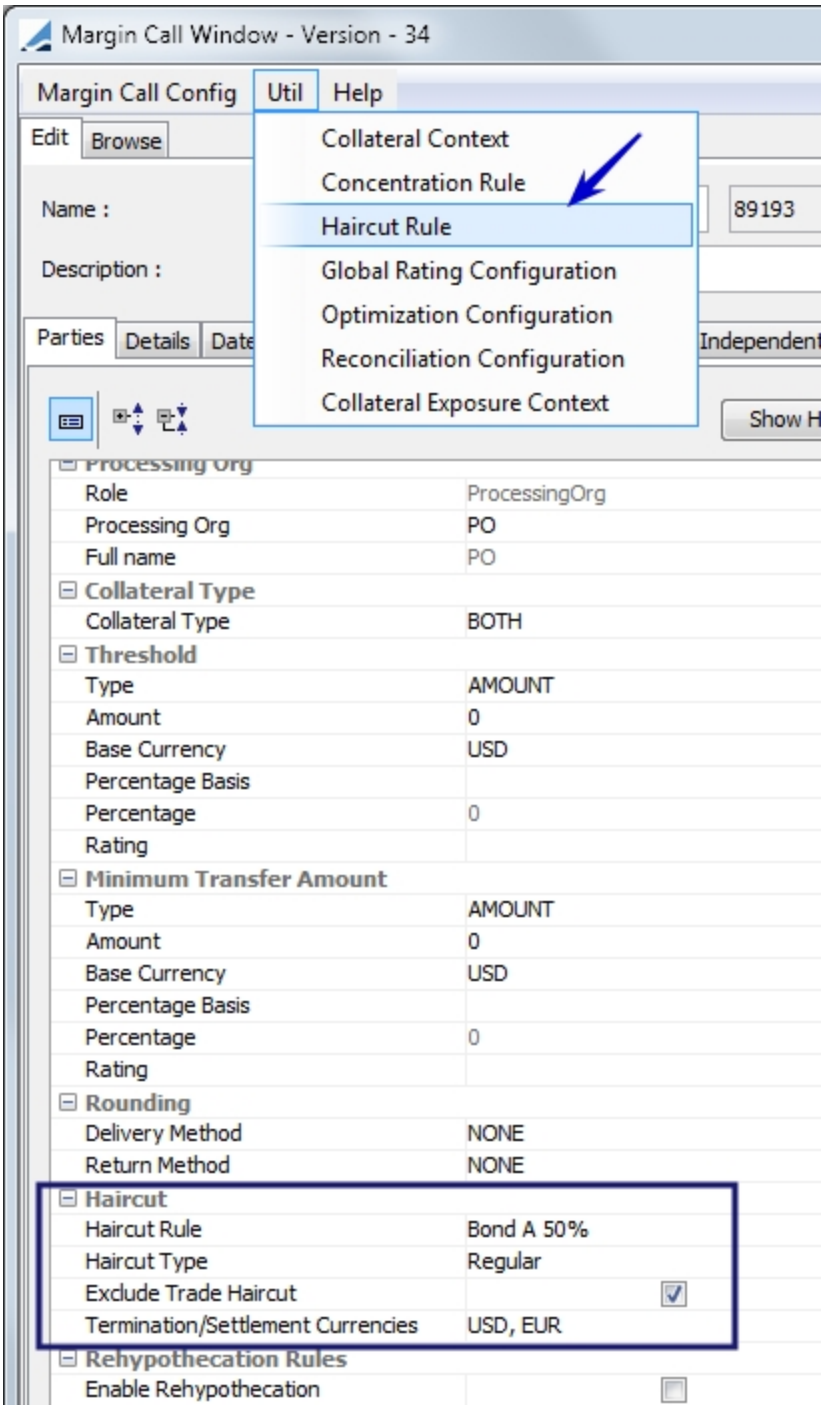
2.9 Assigning SDIs when Counterparty's Agent is the PO

SDI selection for Simple Transfers when the Processing Org is also the Agent of the Counterparty, and intermediaries are defined on the SDIs.

▶ Please refer to the Calypso Settlements documentation for details.

2.10 Configuring a Haircut

In the Parties panel you may designate a haircut configuration for the margin call contract. This haircut will apply to the collateral used in the margin call.



» Select a Haircut Rule you would like to use. If you do not have any rules in place or would like to edit an existing rule, select Haircut Rule from the Util menu to display the Haircut window.

» Choose the Haircut Type, either Regular [amount • (1 + haircut)] or Inverse [amount /(1 - haircut)]. The haircut value is not an absolute value. The sign of value is important. Enter a negative value for a discount and a positive value for a premium.

- You may choose to exclude the trade level haircut from the exposure calculation.
- The order of definitions in the haircut rule is important. Collateral Manager tries to retrieve a haircut value for a bond (for example) from the first definition at the top of the list. If that bond is not handled by that definition, the system tries to handle it in the following definition and so on, until a matching definition is found or the end of the definition list is reached.
- In addition to security information, the following information is also used to determine which haircut to apply:
  - Groups (from the Legal Entity Relation window)
  - Country (from the Legal Entity Relation window)
  - An additional haircut may be applied in the case of Wrong Way Risk. Wrong Way Risk is possible if the legal entity pledges a security that is used or is used by a related party (LE Relation). Wrong Way Risk can also arise if the legal entity country is the same as the country of issuance of the security (Legal Entity Country). See Haircut documentation for more information.
- A definition using a static data filter rule handles a security or cash if it is accepted by the filter.
- A definition using a quote set rule handles a security (it cannot handle cash) if the quote set has a CLOSE quote for the security that day.
- The user environment property USE_REVERSE_HAIRCUT affects the display of the haircut values consistently across the application. If USE_REVERSE_HAIRCUT=false (the default), the haircut intended to discount a value by 5% will be displayed as -5. When USE_REVERSE_HAIRCUT=true, this will instead be displayed as 95 (the remainder). The same is true for the value input by the user in the configuration. To discount a value by 5%, enter 95 in the haircut configuration when USE_REVERSE_HAIRCUT=true.
- The Termination/Settlement Currency field is a reference currency for cross currency haircut. A haircut will be applied if the asset being delivered is not in the same currency as one of the designated currencies. This field can hold one or more currencies and is not mandatory. If there is no designation in this field, the Base Currency field is used for the cross currency haircut determination.

For information on configuring Haircut rules, refer to the Calypso Trading Environment documentation.

2.11 Modifying a Contract

- Select the Browse panel and click **Load** to load existing margin call contracts.

  You can restrict the results using the search criteria.

  Double-click a contract to display its details in the Edit panel, and modify as applicable.
- Click **Save** to save your changes.

  Note that if the Authorization mode is enabled, an authorized user must approve your entry.

2.12 Deleting a Margin Call Contract

- Select the Browse panel and click **Load** to load all existing margin call contracts.

You can restrict the results using the search criteria.

» Select a contract and click **Delete**.

Note that if the Authorization mode is enabled, an authorized user must approve your entry.

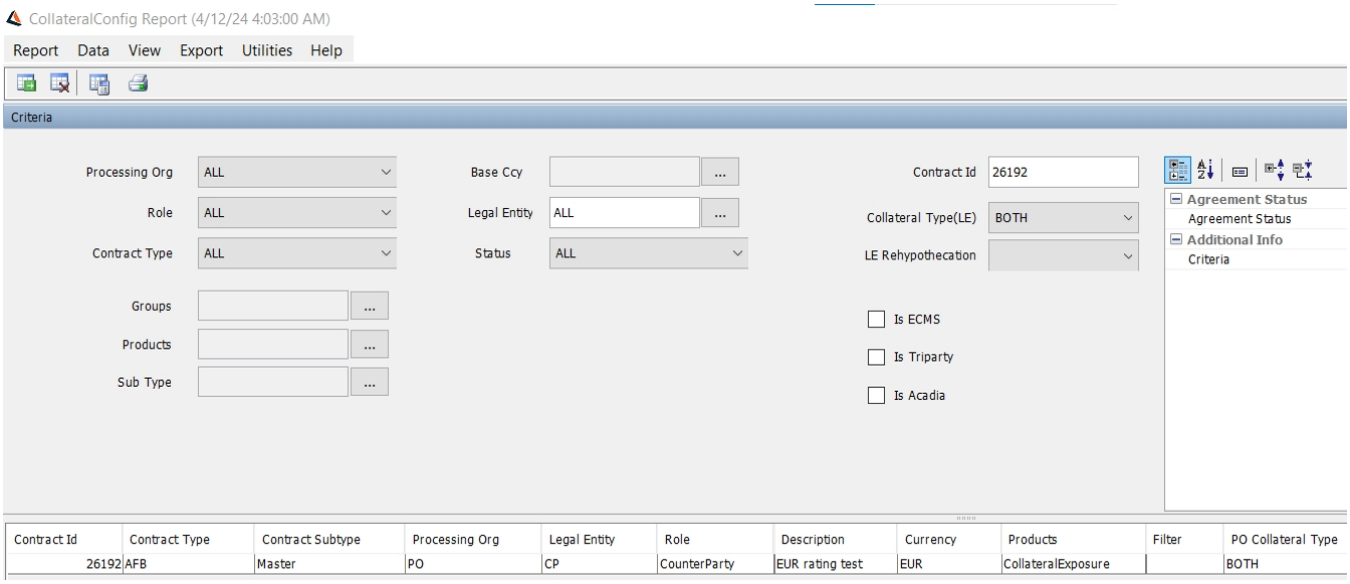
2.13 Displaying Pending Modifications

» Select the Browse panel and click **Load** to load all existing margin call contracts.

» Then click **Show Pending** to display any margin call configuration pending authorization. This only applies if the Authorization mode is enabled.

2.14 Viewing Margin Call Contracts

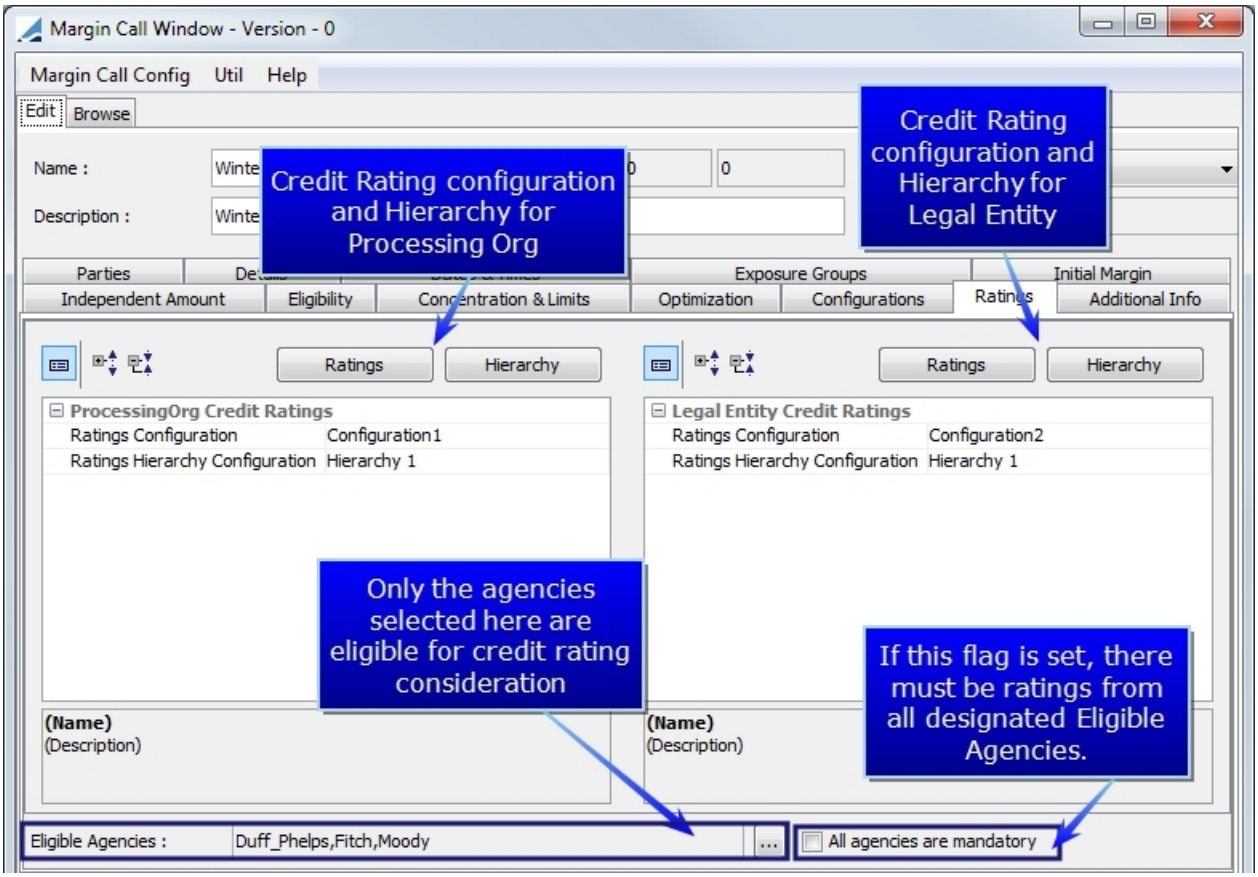
You can view margin call contracts using the Collateral Config report (menu action `reporting.ReportWindow$CollateralConfig`) or using the REPORT scheduled task for the CollateralConfig report type.



3. Margin Call Credit Rating

In the Calypso Collateral Management module, it is possible to use the Processing Org and the Counterparty credit rating to determine the Threshold and Minimum Transfer Amount (MTA). The Credit Rating configuration is completed through the Ratings panel in the Margin Call Contract.

In the Ratings panel, you may also define and designate a Hierarchy which is used to order the agencies and in the event that there is a missing rating.



- Calypso allows for the Threshold and Minimum Transfer Amounts to be different for the processing org and the legal entity.
- To effectively use credit ratings in Collateral Manager, you must first set up a Global Rating Configuration. This is established to allow for comparisons when a legal entity is rated differently by one or more of the applicable rating agencies. This is used to apply the HIGHER/LOWER Rating selection in the Parties panel of the margin call contract.
- If no agency is specified in the Eligible Agencies field, any agency is valid to be considered in the ratings. If any agency is specified in the Eligible Agencies field, all other credit ratings from any non-eligible agencies are ignored.

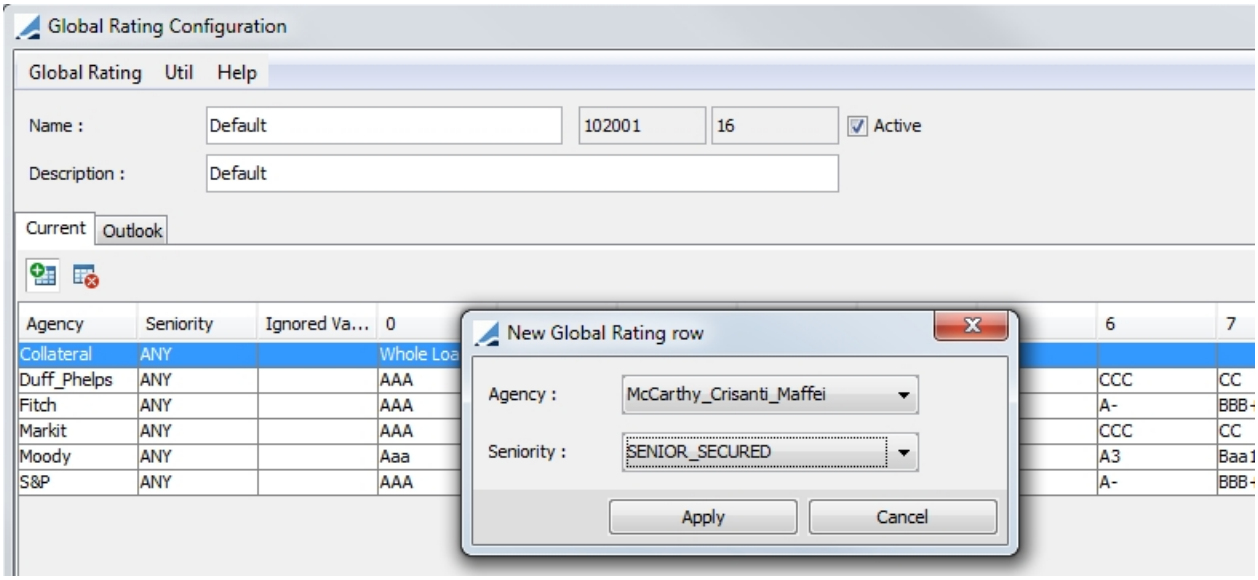
» When the *All agencies are mandatory* field is selected, all of the agencies designated in the *Eligible Agencies* field must provide ratings for the PO and LE (dependent on pricing direction). The default setting on this field is false (unselected).

3.1 Global Rating Configuration

A Global Rating Configuration must be created for comparison purposes between rating agencies. To display this window from the Margin Call contract:

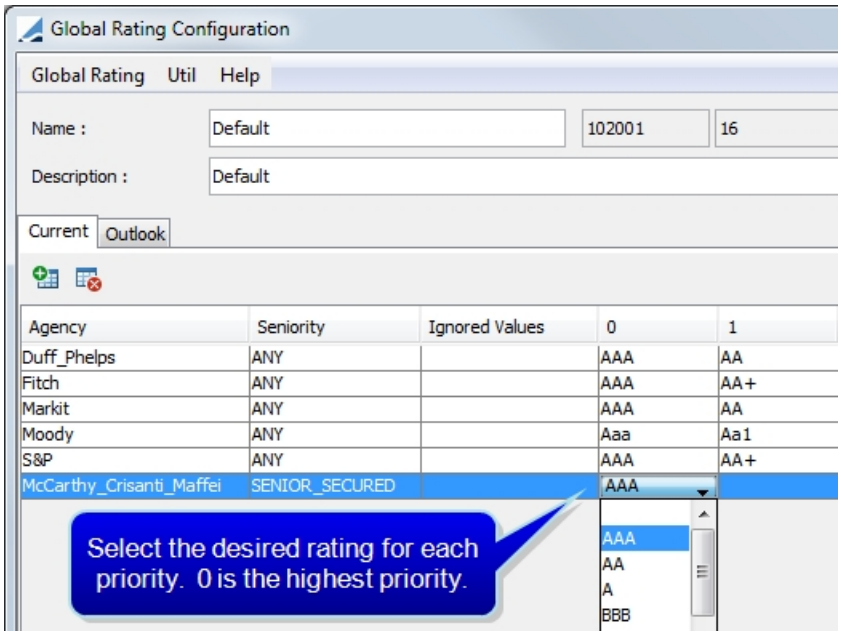
- Click the **Ratings** button which displays the Margin Call Credit Rating Configuration window. From the Util menu in the MC Credit Rating Config window, select Global Rating Configuration.
- In the Margin Call Contract window, select **Util > Global Rating Configuration**

In this window, you can enter the appropriate rating information.

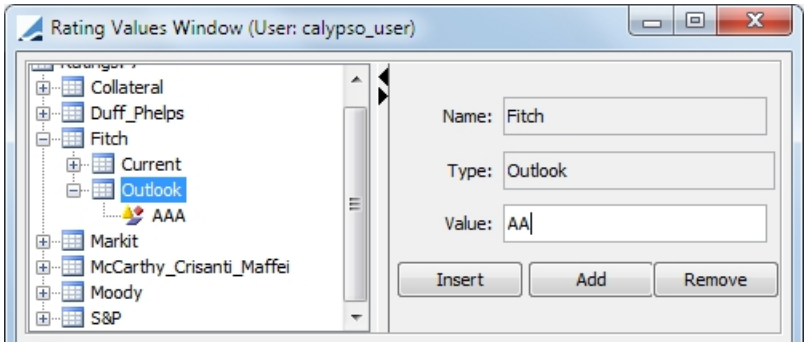


» Click  to add a new row. Select the Agency name and the Seniority. Then click **Apply**.

» After the row is created, enter the ratings.



- You may have multiple configurations but only one can be Active. Whichever configuration is flagged as Active is the one that will be used.
- In each panel, Current or Outlook, you are able to set a configuration. The panel names are called Rating Types. Additional Rating Types can be defined in the *creditRatingType* domain value.
- Once the Rating Type is defined in the domain, select **Util > Rating Values** to add available values for the rating type if necessary.



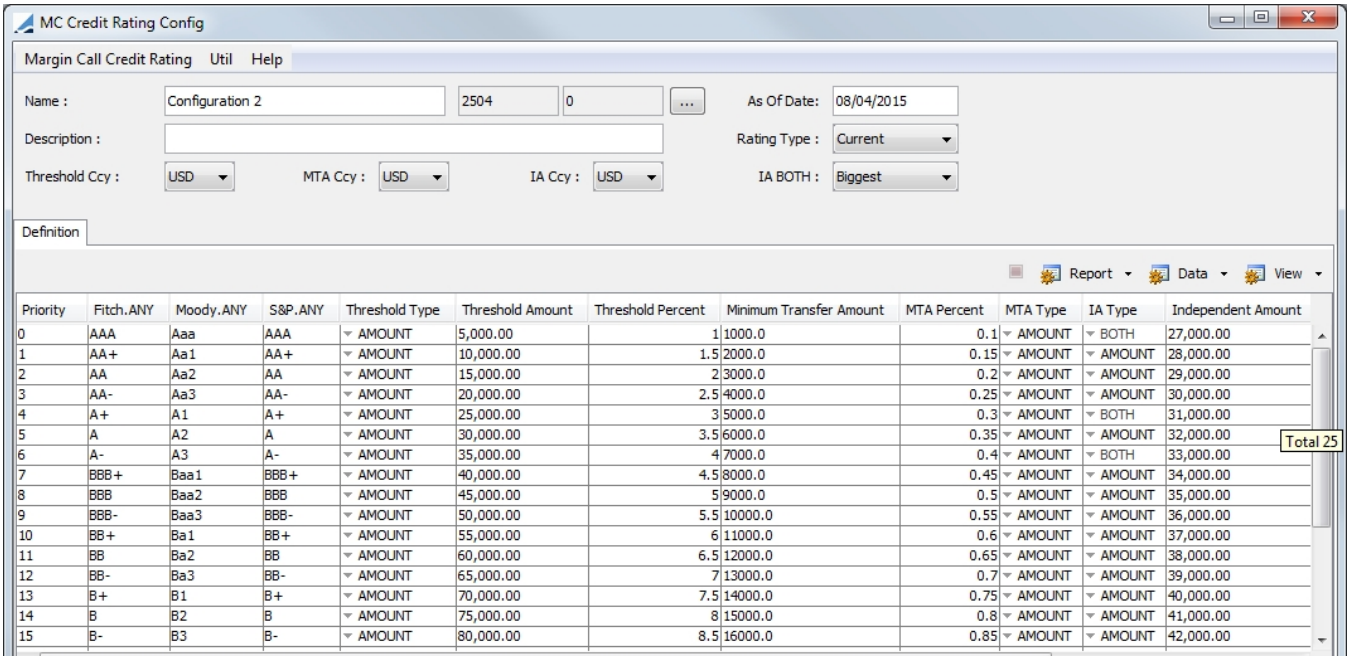
- Name the configuration and save it.
- The equivalence table can be different for each rating type depending on the possible credit rating agency/values for that type.
- Double-click in the Ignored Values column to select ratings values to be ignored for a particular Agency.

3.2 Conversion to Global Rating

In the Margin Call window, select **Util > View Previous Margin Call Credit Ratings** to migrate to the Global Credit Rating configuration. If you choose to convert by Rating Value, you must have set up a Global Rating Equivalence in the Global Rating Configuration window.

3.3 Margin Call Credit Rating Configuration

Once you have created and saved a Global Rating Configuration, you are able to enter the desired Threshold and/or Minimum Transfer Amount data.



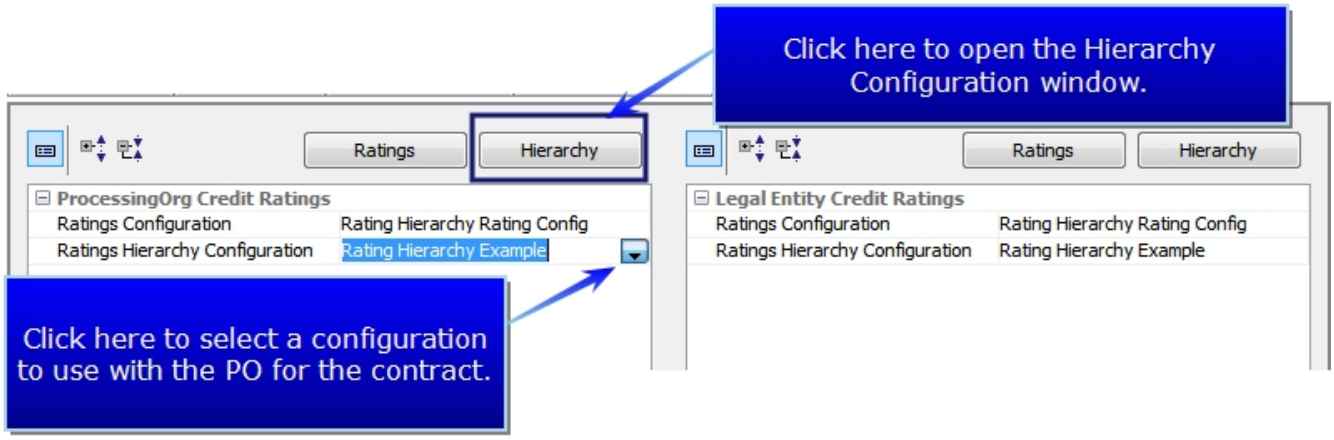
Priority	Fitch.ANY	Moody.ANY	S&P.ANY	Threshold Type	Threshold Amount	Threshold Percent	Minimum Transfer Amount	MTA Percent	MTA Type	IA Type	Independent Amount
0	AAA	Aaa	AAA	AMOUNT	5,000.00	1	1000.0	0.1	AMOUNT	BOTH	27,000.00
1	AA+	Aa1	AA+	AMOUNT	10,000.00	1.5	2000.0	0.15	AMOUNT	AMOUNT	28,000.00
2	AA	Aa2	AA	AMOUNT	15,000.00	2	3000.0	0.2	AMOUNT	AMOUNT	29,000.00
3	AA-	Aa3	AA-	AMOUNT	20,000.00	2.5	4000.0	0.25	AMOUNT	AMOUNT	30,000.00
4	A+	A1	A+	AMOUNT	25,000.00	3	5000.0	0.3	AMOUNT	BOTH	31,000.00
5	A	A2	A	AMOUNT	30,000.00	3.5	6000.0	0.35	AMOUNT	AMOUNT	32,000.00
6	A-	A3	A-	AMOUNT	35,000.00	4	7000.0	0.4	AMOUNT	BOTH	33,000.00
7	BBB+	Baa1	BBB+	AMOUNT	40,000.00	4.5	8000.0	0.45	AMOUNT	AMOUNT	34,000.00
8	BBB	Baa2	BBB	AMOUNT	45,000.00	5	9000.0	0.5	AMOUNT	AMOUNT	35,000.00
9	BBB-	Baa3	BBB-	AMOUNT	50,000.00	5.5	10000.0	0.55	AMOUNT	AMOUNT	36,000.00
10	BB+	Ba1	BB+	AMOUNT	55,000.00	6	11000.0	0.6	AMOUNT	AMOUNT	37,000.00
11	BB	Ba2	BB	AMOUNT	60,000.00	6.5	12000.0	0.65	AMOUNT	AMOUNT	38,000.00
12	BB-	Ba3	BB-	AMOUNT	65,000.00	7	13000.0	0.7	AMOUNT	AMOUNT	39,000.00
13	B+	B1	B+	AMOUNT	70,000.00	7.5	14000.0	0.75	AMOUNT	AMOUNT	40,000.00
14	B	B2	B	AMOUNT	75,000.00	8	15000.0	0.8	AMOUNT	AMOUNT	41,000.00
15	B-	B3	B-	AMOUNT	80,000.00	8.5	16000.0	0.85	AMOUNT	AMOUNT	42,000.00

- In this window, you may enter a Threshold Amount and / or Minimum Transfer Amount for each priority.
- Name and save your configuration. You may have multiple Margin Call Rating Configurations, selecting whichever configuration you would like to use for each margin call contract.
- On the Ratings panel in the Margin Call Contract, you must select Eligible Agencies that can be considered for the contract. Only the agencies selected will be used, regardless of whether they are in the margin call rating configuration.
- If you enter an amount of 0 in the No Rating row, if a credit rating is missing, the value of the rating will be set to 0 and the contract will be priced. If this amount is left blank and there are missing ratings, the contract will not be priced and a pricing exception will be generated.
- The IA BOTH field is utilized only when the IA TYPE field for a credit rating is set to BOTH. The options for this field are:
  - Smallest: the system chooses the smallest value between the Amount and the Percentage value calculated
  - Biggest: the system chooses the largest value between the Amount and the Percentage value calculated

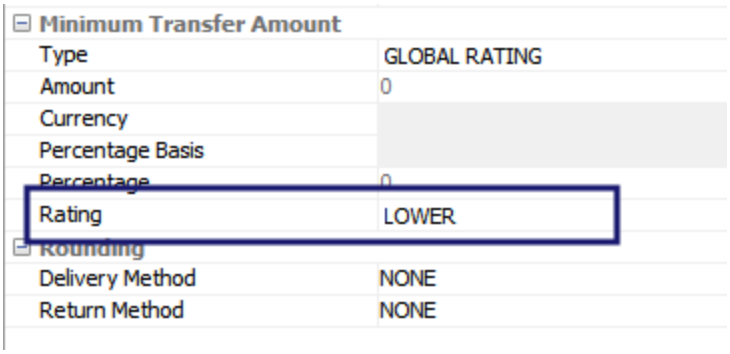
This field is the same for the entire configuration. It is not possible to have one column set to Biggest and another to Smallest within the same configuration. The default value is Biggest.

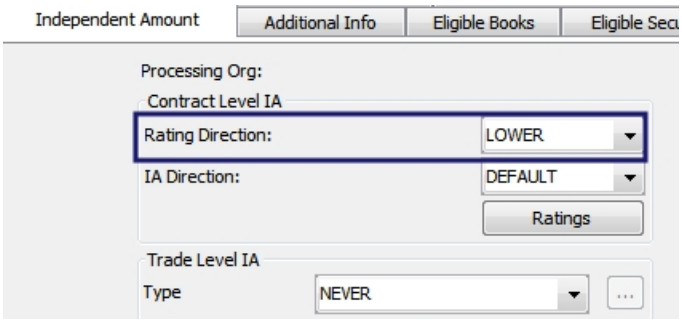
3.4 Hierarchy

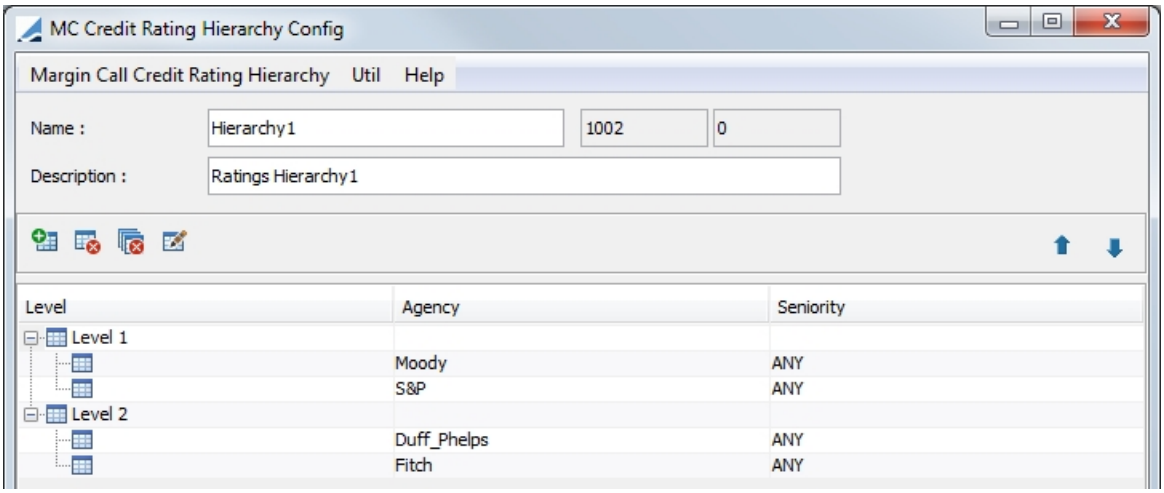
The Ratings Hierarchy window enables the ordering of the Rating Agencies. You may have multiple levels with one or more agency in each level. You may have multiple Hierarchy configurations. In the Ratings panel of the Margin Call Contract, designate which hierarchy you would like to use for the PO and LE.



Based on the rating configuration that is selected for either Threshold or MTA in the Parties panel or in the Independent Amount panel, Calypso looks for the highest or lowest rating of Level 1. If no rating is defined for Level 1, the system moves on to Level 2 and so on....







Using the hierarchy set above, let's say that Moody's rating for the Counterparty is Aaa and S&P's rating is AA+. The Threshold Rating is set to LOWER on the contract. In this case, the S&P rating is used and the Threshold amount is $450,000.

Definition

Report Data View

Priority	Moody.ANY	S&P.ANY	Fitch.ANY	Threshold Amount	Threshold Currency	Minimum Transfer Amount	MTA Currency	Independent Amount	IA Currency
No Rating	N/A	N/A	N/A	0.00	USD		USD		USD
0	Aaa	AAA	AAA	500,000.00	USD	200000.0	USD	10000.0	USD
1	Aa1	AA+	AA+	450,000.00	USD	180000.0	USD	11000.0	USD
2	Aa2	AA	AA	400,000.00	USD	160000.0	USD	12000.0	USD
3	Aa3	AA-	AA-	350,000.00	USD	140000.0	USD	13000.0	USD
4	A1	A+	A+	300,000.00	USD	120000.0	USD	14000.0	USD
5	A2	A	A	250,000.00	USD	100000.0	USD	15000.0	USD
6	A3	A-	A-	200,000.00	USD	90000.0	USD	16000.0	USD

In another example, let's say that Moody's rating is Aaa and S&P has no rating. Because there is a 0 amount in the Threshold Amount column for this configuration, the Moody's rating will be used with a Threshold Amount to 500,000.

If on the other hand, we were referring to a MTA instead of a Threshold, because there is nothing entered in the Minimum Transfer Amount column, Calypso would move on to look at the ratings for the agencies in the next level.

Priority	Moody.ANY	S&P.ANY	Fitch.ANY	Threshold Amount	Threshold Currency	Minimum Transfer Amount
No Rating	N/A	N/A	N/A	0.00	USD	
0	Aaa	AAA	AAA	500,000.00	USD	200000.0

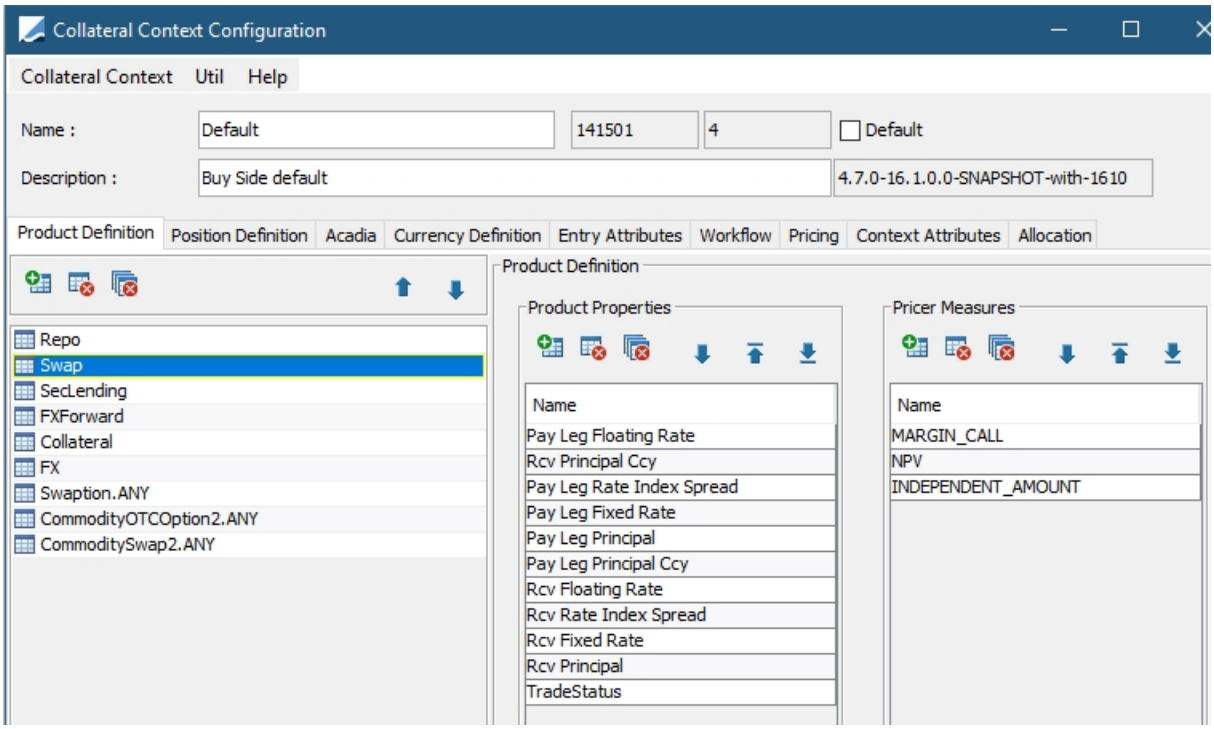
4. Collateral Context

The collateral architecture does not allow the user to add product specific columns directly into the Collateral or Clearing Distribution Manager Underlying panel. By default, the Underlying panel only displays information such as trade date, start date, description, etc... The Collateral Context window takes care of this issue by allowing you to define additional product properties and pricer measures. This context will be common to every contract.

A Collateral Context is chosen in the Collateral Manager window when loading Margin Call Contracts.

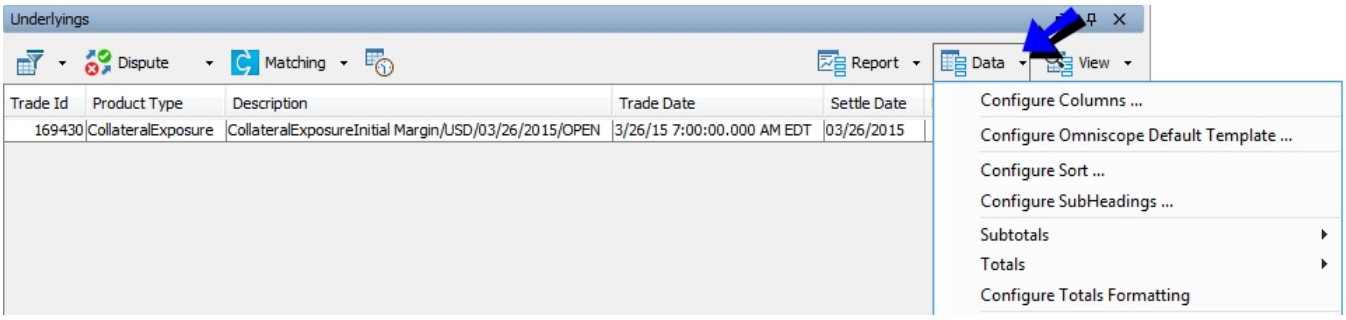
The window is accessible through the Margin Call or Clearing Member Contract window by selecting **Util > Collateral Context** or using the following link: *refdata.collateral.CollateralContextWindow*.

The Collateral Context window looks like that below, with a default set up for Repo trades.



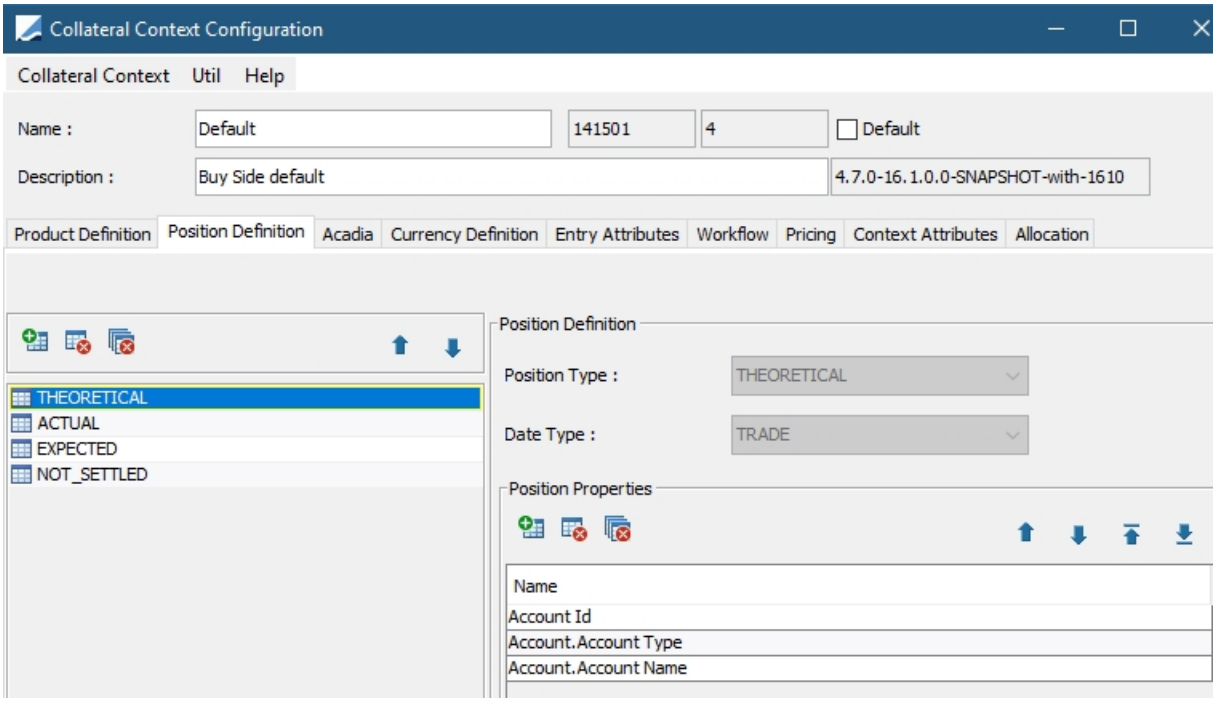
- Enter a name and description for the Collateral Context Configuration.
- Select as many product types and sub-types as you would like to include in the configuration.
- You may add or edit the product properties for each product type.
- Add or edit the pricer measures associated with each product type.

The configurations that are made in the Collateral Context window that apply to column additions are then available for selection in Collateral Manager or Cover Distribution Manager. To add these columns to the view, select Configure Columns from the Data menu from the panel of your choice.



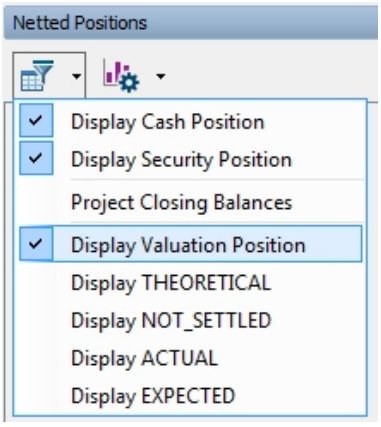
4.1 Position Definition

The Position Definition panel allows you to add additional positions to Collateral Manager.



Positions are aggregated by position type. All positions defined in the context are loaded and priced by the collateral manager. THEORETICAL and ACTUAL positions are always loaded, even if not present in the collateral context.

The Collateral Manager Netted Position panel displays every position defined in the context. By default the Valuation Position (the position used to calculate the exposure) is always loaded even if not declared in the Collateral Context).



In the Position Properties area, you may select attributes that will be displayed in the Netted Position panel of Collateral Manager, such as *AccountId*, *AccountName* and *AccountType*.

4.2 Acadia

This panel is used only for Acadia users.

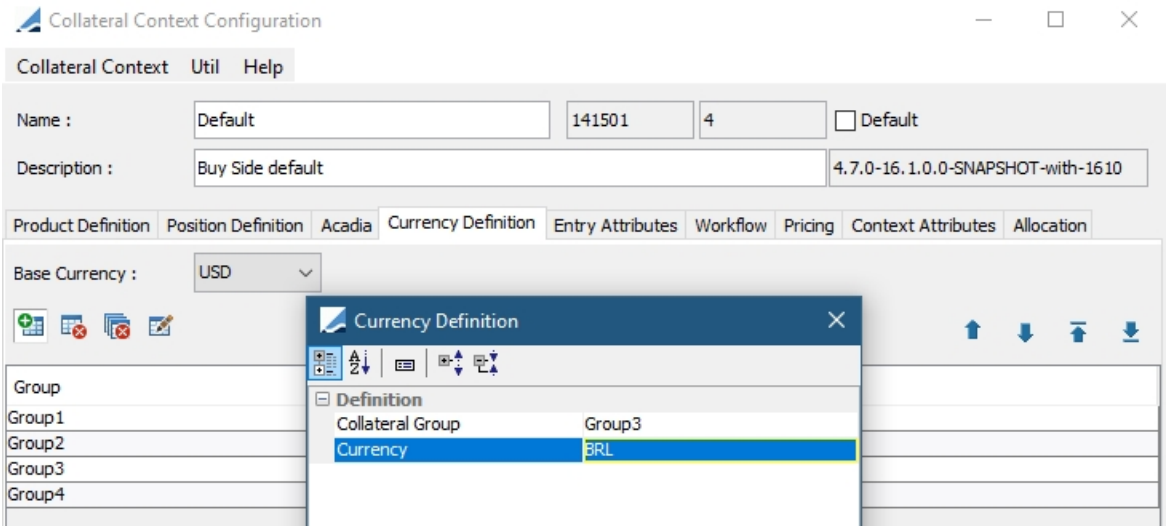
▶Refer to Acadia Attributes in Collateral Context in the Acadia documentation for details.

4.3 Currency Definition

In this panel, you are able to define a group or groups and a corresponding currency linked to that group. The available group names are populated from the *Collateral.Config.Group* domain value.

You may also define a Base Currency, which is used for the *remaining margin (base ccy)* and *base ccy* columns. It enables the comparison of contracts with different contract currencies.

In the Details panel of the margin call contract, you may associate one of these currency definition groups with a contract.



4.4 Entry Attributes

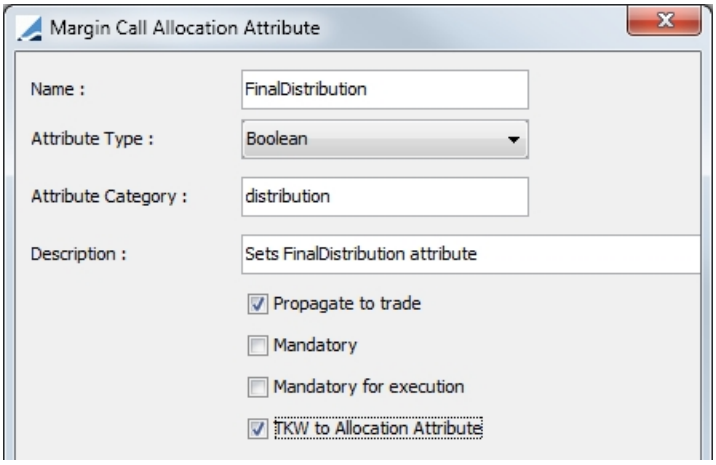
The Entry Attribute tab functions in the same way as the Allocation > Allocation Attribute tab. To populate attribute types, set up a list of available values using the domain *MarginCallEntry.NAME_OF_ATTRIBUTE*. You may also click  to add the attribute to the appropriate domain.

4.5 Allocation

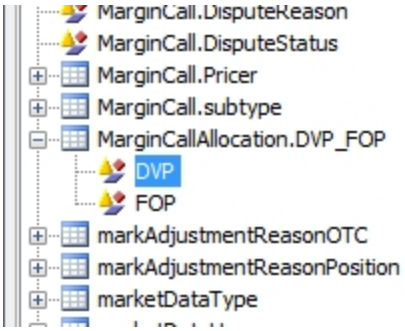
The Allocation panel contains three tabs: Allocation Attributes, Allocation Validator and Settlement Offset.

4.5.1 Allocation Attributes

Select the Allocation Attributes tab to define additional attributes for allocation.



For the Attribute Type: Domain, you can set up the list of available values using the domain *MarginCallAllocation.NAME_OF_ATTRIBUTE*.



Attributes already recognized by Calypso are:

- LiabilityGroupName
- LiabilityCurrency
- LiabilityValue
- ContractType
- CoverDistribution
- DistributionType
- CallForCover
- BankGuarantee
- EndDate
- AccomodationChargeId
- TargetAccountId

The attribute can also be displayed in any allocation report (Collateral Manager or Cover Distribution Manager stand alone report) and the values can be manually edited in the Collateral Allocation window. The attribute is loaded as a standard column from Configure Columns as described below.

For Cover Distribution, two allocation attributes that can be added in the Collateral Context window, *Liability Configuration* and *LiabilityName* are propagated to the margin call trades (by selecting Propagate to trade) when "Distribute the call" is selected in the Call Generation section of the Details panel of the contract. The attributes are visible as trade keywords.

When the *TKW to Allocation Attribute* flag is selected for an attribute, if a trade keyword name matches the allocation attribute, then the keyword value can be displayed in the Allocation panel. Select the keyword/attribute name in Configure Columns.

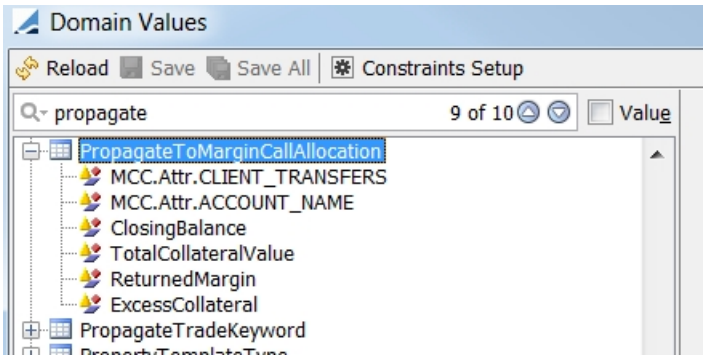
Propagation of Attributes to Margin Call Trade

It is possible to propagate certain attributes to the Margin Call trade. These attributes are:

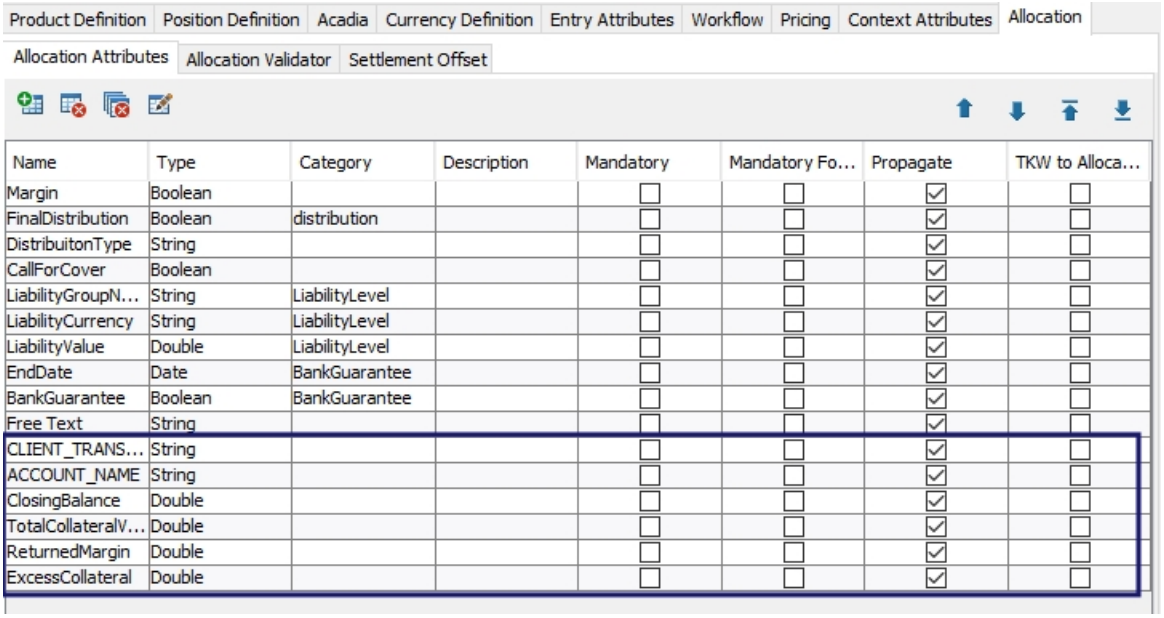
- ExcessCollateral
- NewMargin
- ReturnedMargin
- RemainingMargin
- TotalCollateralValue
- PreviousTotalMargin
- PreviousActualTotalMargin
- ClosingBalance

Additionally, it is possible to propagate attributes from the Margin Call contract Additional Info panel to the Margin Call trade.

To configure this, first create the domain *PropagateToMarginCallAllocation* and add the attributes. Attributes from the Additional Info panel must start with *MCC.Attr.xxx*.



Then, add the fields to Collateral Context > Allocation Attributes and designate the attributes to propagate to the trade.



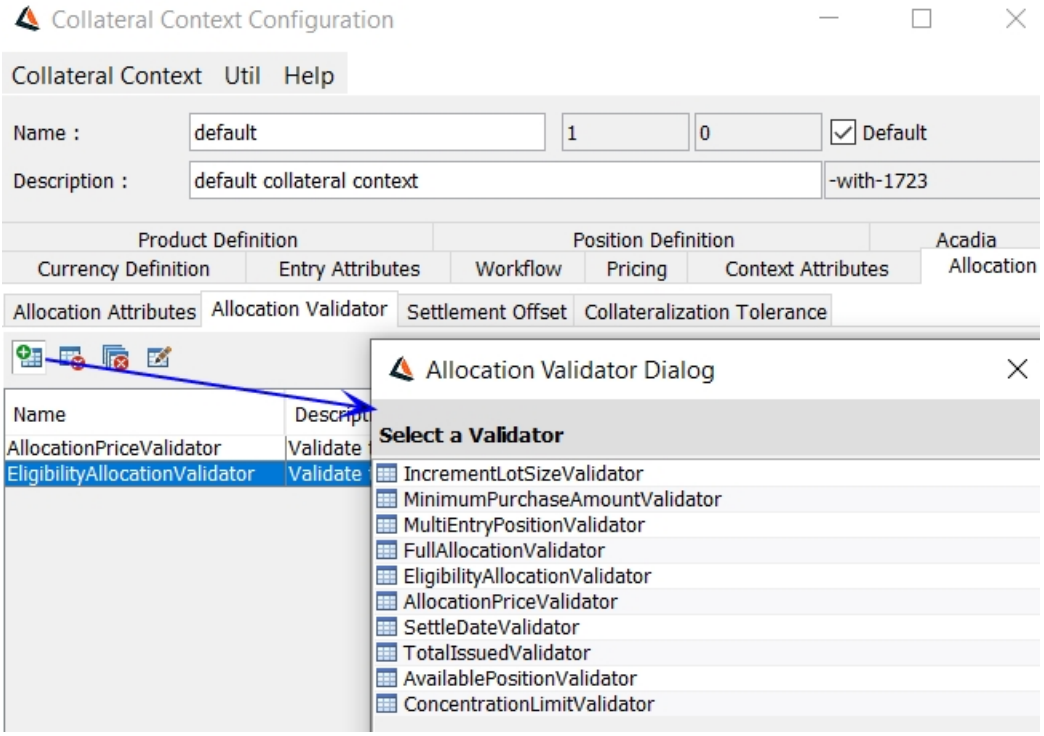
Name	Type	Category	Description	Mandatory	Mandatory Fo...	Propagate	TKW to Alloca...
Margin	Boolean			☐	☐	☑	☐
FinalDistribution	Boolean	distribution		☐	☐	☑	☐
DistribuitonType	String			☐	☐	☑	☐
CallForCover	Boolean			☐	☐	☑	☐
LiabilityGroupN...	String	LiabilityLevel		☐	☐	☑	☐
LiabilityCurrency	String	LiabilityLevel		☐	☐	☑	☐
LiabilityValue	Double	LiabilityLevel		☐	☐	☑	☐
EndDate	Date	BankGuarantee		☐	☐	☑	☐
BankGuarantee	Boolean	BankGuarantee		☐	☐	☑	☐
Free Text	String			☐	☐	☑	☐
CLIENT_TRANS...	String			☐	☐	☑	☐
ACCOUNT_NAME	String			☐	☐	☑	☐
ClosingBalance	Double			☐	☐	☑	☐
TotalCollateralV...	Double			☐	☐	☑	☐
ReturnedMargin	Double			☐	☐	☑	☐
ExcessCollateral	Double			☐	☐	☑	☐

4.5.2 Allocation Validators

The Allocation Validator panel is used to define validators when allocating and creating margin call trades. The possible validators are:

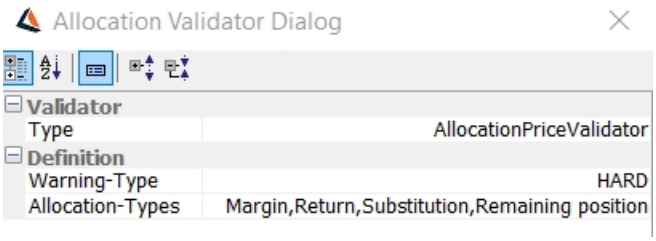
- AllocationPriceValidator
- AvailablePositionValidator
- ConcentrationLimitValidator

  Please note that concentration limit check is not performed on full return cases when exposure changes are in t ooohe PO's advantage.
- EligibilityAllocationValidator
- FullAllocationValidator
- IncrementLotSizeValidator
- MinimumPurchaseAmountValidator
- MultiEntryPositionValidator
- SettleDateValidator
- TotalIssuedValidator



For each validator, it is possible to designate either a hard or soft warning as well as allocation types.

Example:



AvailablePositionValidator

The system compares the allocation nominal against the trading book position nominal coming from the "Allocation_" Inventory Position template defined in the Allocation window. The user can designate Allocation-Types options of Margin, Return, and Substitution.

This feature can only be implemented with an Inventory Report Template using a Book Aggregation. Any other aggregation like Global or Book/Agent/Account will result in a validator failure. The reason why we cannot check at a more granular level of Book/Agent/Account is because we do not have access to the Agent/Account information until after the trade is created and SDI selection has occurred.

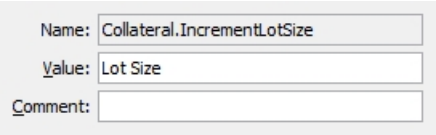
FullAllocationValidator

You can check *Collateralization_Tolerance* to use the tolerance configuration designated in the Collateralization Tolerance tab.

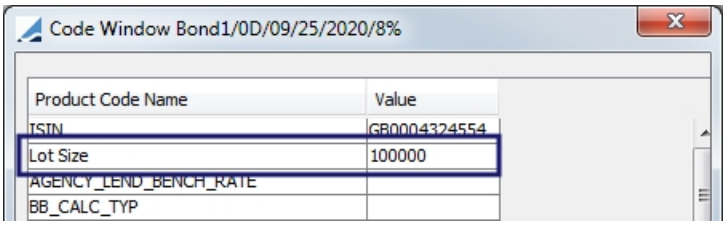
IncrementLotSizeValidator

In the case of a security allocation, the nominal of each security allocation is compared with the incremental value. If it is a multiple of the lot size, the validation passes. If it is not a multiple of the lot size, the system recalculates the allocation based on selected *Automatic-Rounding*.

Increment Lot Size is specified in Bond product code "Lot Size" by default as defined in domain *Collateral.IncrementLotSize*.



In the bond's Product Code Window, input the Lot Size Increment amount. Only if this amount is input for the bond will the *Increment Lot Size Validator* work.



MinimumPurchaseAmountValidator

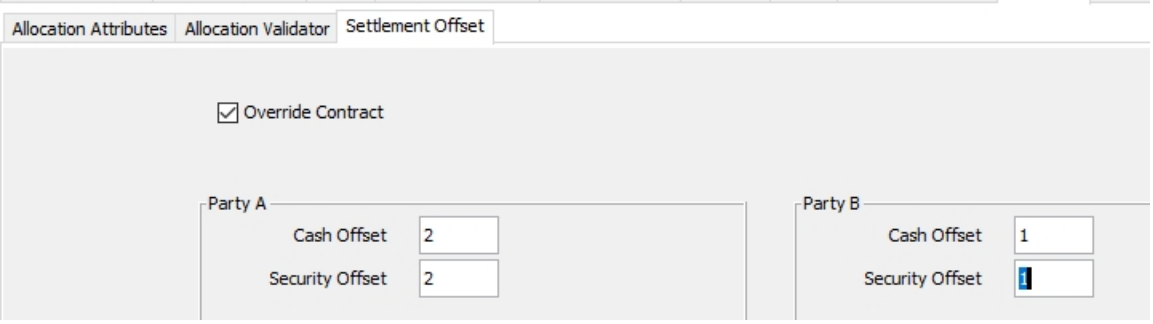
By default, is set to a hard warning.

MultiEntryPositionValidator

A warning appears if the allocations > previous margin of the processing entry + (daily margin) of all the non-selectec entries. There is also a workflow rule called *CheckMultiEntryPosition* that performs the same check as this validator.

4.5.3 Settlement Offset

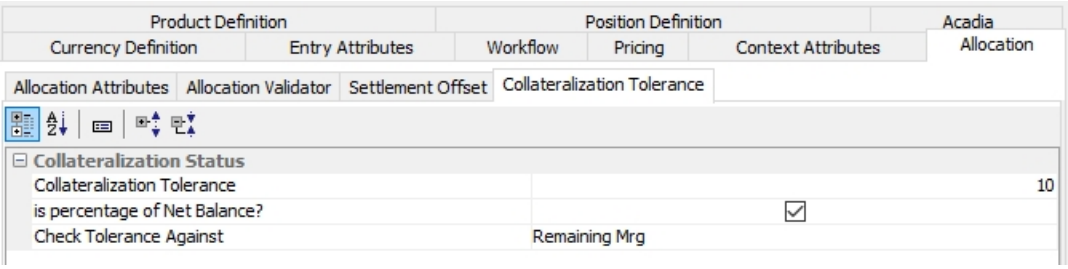
The Settlement Offset panel allows the ability to override, at the Collateral Context level, the settlement lag configuration defined in the Margin Call contract.



When the Override Contract checkbox is enabled, it specifies that the Settlement Offset on the Margin Call contract should be overridden by the values entered in the Party A and Party B boxes.

4.5.4 Collateralization Tolerance

A tolerance can be added for a full allocation validation. Therefore, even if a small percentage of the margin is not allocated or if it is over allocation, the process can continue.



- Enter a *Collateralization Tolerance* amount.
- When *Is Percentage of Net Balance* is checked, the collateralization tolerance is calculated based on the Net Balance.
- Designate to *Check Tolerance Against* either the Remaining Margin or the Actual Outstanding Margin.

  Remaining Margin = Netted Position – Return – Substitution

This feature can be used in conjunction with Acadia Auto Accept Allocation. Refer to the Acadia documentation for details.

4.6 Workflow

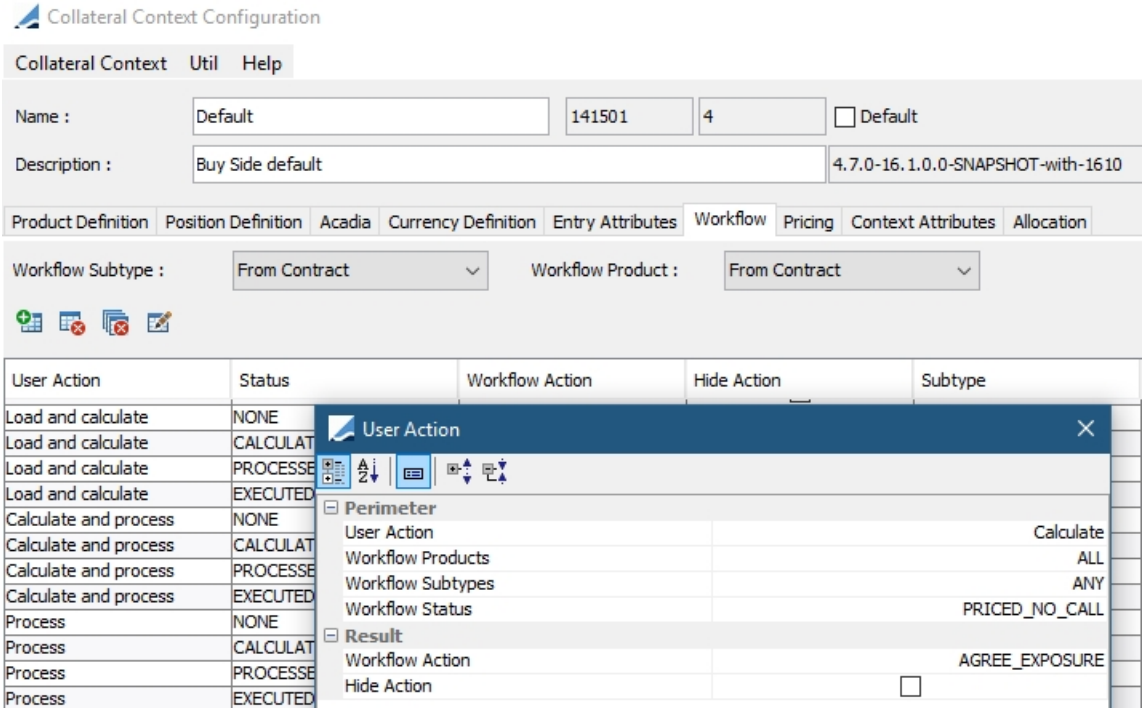
This panel allows you to link a workflow action directly to the Price and Allocate buttons in Collateral Manager for the selected margin call contract or to the Load and Load & Process buttons in Cover Distribution Manager.

4.6.1 Workflow for Collateral Manager

In Collateral Manager, by default when you click the Price button, you must then apply the NEW workflow action in order to save the priced contract. You must also perform a save function after an allocation is applied from the ALLOCATE window.

To allow the save action to be performed automatically after a contract is priced or allocation is applied, use this panel to set up which action you would like to be performed when these buttons are clicked and all of the criteria is met.

You may also designate a Workflow Subtype and or Workflow Product. The Workflow Actions available for a specified subtype are displayed based on the actions designated for that subtype in the Collateral Workflow or Cover Distribution Workflow. The Workflow Products and Workflow Subtypes must also be designated in the Details panel of the Margin Call or Clearing Member contract.



NOTE: If you would like to hide an action from the Action button drop-down menu or the right-click Action menu in Collateral Manager, select the Hide Action checkbox.

4.6.2 Workflow Subtype / Workflow Product

The options for Workflow Subtype and Workflow Product are: *From Contract*, *Use Context*, *From Entry Type* and *From Contract and Entry*.

The Entry Type designations allow the Processing Type selection in Collateral Manager to determine which workflow is used.

When *From Entry Type* is chosen in the Context, the behavior in Collateral Manager is as follows:

- Processing Type *Processing* uses workflow subtype *processing*
- Processing Type *Substitution* uses workflow subtype *substitution*
- Processing Type *Valuation* uses workflow subtype *valuation*

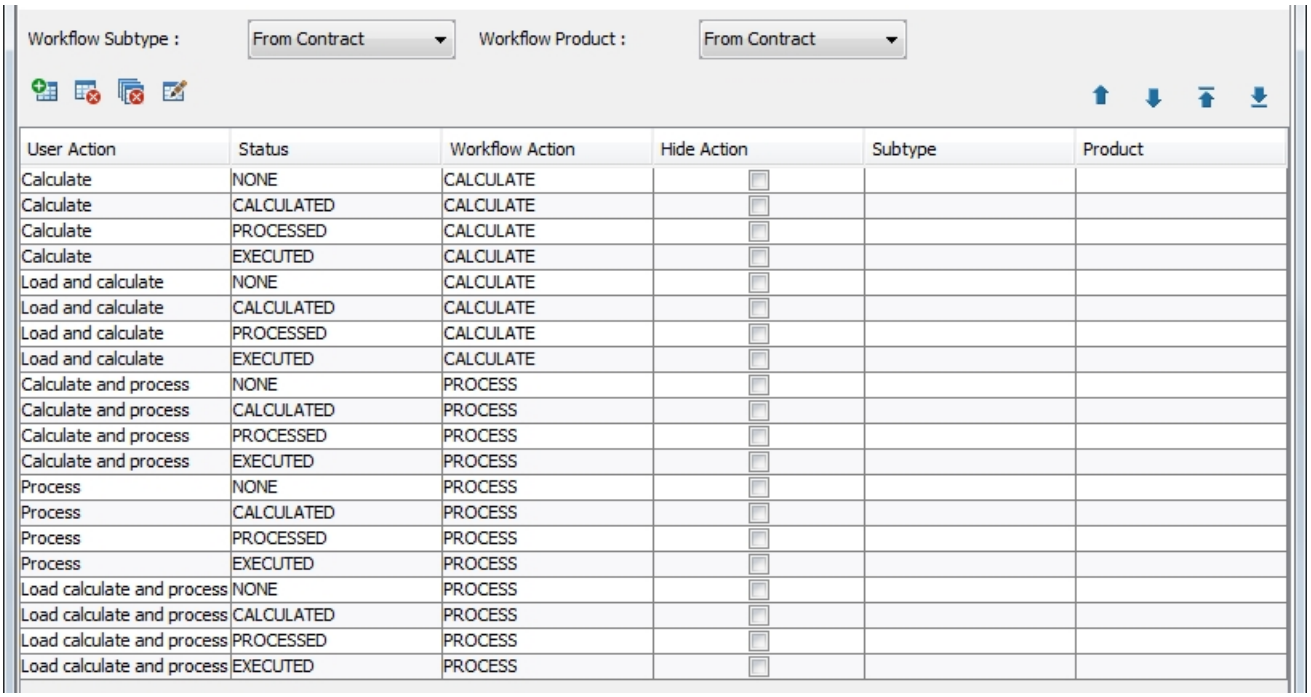
When *From Contract and Entry* is chosen, the behavior in Collateral Manager is as follows:

- Processing Type *Processing* uses the workflow from the Margin Call Contract > Details panel > Workflow field
- Processing Type *Substitution* uses workflow subtype *substitution*
- Processing Type *Valuation* uses workflow subtype *valuation*

4.6.3 Workflow for Cover Distribution Manager

In Cover Distribution Manager, by default when the contracts are loaded no action is applied to the contracts. In other words, when you Load, Process or Load & Process, none of the figures are saved to the database unless an action is applied to the contracts. Automatically applying an action upon clicking one of these buttons, is configured in the Workflow tab of the Collateral Context window.

Below is an example of how a Cover Distribution collateral context can be set up detailing the user action (button or menu selection) and the workflow action applied depending on the status of the contract at the time.



User Action	Status	Workflow Action	Hide Action	Subtype	Product
Calculate	NONE	CALCULATE			
Calculate	CALCULATED	CALCULATE			
Calculate	PROCESSED	CALCULATE			
Calculate	EXECUTED	CALCULATE			
Load and calculate	NONE	CALCULATE			
Load and calculate	CALCULATED	CALCULATE			
Load and calculate	PROCESSED	CALCULATE			
Load and calculate	EXECUTED	CALCULATE			
Calculate and process	NONE	PROCESS			
Calculate and process	CALCULATED	PROCESS			
Calculate and process	PROCESSED	PROCESS			
Calculate and process	EXECUTED	PROCESS			
Process	NONE	PROCESS			
Process	CALCULATED	PROCESS			
Process	PROCESSED	PROCESS			
Process	EXECUTED	PROCESS			
Load calculate and process	NONE	PROCESS			
Load calculate and process	CALCULATED	PROCESS			
Load calculate and process	PROCESSED	PROCESS			
Load calculate and process	EXECUTED	PROCESS			

NOTE: With the above setup, the same action applied to any contract status will result in the same status. This is useful for the COVER_DISTRIBUTION scheduled task where contracts being processed will most likely be in different statuses (such as NONE, CALCULATED, PROCESSED or EXECUTED).

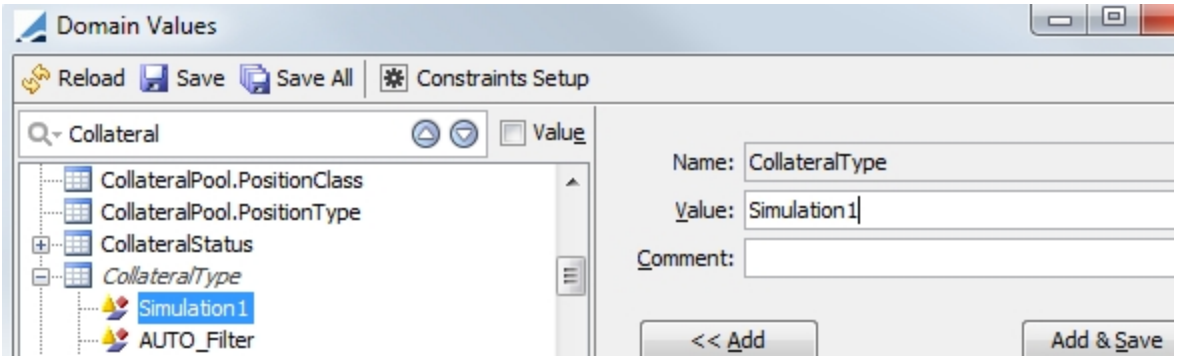
4.6.4 Context Specific Workflow

In the Workflow panel, you may define a context specific workflow which overrides the workflow specified in the contract for any contracts processed using that context.

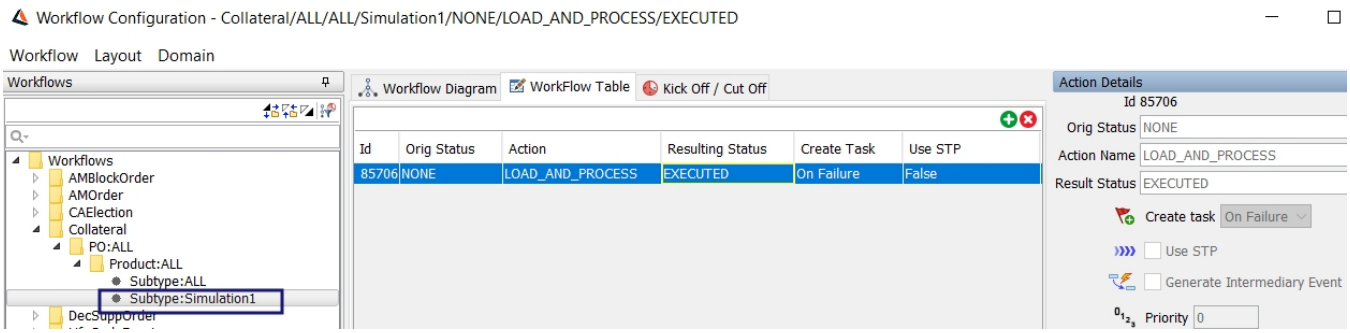
An example of when this may be helpful is when a context is being used to calculate the Global Required Margin using simulated credit ratings. In this case, you would not want to use a standard collateral workflow and would instead prefer a simplified workflow which moves the contract to a simulated status when using the simulation context.

To use this functionality, follow the steps below.

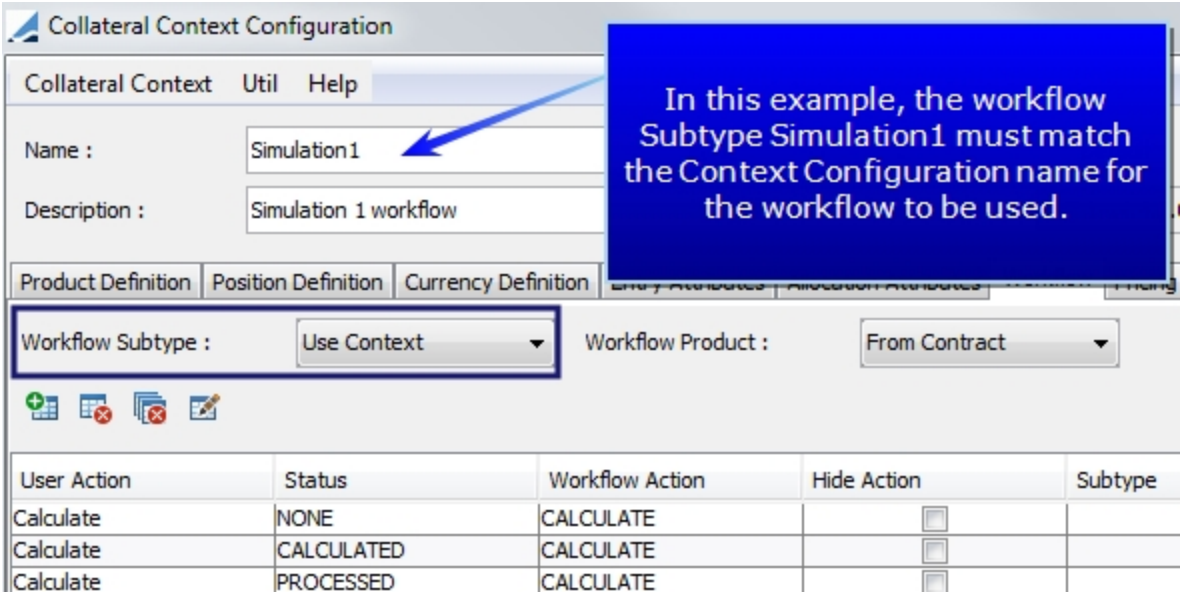
Step 1 - Add the name of the Context Configuration to either one of the following domain values: *CollateralType* (for Subtype), *productGroup* or *productType* (for use with different product types).



Step 2 - In the Workflow window (from Calypso Navigator, **Configuration > Workflow**), specify the workflow to be used with that context configuration. (If you specified a product type or group, select it from the Product drop-down)

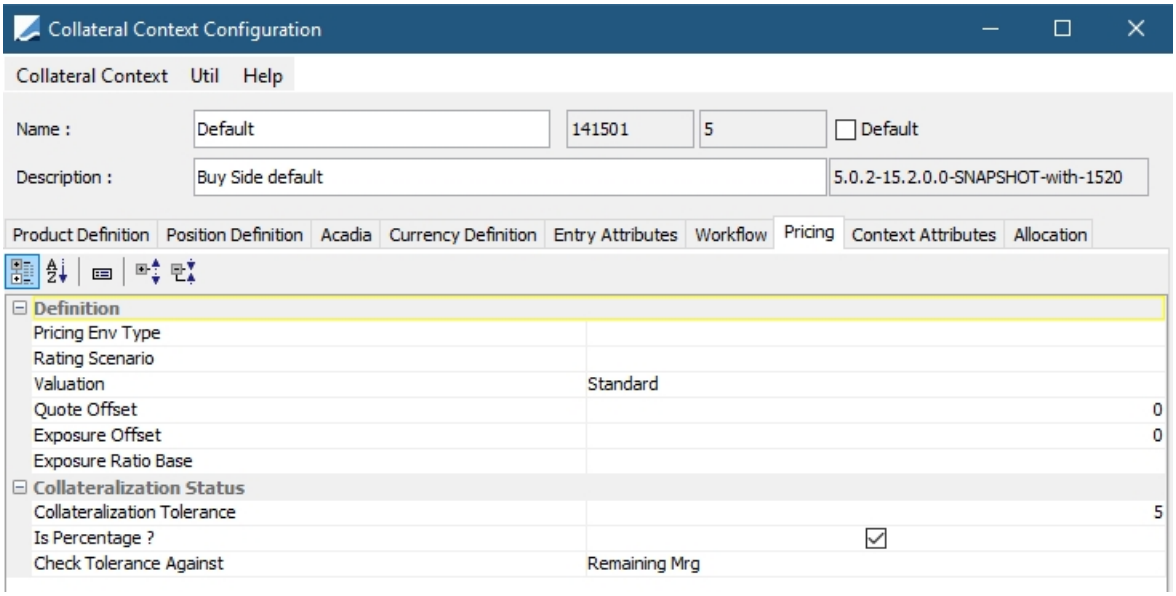


Step 3 - In the Context Configuration window, specify for the Workflow Subtype to use the Context. (If a product type or group was used instead, select Use Context in the Workflow Product drop-down.) Processing Type may also be chosen as the Workflow Subtype or Workflow Product. Processing Types are chosen in the Collateral Manager filter criteria.



4.7 Pricing

This panel specifies how the collateral data should be priced for the optimization.



4.7.1 Pricing Environment Type

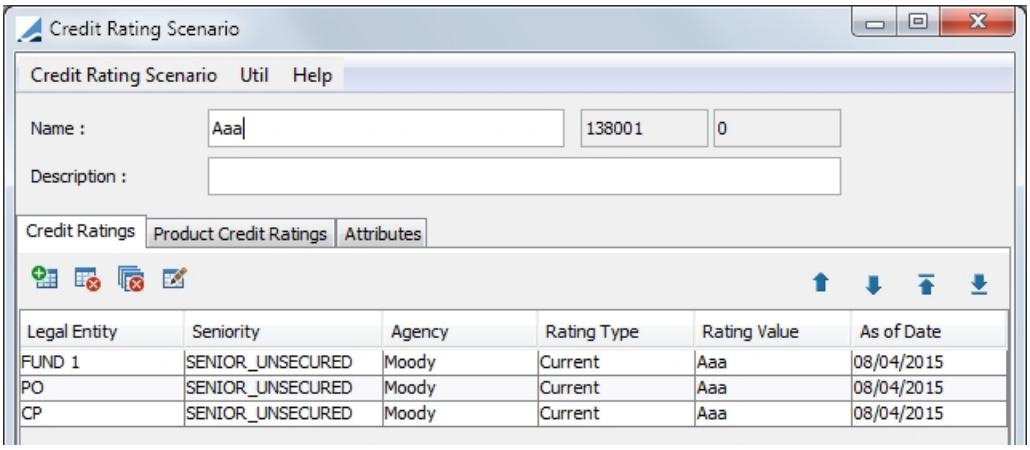
In this field, designate whether to use end of day (EOD) pricing, intraday (ITD) pricing or credit downgrade simulation (SIM) during optimization. The pricing environments that correspond to these choices are designated in the Details panel of the contract.

4.7.2 Rating Scenario

The Rating Scenario designation enables simulation of the effects on margin requirements that come from a downgrade in credit rating or a change to counterparty credit ratings. This functionality can be used solely through the Collateral module, or perturbed data may be fed into Collateral from the Liquidity module. Selecting a Rating Scenario in this field indicates that the Collateral module will process data on a scenario basis, rather than a standard one.

The scenario information comes from the CREDIT_RATING_SCENARIO table. If no scenario is selected, the normal CREDIT_RATING table is used to process the collateral information. See Margin Call Credit Rating for more information on standard credit rating processing.

Scenarios are either populated in the CREDIT_RATING_SCENARIO table via the Liquidity module, or the information can be manually entered in the Collateral module from the Credit Rating Scenario window. This window may displayed by selecting **Util > Credit Rating Scenario**.



You may enter rating information pertaining to legal entity and/or product credit ratings as well as designate credit rating attributes.

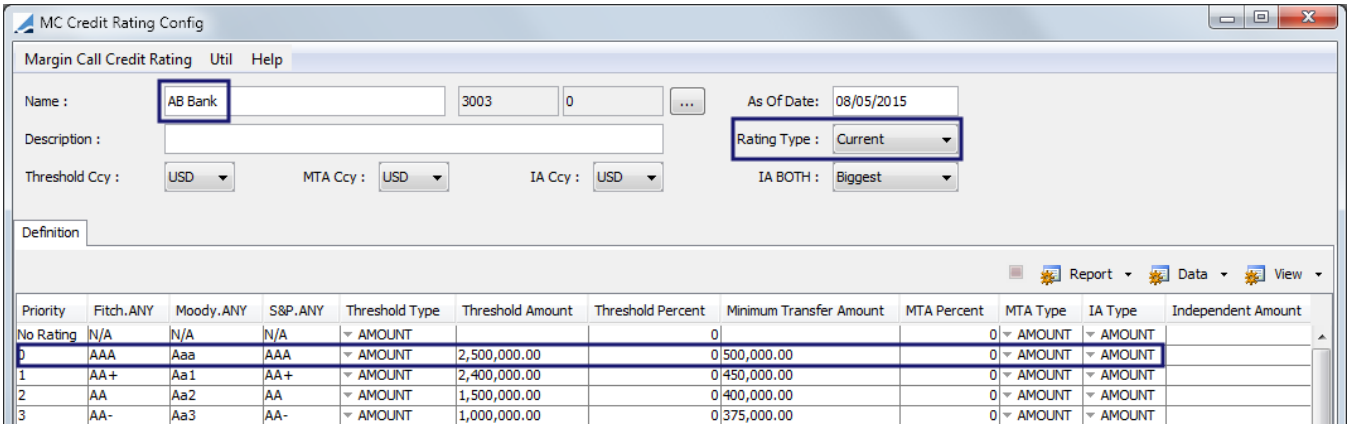
NOTE: If the Liquidity module is used to feed credit rating scenario data into the Collateral module, the scenario name in Liquidity must be entered in the Rating Scenario field of the Collateral Context. This enables Collateral to pull the appropriate information from the CREDIT_RATING_SCENARIO table. No additional data is required to be entered in the Credit Rating Scenario window in that case.

Business Case for Credit Rating Scenario

In this example, consider that AB Bank has Senior Secured Debt that is paid first in the event of a default. This debt is secured by collateral to reduce lending risk. The senior secured loan agreement contains covenants tied to anticipate financial metrics of the underlying company. These financial covenants are essentially an option to re-price risk when a covenant default is near or has been reached. If AB Bank projects a certain level of cash flow or leverage (examples

of the financial covenants) in the future and they fail to deliver, they can come back and ask to negotiate an amendment to the original agreement, but the new terms often include a re-pricing of risk either in the form of a fee or higher interest rate.

The current Credit Rating provided to AB Bank from S&P and Moody's is AAA. Our agreement in place for AB Bank was based on the ratings. At this credit rating, the threshold established for AB Bank is $2,500,000 USD. The minimum transfer amount is $500,000 USD. This means in our agreement, we will not initiate a margin call until AB Bank has reached $500,000 USD exposure over the $2,500,000 USD threshold.

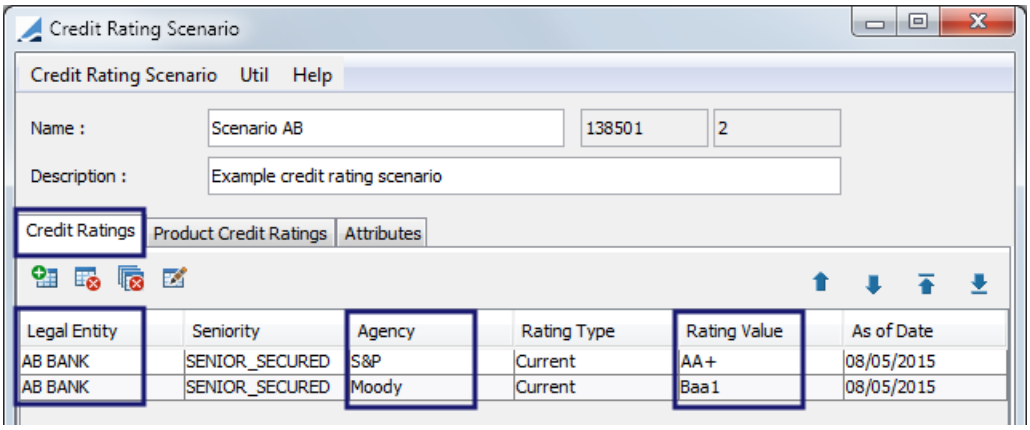


Priority	Fitch.ANY	Moody.ANY	S&P.ANY	Threshold Type	Threshold Amount	Threshold Percent	Minimum Transfer Amount	MTA Percent	MTA Type	IA Type	Independent Amount
No Rating	N/A	N/A	N/A	AMOUNT		0		0	AMOUNT	AMOUNT	
0	AAA	Aaa	AAA	AMOUNT	2,500,000.00	0	500,000.00	0	AMOUNT	AMOUNT	
1	AA+	Aa1	AA+	AMOUNT	2,400,000.00	0	450,000.00	0	AMOUNT	AMOUNT	
2	AA	Aa2	AA	AMOUNT	1,500,000.00	0	400,000.00	0	AMOUNT	AMOUNT	
3	AA-	Aa3	AA-	AMOUNT	1,000,000.00	0	375,000.00	0	AMOUNT	AMOUNT	

For this example, the credit rating has been downgraded for AB Bank by S&P to AA+. This is still considered a low risk. However, the second agency, Moody's, has downgraded AB Bank to Baa1. This represents Medium Risk by Moody's. For this agreement, default risk will be managed by using the lowest credit rating (This is set in the Margin Call Contract.) From the two Credit Rating Agency's ratings, there could be a possibility that one agency has not received the most recent rating assignment to reflect the current creditworthiness of AB Bank.

The exposure in this scenario for AB Bank is now $3,000,000 USD. The new threshold exposure based on the current agreement and previous credit rating by S&P and Moody's is $1,800,000 USD based on the current threshold of $2,500,000 USD. The new (MTA) minimum transfer amount exposure based the current agreement and previous credit rating by S&P and Moody's is $375,000 USD.

In this scenario, if AB Bank's credit rating is Baa1 (Medium Risk), the agreement in place is for a threshold of $700,000 USD and the (MTA) minimum transfer amount exposure is $125,000 USD. The exposure is $825,000 USD based on the downgraded credit rating provided by Moody's.



4.7.3 Valuation

This selection designates whether the contracts should be processed for Standard, Ad Hoc or Context Based valuation.

- Standard Valuation - The pricing is based on the valuation information specified in the Dates & Times panel and the Minimum Transfer Amount specified in the Parties panel in the contract.
- Ad Hoc Valuation - The pricing is based on the valuation and MTA information specified in the Ad-Hoc Details panel of the contract.
- Context Based Valuation - When this valuation type is selected, the system ignores the Valuation Date rule and the Valuation Time Offset rule defined in the Dates & Times panel of the contract and instead loads every contract (meeting template criteria) on the process date and forces the valuation offset defined on the context. There are also two fields that appear only when this Valuation Type is chose. One to indicate the Valuation Offset and the other to designate Business Calendars to use on the context to respect business days for the offset.

4.7.4 Quote Offset & Exposure Offset

These fields are used to utilize initial margin balances to offset against variation margin. The system will look for a date rule set, defined in the Dates & Times panel of the Margin Call Contract, and then calculate the real quote the day after the offset. The exposure value date will be the day after the offset.

Note: Quote Offset exists on the Margin Call contract as well but the setting in the Collateral Context overrides the contract setting.

Total Quote Offset = Contract Quote Offset Days + Context Quote Offset

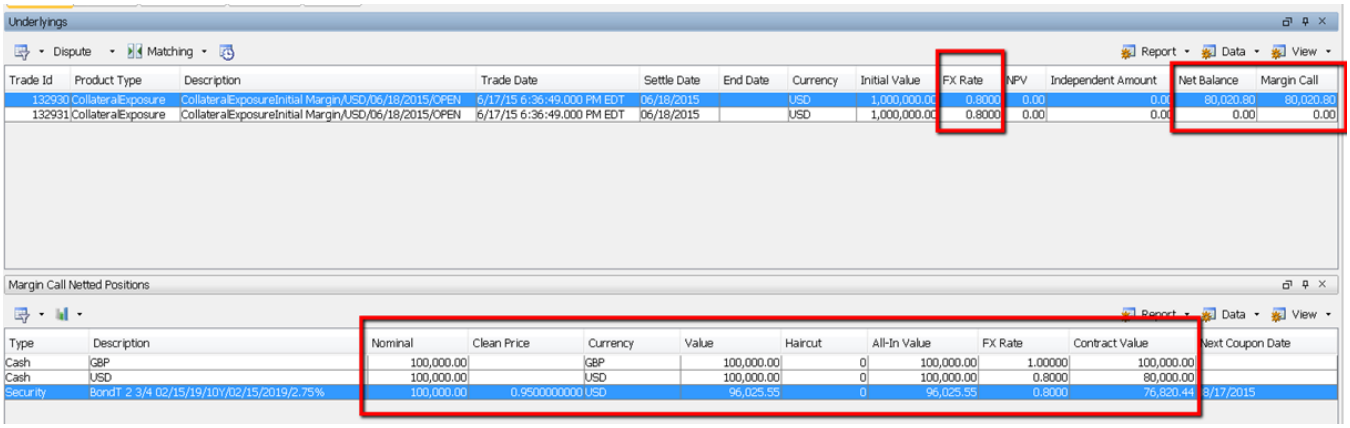
Example 1:

Process Date	6/29/2015
Val Date Offset	0
Contract Quote Offset	0

Context Quote Offset	2	6/25/2015
Total Quote Offset	2	6/25/2015
Exposure Offset	1	6/26/2015

Offset Days		FX.GPB.USD	Bond T	PL Mark
	6/21/2015	1.21	91	100021
	6/22/2015	1.22	92	100022
	6/23/2015	1.23	93	100023
3	6/24/2015	1.24	94	100024
2	6/25/2015	1.25	95	100025
1	6/26/2015	1.26	96	100026
Weekend	6/27/2015	1.27	97	100027
Weekend	6/28/2015	1.28	98	100028
0	6/29/2015	1.29	99	100029
	6/30/2015	1.3	100	100030
	7/1/2015	1.31	101	100031

Exposure: 100026/1.25 = 80020.80



Example 2:

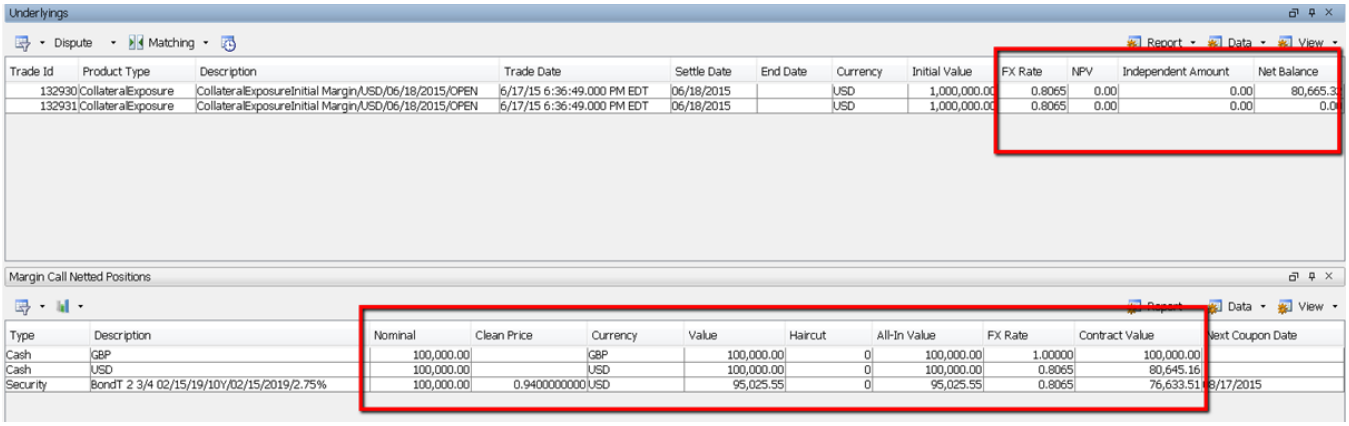
Process Date		6/29/2015
Val Date Offset	0	
Contract Quote Offset	1	
Context Quote Offset	2	

Total Quote Offset	3	6/24/2015
Exposure Offset	2	6/25/2015

Offset Days		FX.GPB.USD	Bond T	PL Mark
	6/21/2015	1.21	91	100021
	6/22/2015	1.22	92	100022
	6/23/2015	1.23	93	100023
3	6/24/2015	1.24	94	100024
2	6/25/2015	1.25	95	100025
1	6/26/2015	1.26	96	100026
Weekend	6/27/2015	1.27	97	100027
Weekend	6/28/2015	1.28	98	100028
0	6/29/2015	1.29	99	100029
	6/30/2015	1.3	100	100030
	7/1/2015	1.31	101	100031

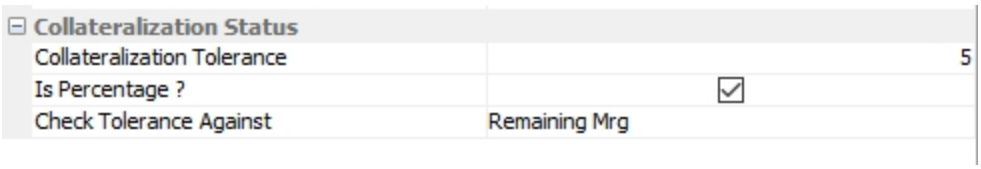
FX rate: 1/1.24 = 0.806452

Exposure: 100025/1.24 = 80665.32



4.7.5 Collateralization Status

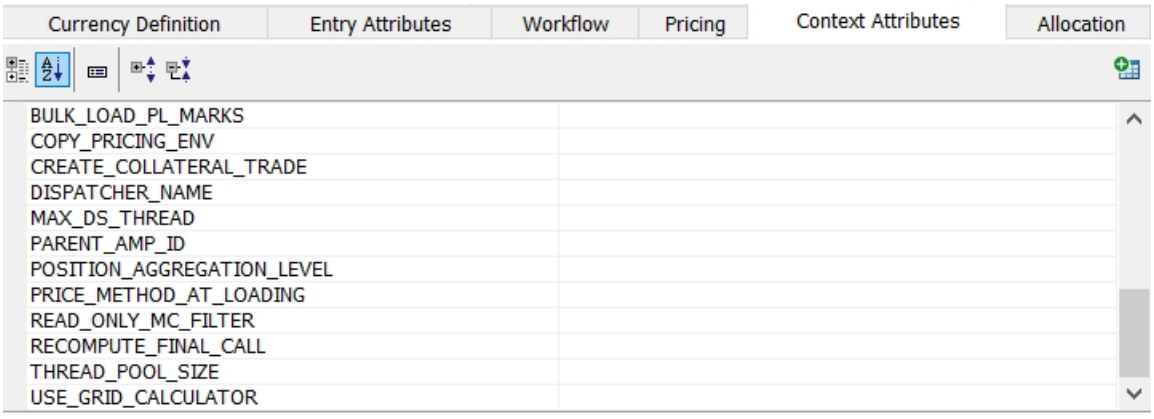
To simplify the end of day controls on Collateral activity, a collateralization tolerance can be defined, either as a fixed amount expressed in contract currency or as a percentage based on the Net Balance. This Tolerance definition is then used in the *Collateralization Status* in the Collateral Manager Margin Call Entry section.



- Collateralization Tolerance - A tolerance number in either percentage or contract currency. Decimal values are permitted.
- Is Percentage? - If false (default), the value provided in Collateralization Tolerance is considered as a fixed amount expressed in base currency. If true, the value in Collateralization Tolerance is a percentage. The formula is *Tolerance = Collateralization Tolerance * Net Balance / 100*.
- Check Tolerance Against - There are two options for this:
  - *Remaining Margin* - For standard business where margin calls need to be covered on a theoretical basis. When Remaining Margin is chosen, this value is compared against the Tolerance when computing *Collateralization Status* in Collateral Manager.
  - *Actual Outstanding Margin* - For Sec Finance, where margin calls need to be covered in real settlement (considering the collateral settlement status).

4.8 Context Attributes

Some of the attributes of the COLLATERAL_MANAGEMENT scheduled task can be also used for Collateral Manager, likewise for the attributes of the COVER_DISTRIBUTION scheduled task and Cover Distribution Manager. Having two separate sets of variables allows for the configuration of scheduled task independently. Some of the attributes are described below.



Attribute	Description
BULK_LOAD_PL_MARKS	Set to True for bulk loading of PL Marks. Be sure that the Collateral Exposure product is using PricerCollateralExposure in the Pricer Configuration.
CREATE_COLLATERAL_	The default of this attribute is true. When set to true, collateral details for repo and sec

Attribute	Description
TRADE	lending trades are displayed. Set to false to deactivate this display.
DISPATCHER_NAME	Dispatcher configuration name to use for the grid.
MAX_DS_THREAD	Limits the maximum number of threads that can query the data server at the same time in order to avoid too much stress being put on the data server.
POSITION_AGGREGATION_LEVEL	Position aggregation designation. Book - Margin Call positions are aggregated based on Book Global - Margin Call positions are aggregated at the contract level. If no value is chosen, the default aggregation is by Book.
PRICE_METHOD_AT_LOADING	This attribute can accept the values PRICE, REPRICE or NONE. The default value is PRICE if you do not define the attribute. This allows the Collateral Manager to automatically price or re-price the entries as part of the loading process.
RECOMPUTE_FINAL_CALL	If this attribute is not set or set to True (default behavior) then there is no change in final call amount behavior. If it is set to False, then the Final Call Amount is not recomputed when executing the distribution. When the Final Call Amount is reset to 0, the Remaining Margin will always be equal to the Call including the buffer. When the Final Call Amount is not reset, the Remaining Margin = Call including buffer – Final Amount.
THREAD_POOL_SIZE	Total number of threads used by the Collateral module for improved performance
USE_GRID_CALCULATOR	Set to true if the collateral module should run using the grid calculator

5. Collateral Exposure

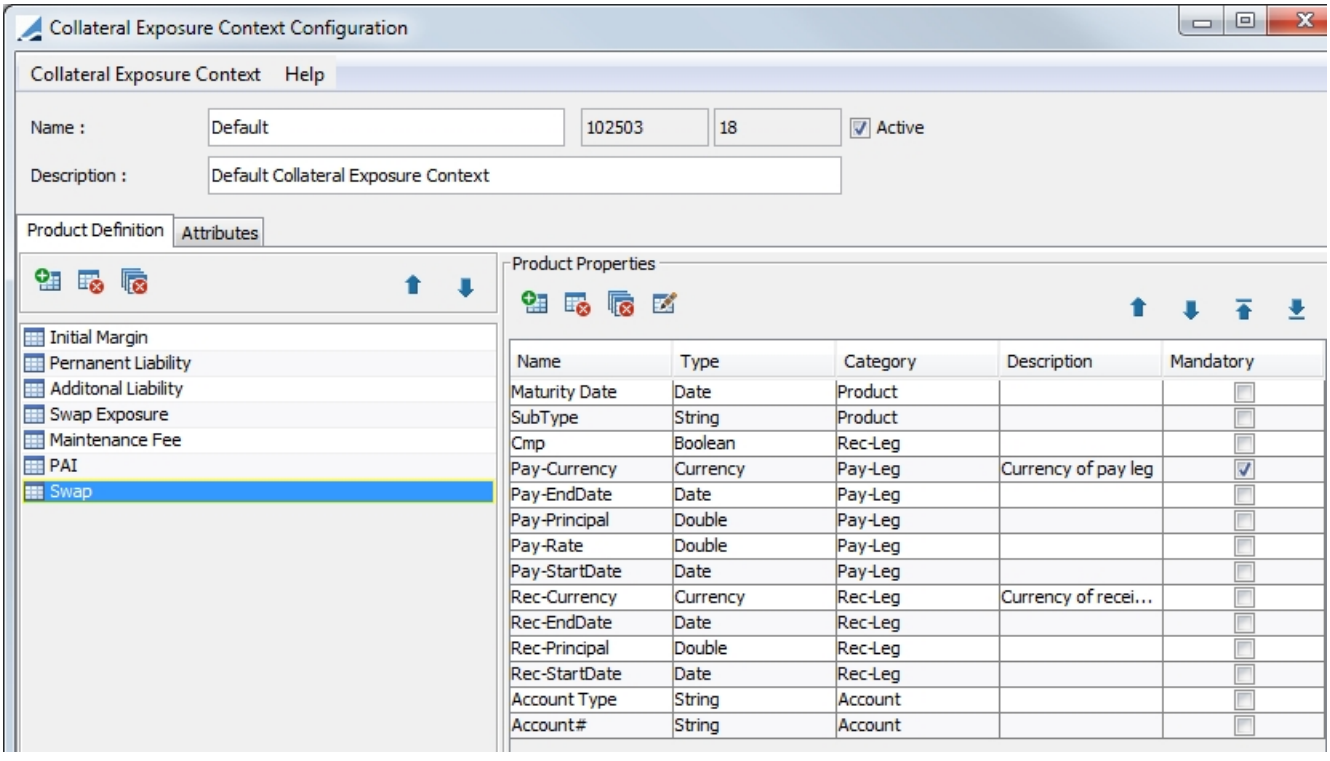
The Collateral Management module allows you to use trades for collateral management purposes which have been created outside of the Calypso system, and are imported into the Calypso system as Collateral Exposure trades. Margin calls can be computed on those trades as on any other native Calypso trade.

This applies, for example, to initial margins imported from the clearing houses in the context of OTC Clearing.

5.1 Collateral Exposure Context

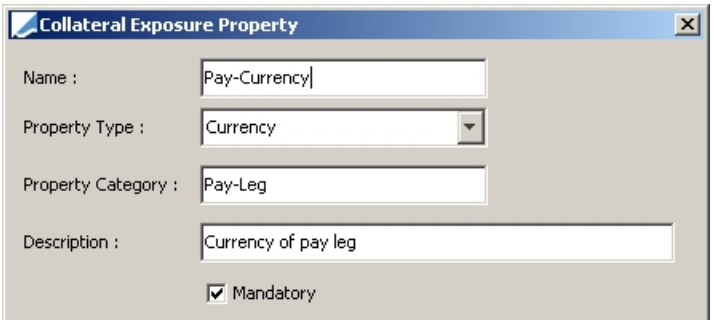
The Collateral Exposure Context window allows you to define the structure of the underlying product of the Collateral Exposure trade. You may save as many contexts was you wish, but only one context may be selected at the default and that context is the one used by the system.

To view this window, select **Util > Collateral Exposure Context** from the Margin Call Contract window or the Clearing Member Contract window.



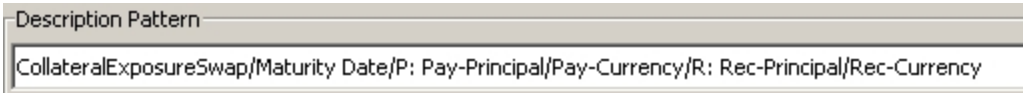
- Enter a Name and Description for your exposure context. Select the default check box to indicate if you would like the context to be the default and therefore the one the system automatically uses.
- Click  to add a product type or underlying. These are defined in the domain value *CollateralExposure.subtype*.

» In the Product Properties area, click  to add properties to define your underlying product. When you click this button, the Collateral Exposure Property window displays.



Fields	Description
Name	The name of the property
Property Type	Select the type of data for the property (String, Date, etc...)
Property Category	Enter a category for the property. This is used to group the properties in the Collateral Exposure Trade window.
Description	Enter a brief description for the property.
Mandatory	Check this box if the property is required to save a trade.

» The Description Pattern is used to generate the trade description. The keyword with the format NAME_OF_PROPERTY will be replaced by the value. Below is an example.



A saved collateral exposure trade with the above description:

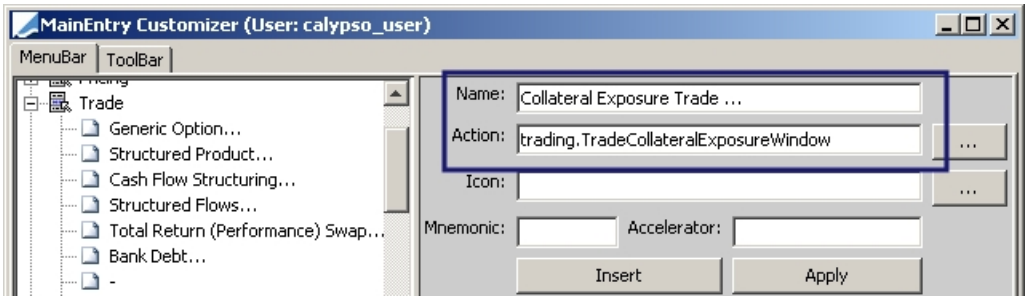
» The Attributes tab allows you to add additional information to a context. The list of attributes is defined by the domain value *CollateralExposureContext*. The list of possible values for an attribute is defined with the *CollateralExposureContext.NAME_OF_THE_ATTRIBUTE* domain value. You may also click  to add the attribute to the domain.

5.2 Collateral Exposure Trades

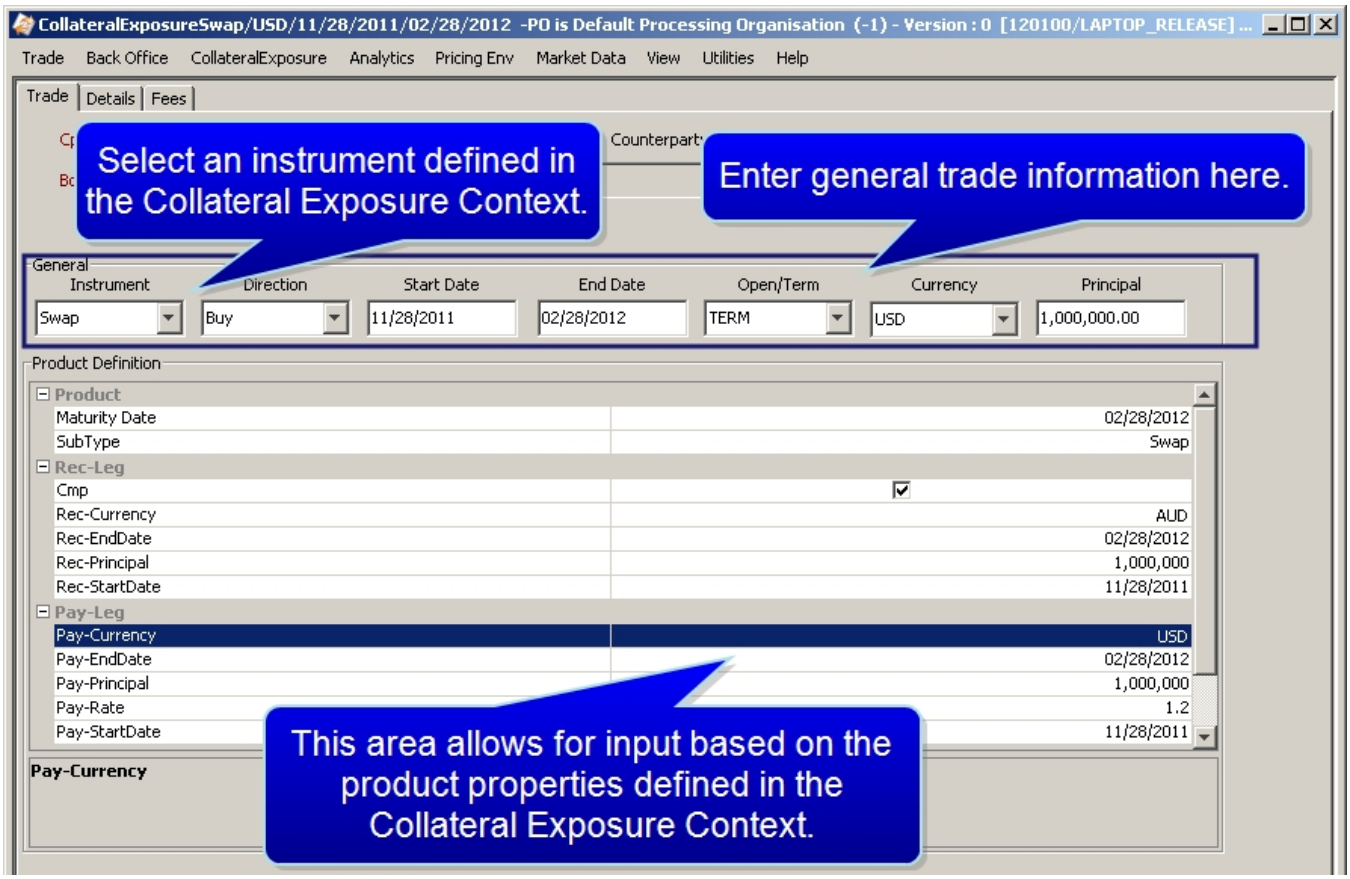
A Collateral Exposure trade displays the trade using basic trade information (such as start date, end date, currency, etc...) but it also contains additional product information defined in the Collateral Exposure Context.

You can add the Collateral Exposure Trade window through the Main Entry Customizer (**Utilities > Main Entry Customizer**)

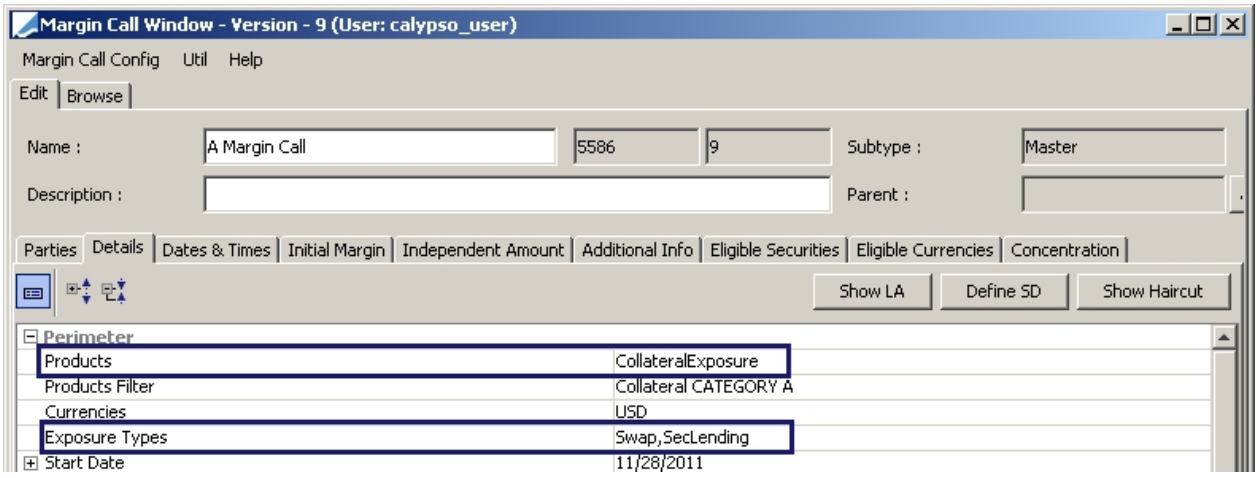
Menu action: `trading.TradeCollateralExposureWindow`



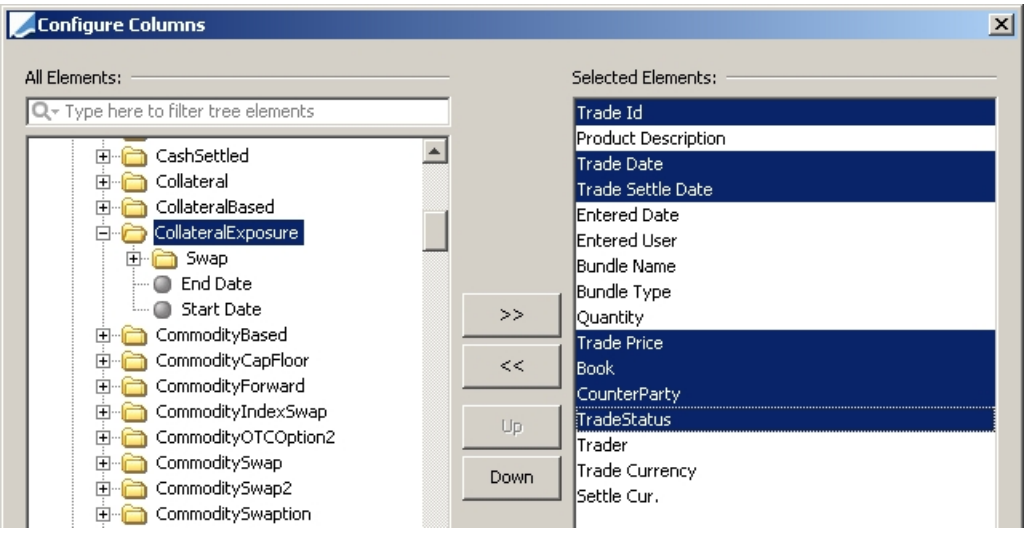
Once opened, the Collateral Exposure Trade window looks like that below.

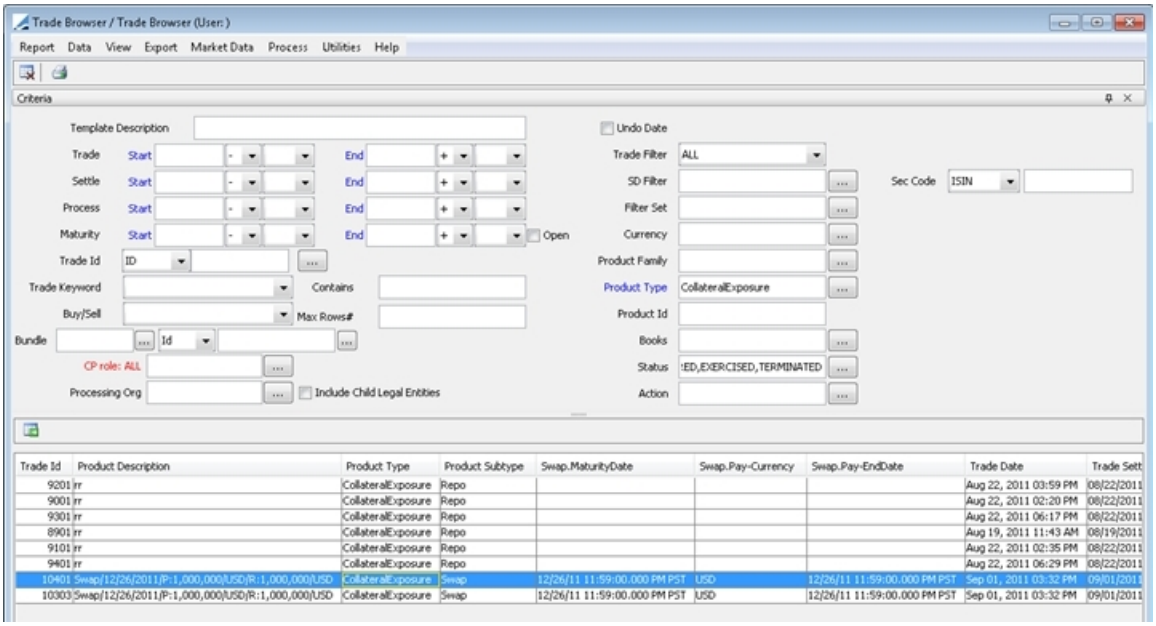


For these types of trades, the product family and type is Collateral Exposure. the product subtype is the underlying type. This is defined in the Contract.

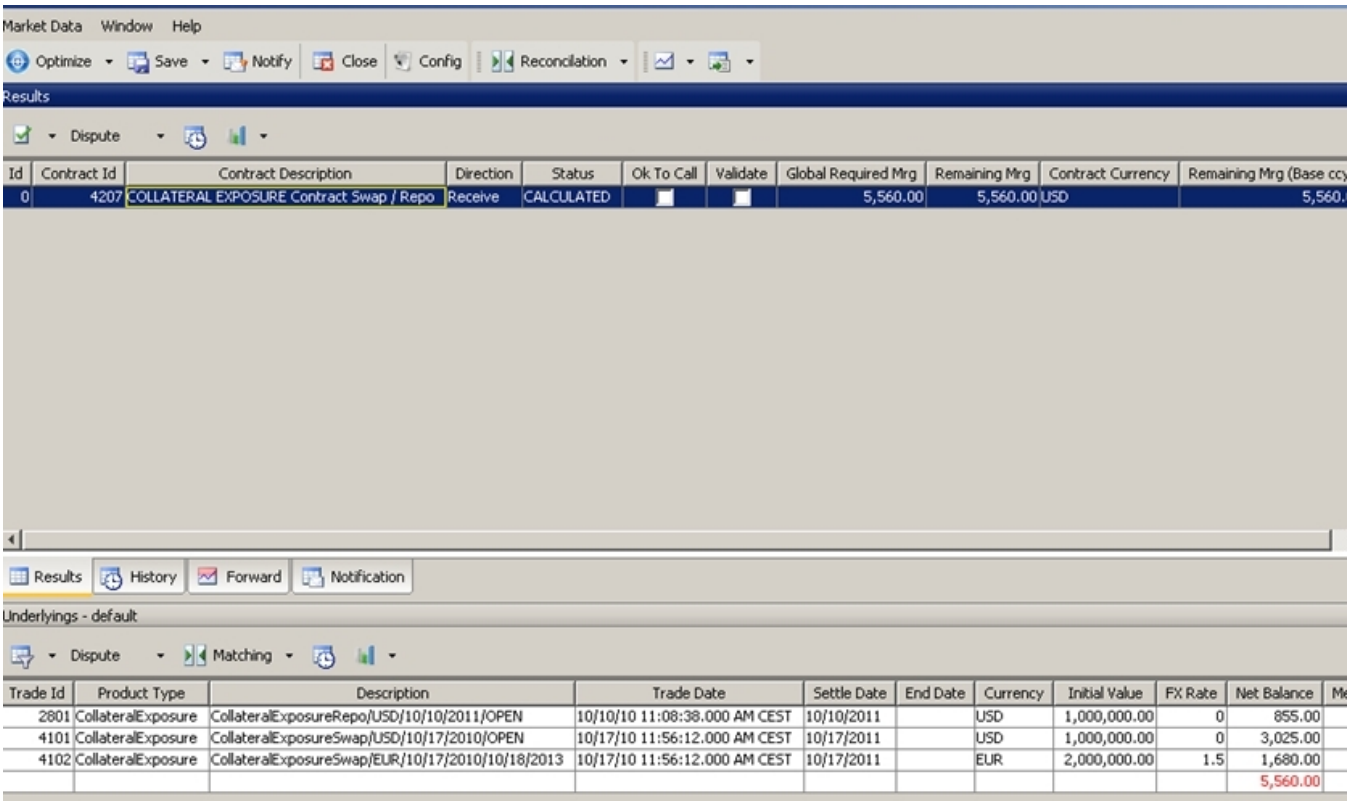


You are able to display the product properties of a Collateral Exposure trade in a trade report like any other product. See the Configure Columns window in the Trade Browser below. (**Deal Management > Trade Browser**)





Below is an example of how a Collateral Exposure trade appears in the Collateral Manager.



NOTE: When using a PL Mark currency, you must use the *PricerCollateralExposure* pricer.

6. Exposure Groups

To meet IOSCO regulations, specifically the 2-way movement of Initial Margin and the Variation Margin currency silos, Calypso has a solution which breaks down contract level exposures into more granular Exposure Groups. This works by defining filters which consolidate underlying trades for a contract into distinct exposure groups or portfolios. These groups maintain their own exposures and their own previous collateral positions. The sum of the groups' exposures and the sum of the groups' positions form the required margin to the external counterparty.

There are two solutions that comprise the Exposure Group Functionality. One solution involves independent workflows for the exposure groups called Bilateral Exposure Group Functionality and the other involves the exposure groups exchanging cash or securities internally and depending on the parent contract for the workflow. This is called Buy Side Fund Distribution.

6.1 Bilateral Exposure Groups

The IOSCO framework mandates that Initial Margin be exchanged on a 2-way basis. This means that each party must exchange their portion of the Initial Margin requirement. The IOSCO framework also mandates that the Variation Margin be subject to Currency Silos. Currency Silos require that exposures be covered in their own currency, or a specific currency. For example, if a contract accepts EUR and USD transactions, the EUR exposure can be covered only with EUR collateral and the USD exposure can only be covered with USD collateral.

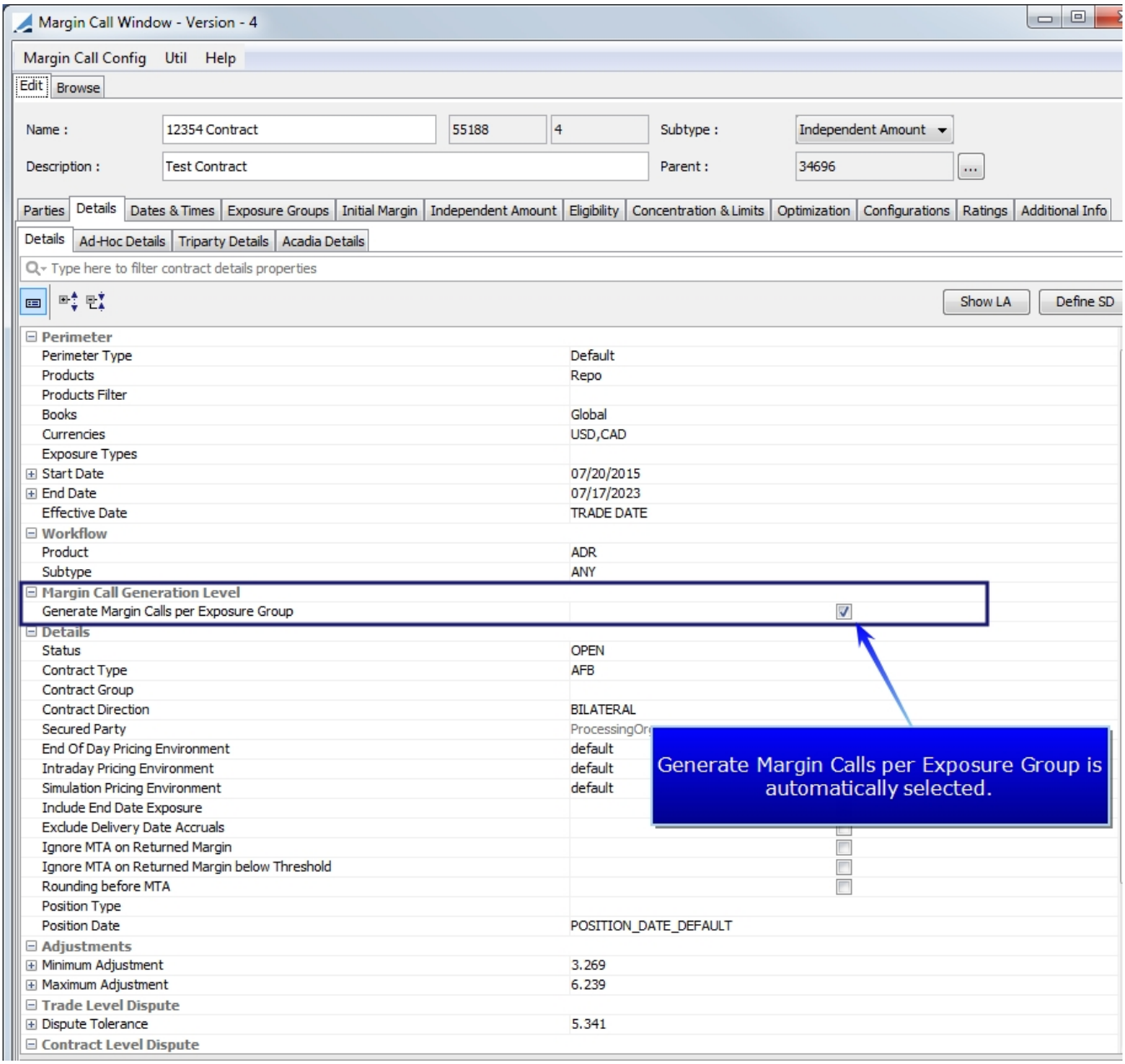
Using Bilateral Exposure Groups:

- It is possible to create a single Initial Margin contract which has two underlying Exposure Groups. One Exposure Group represents the exposures/collateral that the PO has to pledge to the CP. The other Exposure Group represents the exposures/collateral the CP has to pledge to the PO.
- It is possible to create a singe Variation Margin contract which has multiple underlying Exposure Groups. Each Exposure group can accept trades of a certain currency (or multiple currencies for the Group Currency silo). Each Exposure Group would have its own eligibility set and its own haircut schedule to apply to appropriate cross currency haircuts.

With Exposure Groups, each group can have its own Minimum Transfer Amount, Threshold and rounding convention. Each group can maintain its own workflow for payment and dispute purposes. This means that each group's workflows do not have to be synchronized together. For example, one Exposure Group can be in PRICED_PAY status while another is in EXPOSURE_AGREED status.

6.1.1 Contract Creation with Bilateral Exposure Groups

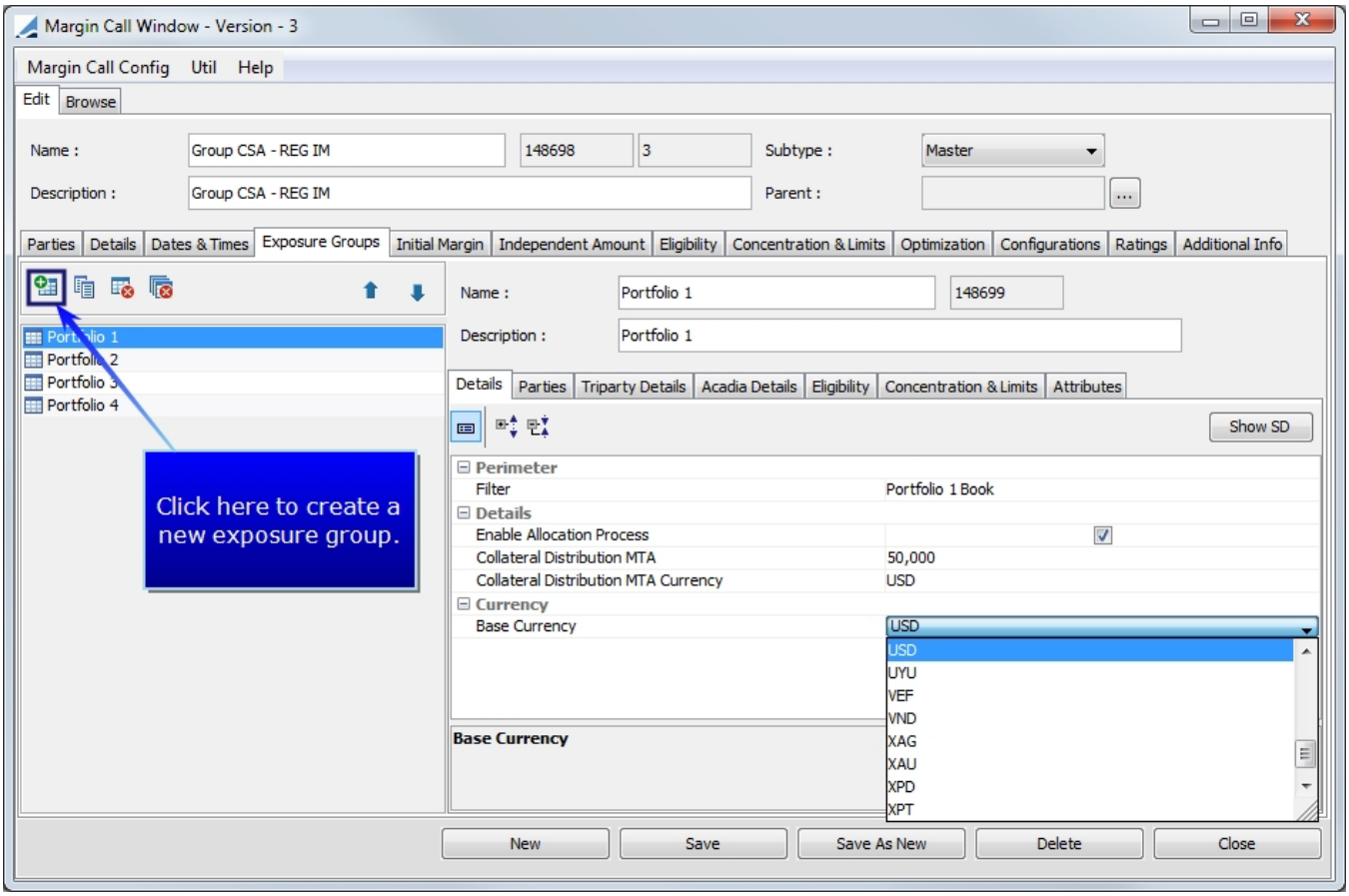
When designating a contract to use Exposure Groups , it is necessary to have *Generate Margin Calls per Exposure Group* selected in the Details panel of the contract. This field is selected by default in a margin call contract.



- If this field is selected and there are NO Exposure Groups on the contract, Margin Calls will be generated at the contract level.
- If this field is selected, and there ARE Exposure Groups on the contract, Margin Calls are generated at the Exposure Group level. Workflow actions can be applied at the master contract level as well as the Exposure Group level.

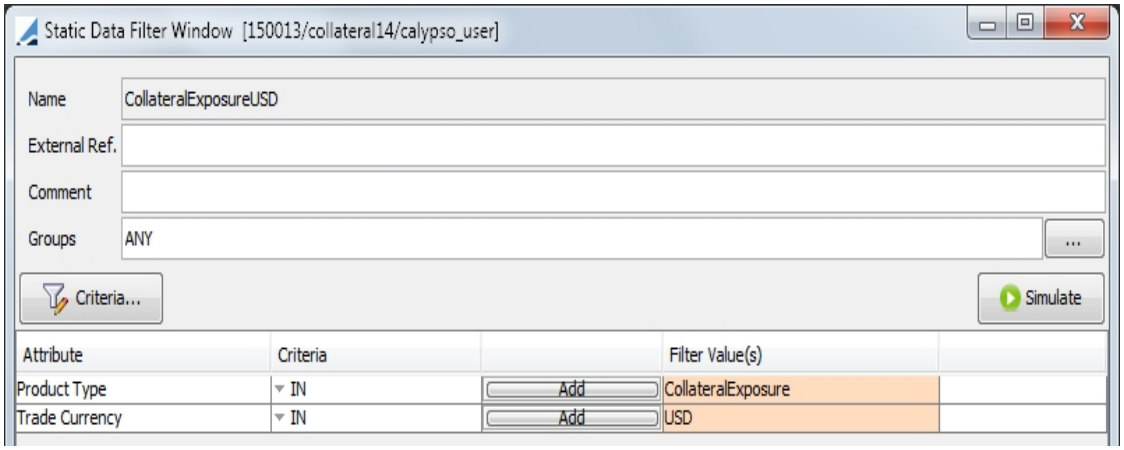
6.1.2 Bilateral Exposure Groups

Select the Exposure Groups panel of the margin call contract.

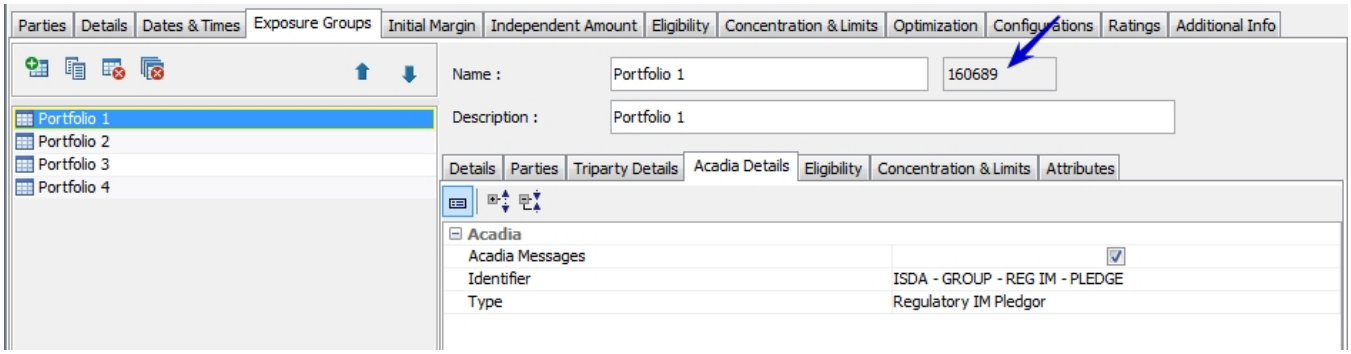


» A currency is required to save an Exposure Group but a Filter is not. If a filter is not defined, all underlyings that belong to the main contract will be loaded at the Exposure Group level.

» Exposure Groups use a static data filter to determine which exposure trades will belong to the Exposure Group.



» After the margin call contract is saved with the Exposure Group, an Id is assigned to the Exposure Groups.



» It is possible to Duplicate an existing Exposure Group, delete a single group or delete all of the groups using the icons at the top of the Exposure Group panel.

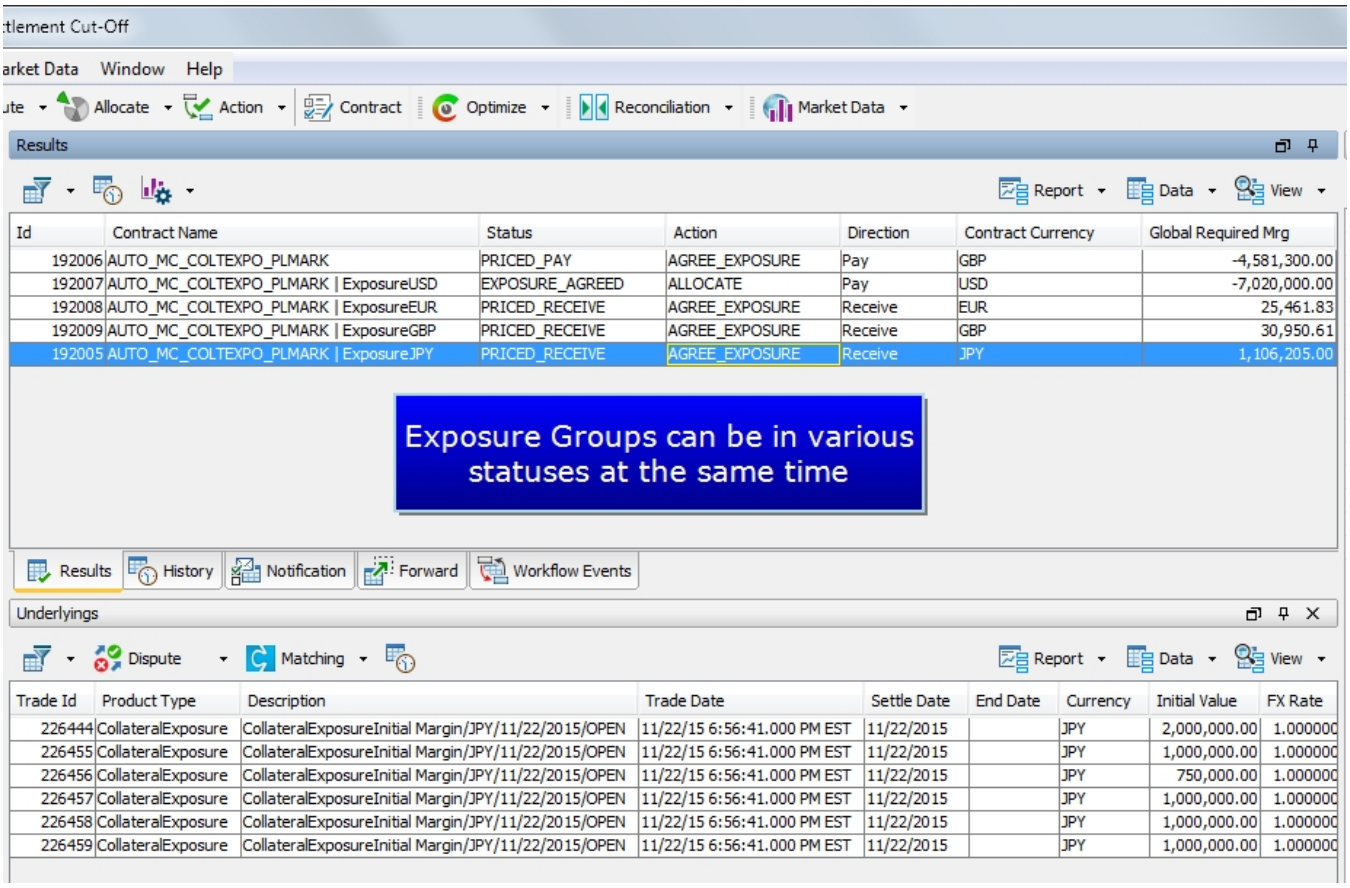
» Each Exposure Group can have its own settings for Parties, Eligibility, Concentration & Limits , Triparty Details , Acadia Details and Attributes (Additional Information). At this time, if fields in the Exposure Group are not set, Calypso does NOT take the settings from the main contract.

» The *Enable Allocation Process* flag is available for selection when *Distribute To Exposure Group* on the Details panel has been selected. This flag indicates that the Exposure Group will be available for the Allocation Distribution process.

6.1.3 Computing a Margin Call with Bilateral Exposure Groups

The process of computing a margin call with Bilateral Exposure Groups is the same as computing a margin call without Exposure Groups. Although margin calls are generated at the Exposure Group level the process of optimization, allocation, disputes, etc..., are the same as if the margin call was at the contract level.

▶ Please refer to Calypso Collateral Management documentation for details on computing margin calls.



6.2 Buy Side Fund Distribution

In this solution, once individual exposure trades are sorted into the Exposure Groups, pricing the contract computes the Required Margin for the contract. A margin call is generated in a collateral book against an external counterparty based on the sum of the Exposure Group information. Calypso then computes each Exposure Group's ratio relative to the sum for the groups. It is possible to have this ratio computed based on information such as required margin, trade exposures or change in trade exposures. The metric used to determine the ratio is defined in the Collateral Context. The ratio is then used to allocate from or to each relevant Exposure Group book and Exposure Group position (Exposure Groups can also be considered Portfolios.)

Below is a basic set up example. Specifics can vary by client.

6.2.1 Book Designation

There needs to be designated books for the Margin Call position itself, as well as the Margin Call Exposure and the each of the Exposure Groups. It is helpful to use a similar naming convention to quickly identify the books. In the example below, the books are named as follows:

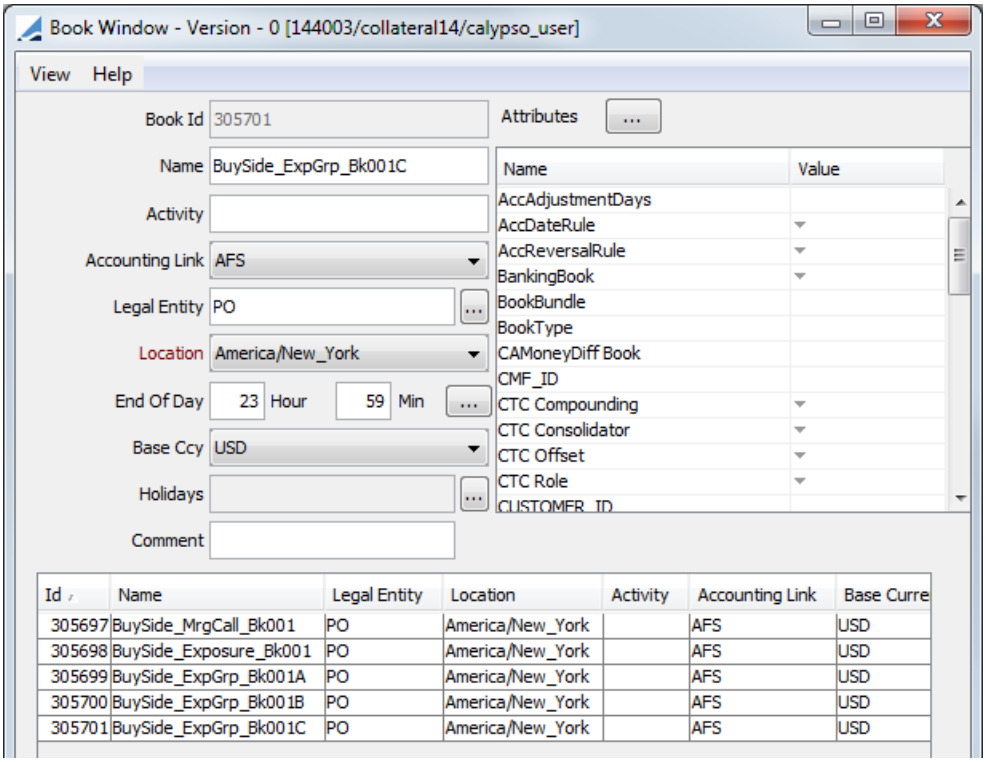
- Margin Call Positions book: *BuySide_MrgCall_Bk001*

- Exposures: *BuySide_Exposure_Bk001*
- Portfolio Books:

  BuySide_ExpGrp_Bk001A

  BuySide_ExpGrp_Bk001B

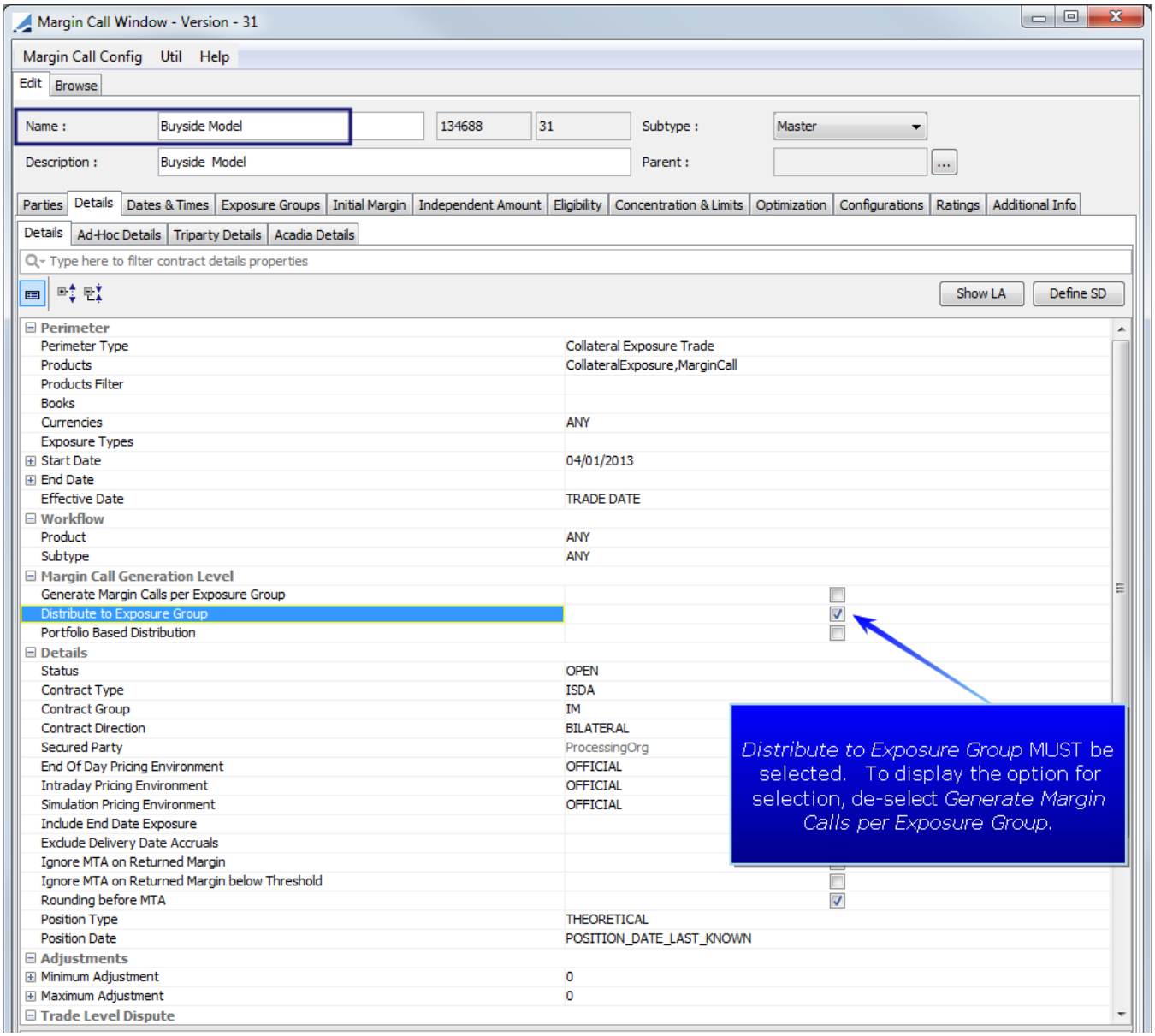
  BuySide_ExpGrp_Bk001C



The Book window is accessed from Calypso Navigator by selecting **Configuration > Books & Bundles > Trading Book**.

6.2.2 Contract Creation with Buy Side Exposure Groups

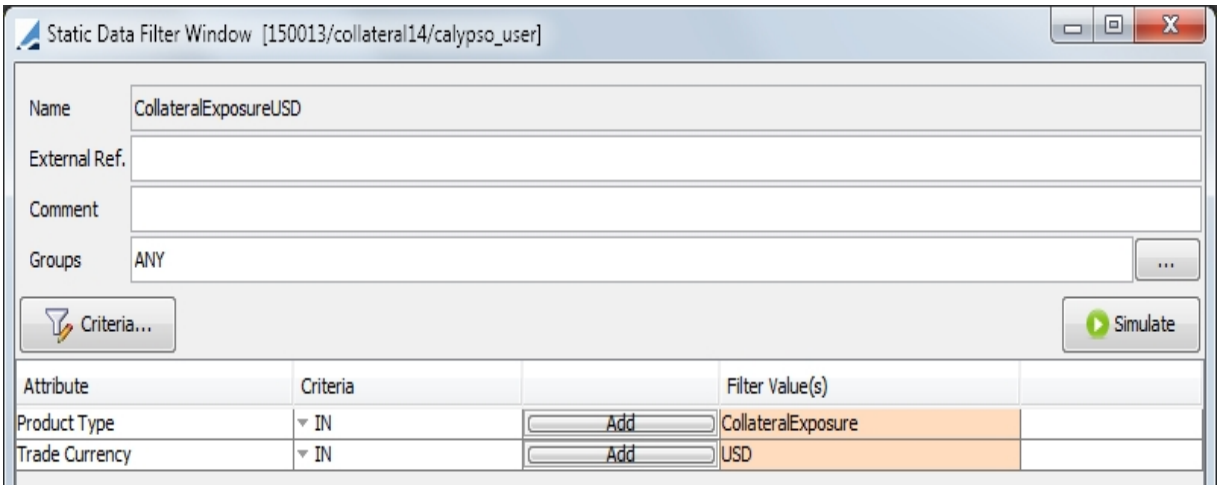
Create a Margin Call contract that will serve as a Buy Side contract. In this example, three Exposure Groups have been created. This contract looks at the exposure book (specified above) to get the exposure.



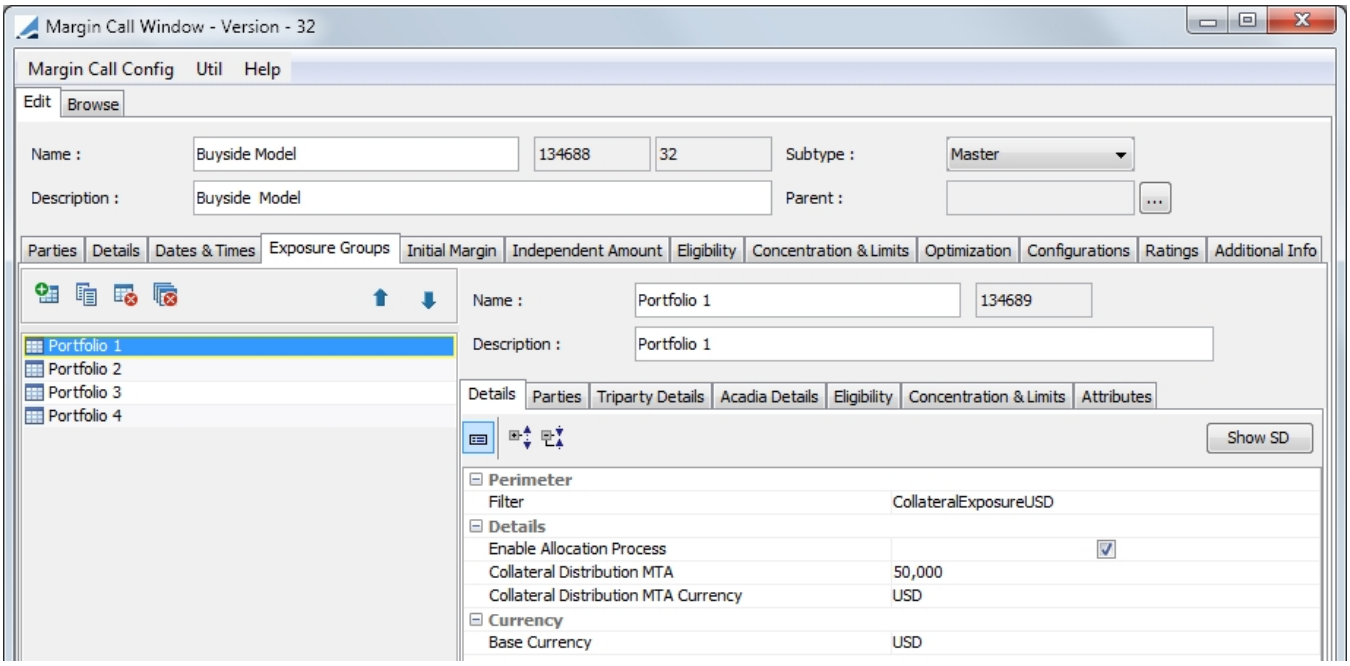
- In the Details panel of the Buy Side margin call contract, *Distribute to Exposure Group* must be selected. In order for this option to be displayed, de-select *Generate Margin Calls per Exposure Group*. This action displays *Distribute to Exposure Group*, which you are then able to select.
- When the *Portfolio Based Distribution* flag is selected, collateral is provided by the Exposure Groups rather than the PO's collateral being distributed to the Exposure Groups.
- When *Portfolio Based Inclusion* is selected, a *Direction Based Inclusion* flag becomes available for selection. When this flag is selected, if the net exposure of the Exposure Group is not in the same direction as the Master contract, it will be excluded from the distribution process.

6.2.3 Exposure Groups

Exposure Groups use a static data filter to determine which exposure trades will belong to the Exposure Group. In this example, three Exposure Groups will be set up. One for USD, one for EUR and one for GBP. Below is an example of the static data filter that has been set up to be used by each of the Exposure Groups.



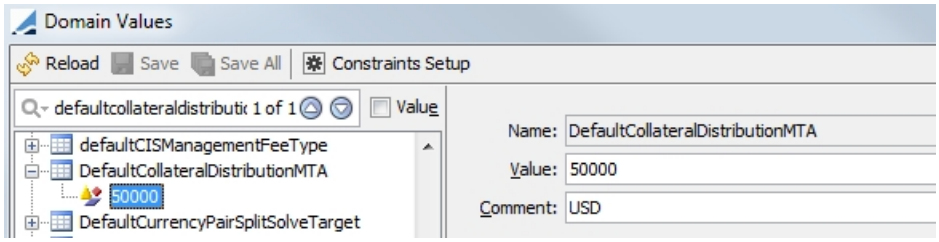
Exposure Groups are created in the Exposure Groups panel of the margin call contract.



» In the Details panel of the Exposure Group, select the currency for the group and the static data filter to be used for the group.

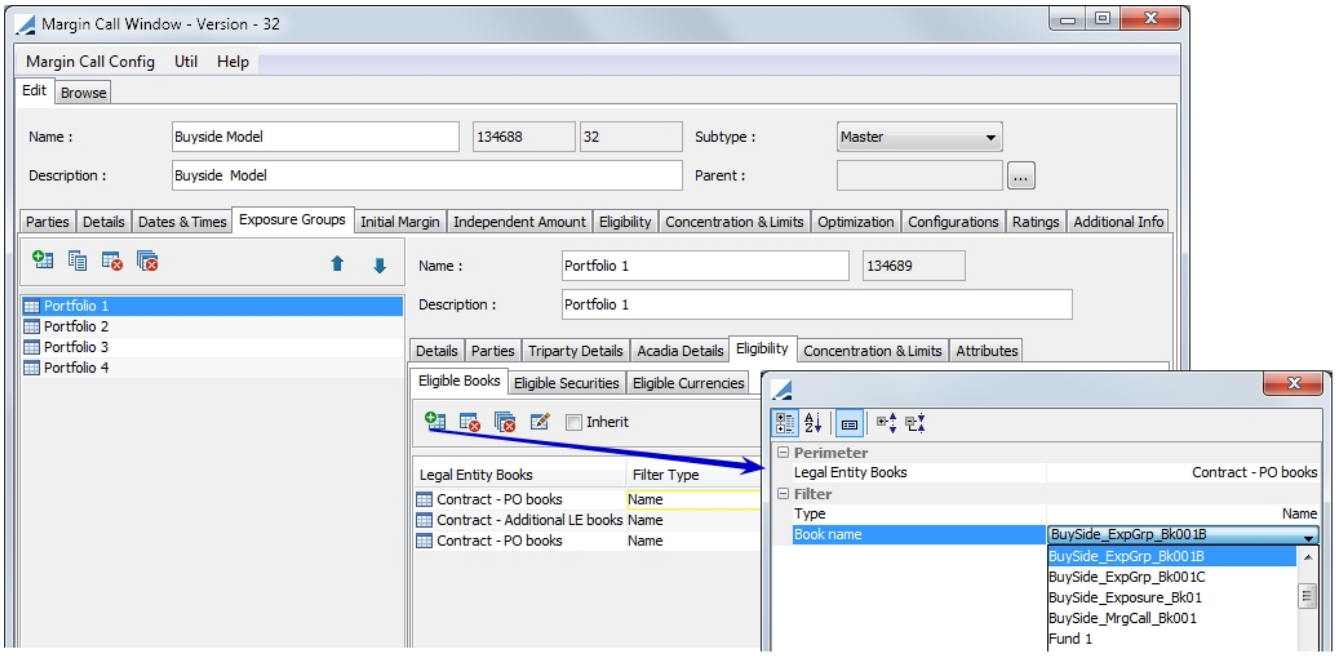
» *Collateral Distribution MTA* and *Collateral Distribution MTA Currency* appear in the contract when *DefaultCollateralDistributionMTA* is added to the domain values in *domainName*.

When defining the domain value, the MTA amount should be input in the Value field and the currency for the MTA should be input in the Comment field.

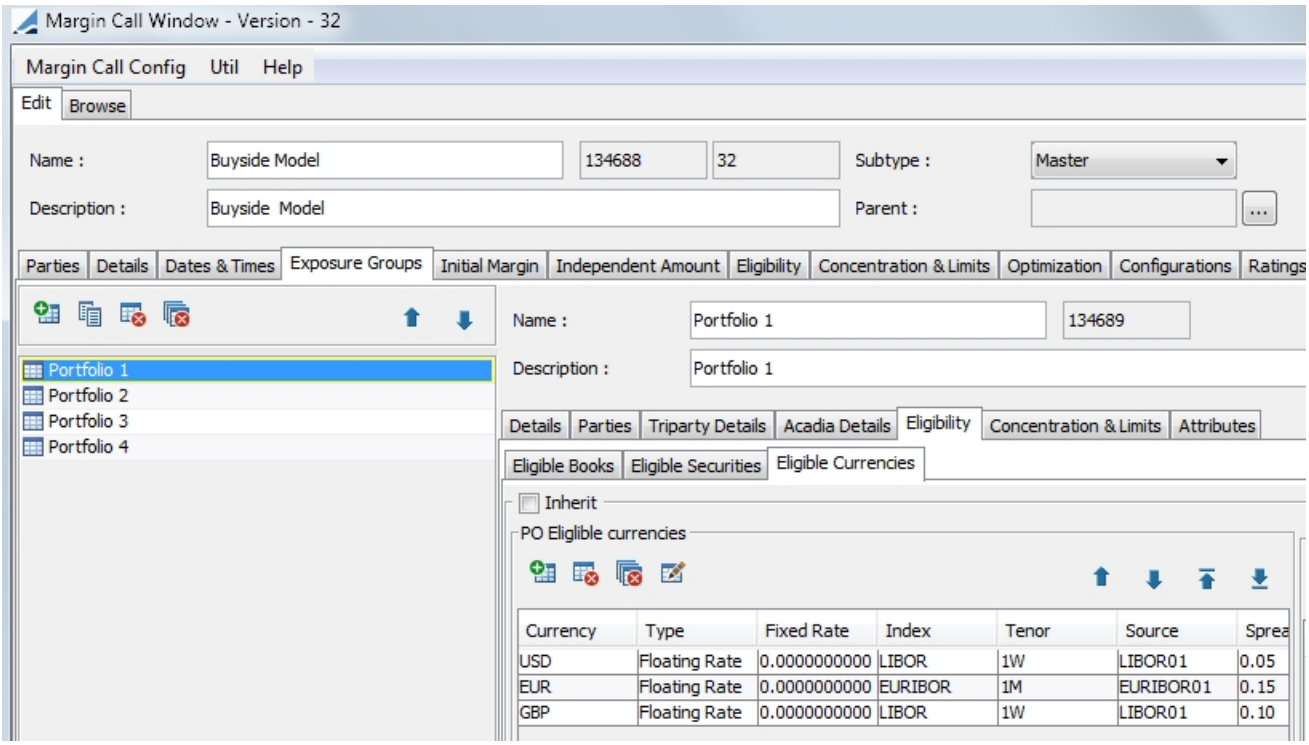


» In the Parties panel, the selection of a Processing Org is used to drive the counterparty on the Clearing Distribution trade. Also, for reporting purposes, it is used to load the Allocation Entry report to retrieve all Exposure Groups for a given portfolio.

» Eligible Books for the Exposure Group correspond to each portfolio.



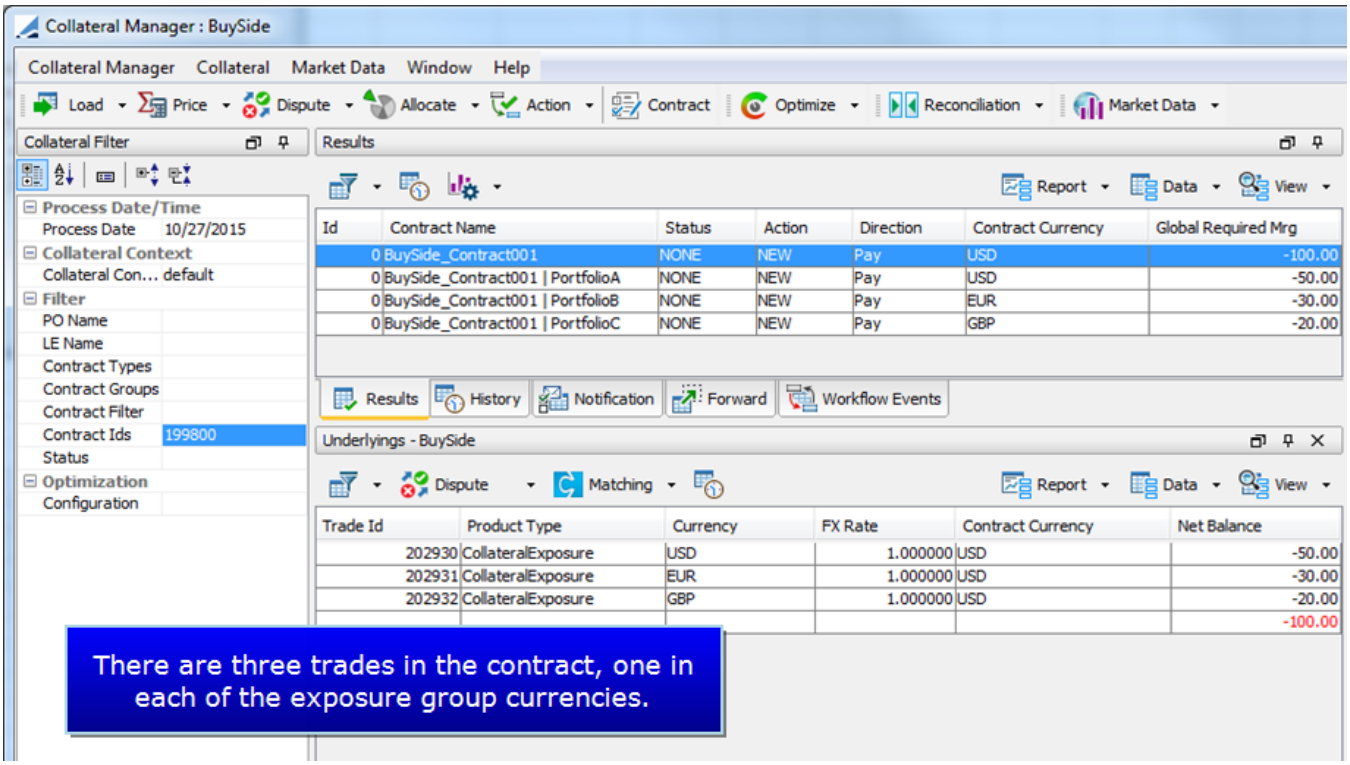
» In this example, Portfolio A is eligible to provide USD, EUR and GBP cash as collateral. This designation is made in the Eligible Currencies panel of each Exposure Group.



6.2.4 Executing a Buy Side Exposure Group Allocation

Once individual trades are sorted into Exposure Groups based on the criteria of the contract and group, pricing the contract computes the Required Margin for the contract.

In the example below, the contract created above has been loaded. For the sake of simplicity and ease of illustration, three trades are in the contract, one in each of the exposure group currencies. Each trade will be sorted into its appropriate Exposure Group.



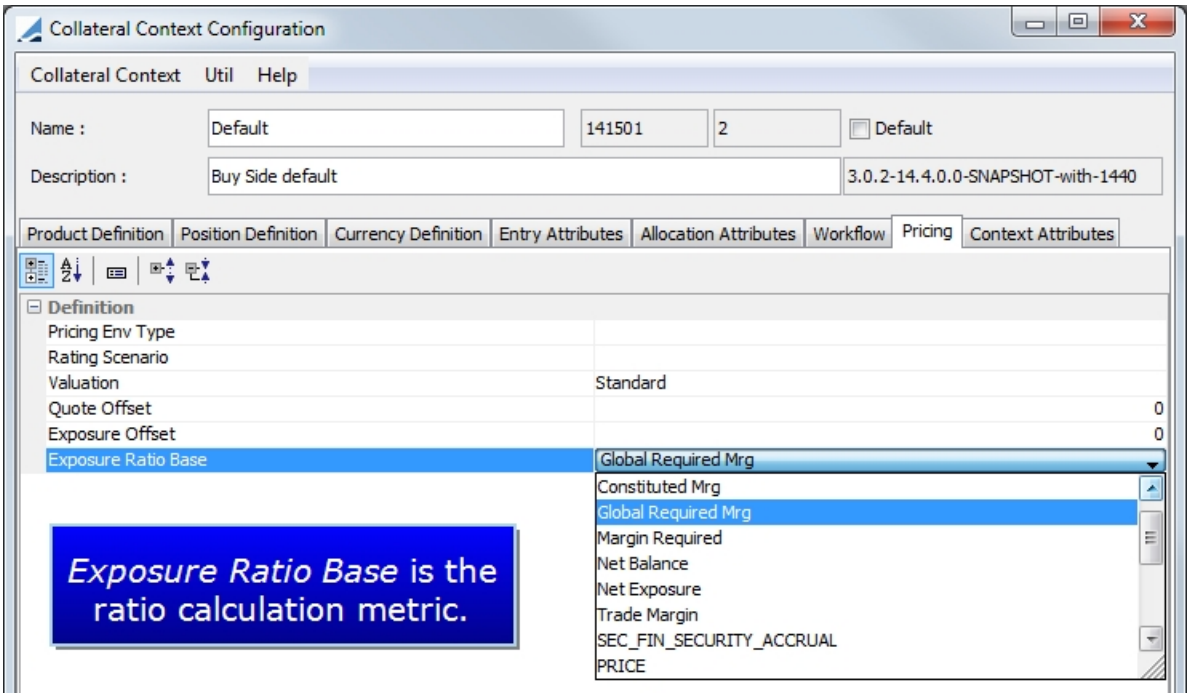
When a margin call is generated on the contract, normal Collateral procedure is followed for allocation.

6.2.5 Computing a Ratio

After this takes place, Calypso needs to compute each Exposure Group's ratio relative to the sum for the groups. It is possible to compute this ratio based on any of a variety of factors such as the required margin, the trade exposures or the change in trade exposures. The ratio is computed as:

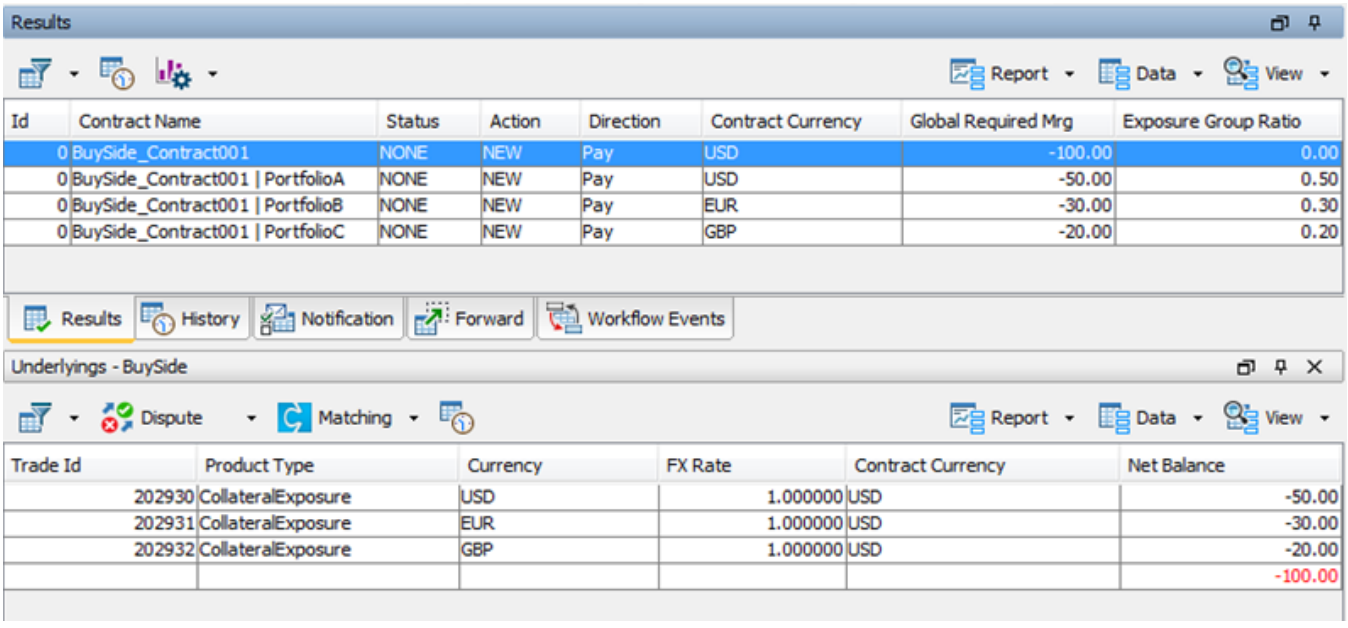
(the chosen metric for the Exposure Group) / (the sum of the chosen metrics for all of the participating Exposure Groups)

Before the ratio can be generated, a collateral context needs to be set up to use the desired metric.



The Ratio calculation metric is selected in the *Exposure Ratio Base* field which is contained in the Pricing panel of the Collateral Context window. The options available for selection include pricer measures selected in the Product Definition panel as well as values available in the Margin Call Entry column chooser in Collateral Manager.

Once the Ratio metric has been added, the Exposure Group Ratio column can be added to show the ratio for each Exposure Group.



In this example, Global Required Margin is used as the ratio metric. To determine the ratio, the Global Required Margin of each Exposure Group is divided by the Global Required Margin of the participating Exposure Groups to determine the ratio of each group.

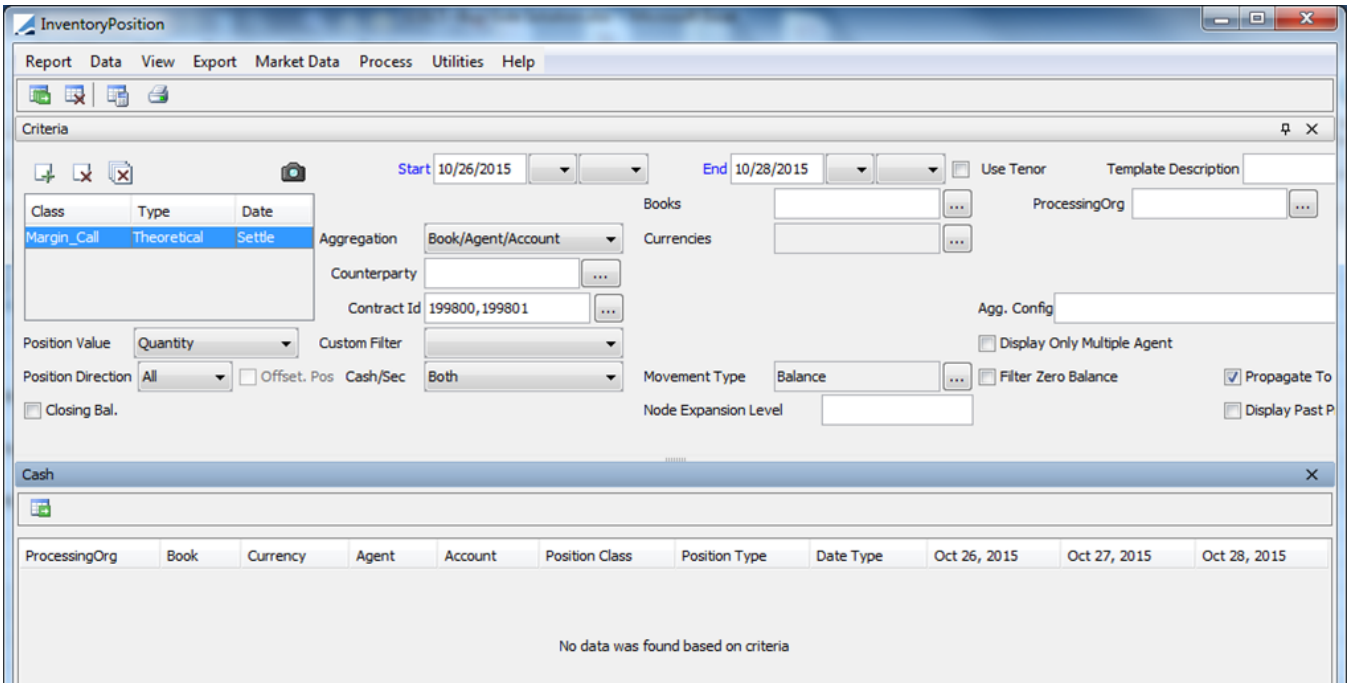
(For example for PortfolioA, -50 /-100 = .5)

If an Exposure Group has not been designated to be used in the allocation process, it will not have a ratio and the allocation ratio will be distributed among the other Exposure Groups.

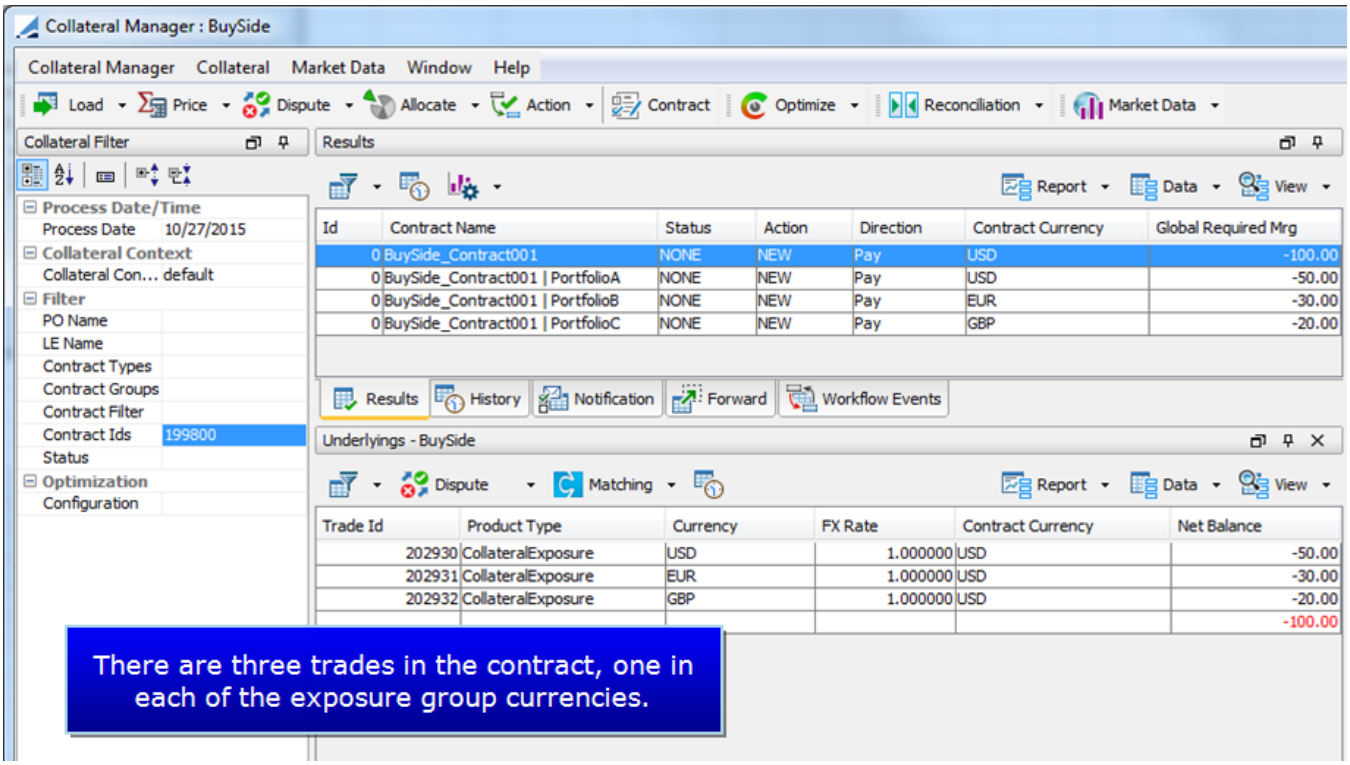
6.2.6 Computing Margin Call

The next step is to generate a Margin Call trade and then generate the Clearing Distribution trades to distribute the positions to or from the Exposure Groups.

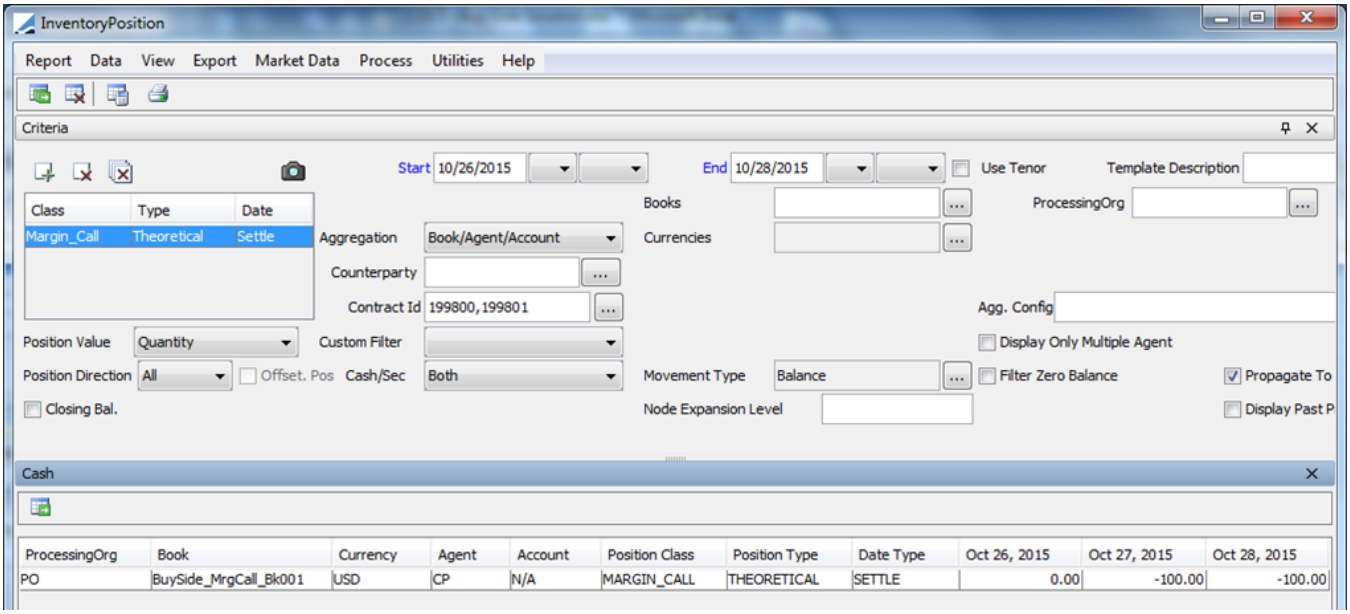
In the current example, the Inventory Position report for the parent and children has no position yet.



Now, the Margin Call trade has been booked:



The Inventory Position Report now contains information:



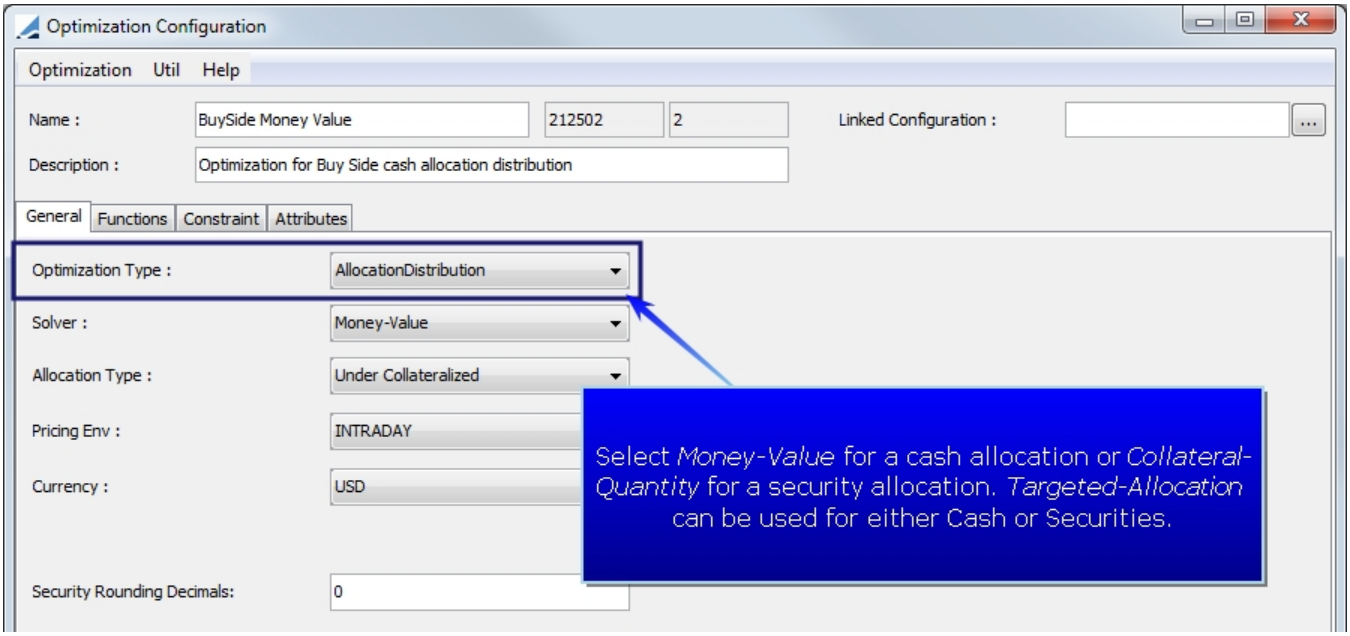
» When there is a Dispute, the Exposure Group Global Required Margin is recomputed because the margin to pay has changed. This occurs specifically, when entering a value in the Cpty Amount field and clicking the Accept CP

Amount or when entering an Agreed Amount. A user is required to apply an action to the entry after accepting the Counterparty amount. Once this action is applied, it is necessary to reprice the contract in order to re-compute the Exposure Group GRM values.

6.2.7 Generating an Allocation Distribution

Optimizing the Contract

After the Margin Call trade is booked, the contract can be optimized for allocation distribution from or to the Exposure Groups. A specific Optimization Configuration must be set up for this purpose.

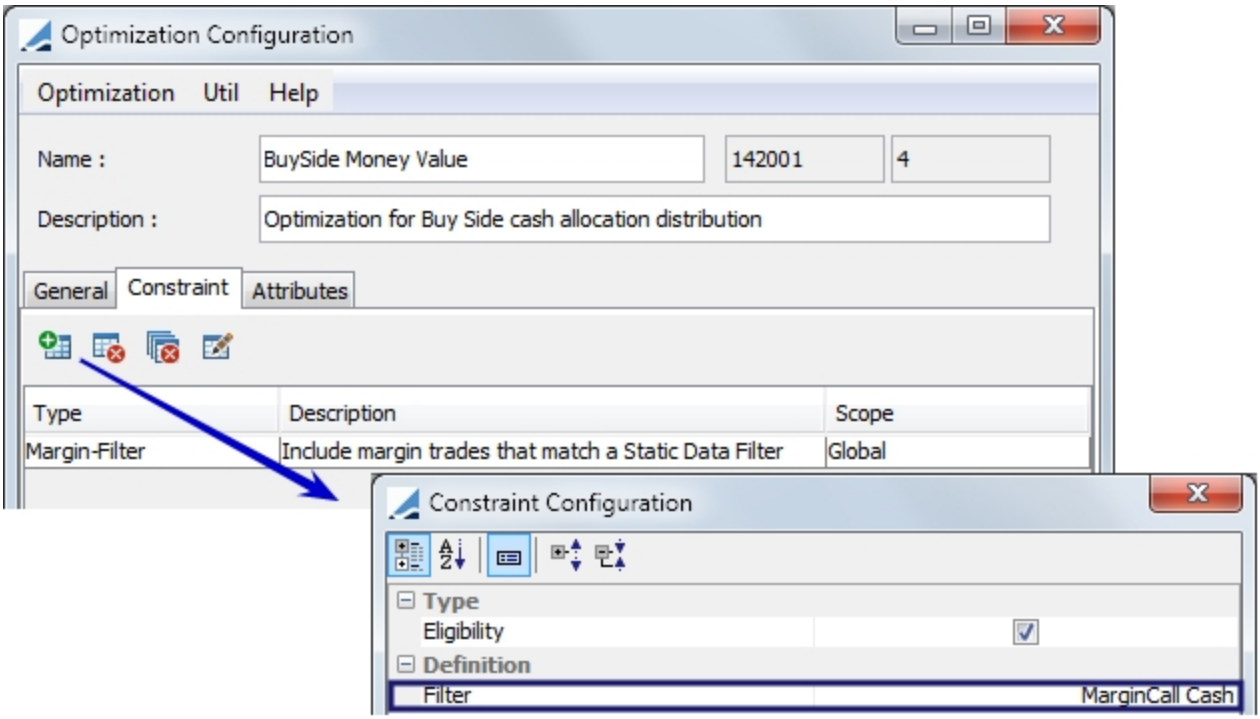


- The Optimization Type must be *AllocationDistribution*.
- There are three solvers with this Optimization Type, *Money-Value* is used for cash margin call trades, *Collateral-Quantity* is used for allocation of security margin call trades and *Targeted-Allocation* can be used for either cash or securities.
  - The *Money-Value* solver retrieves the ratios per participating Exposure Group and multiplies each participating Exposure Group's signed ratio by the signed value of the margin call trade. It then creates a Clearing Distribution trade, moving collateral between the Exposure Group contract/book and the parent contract/book.
  - The *Collateral-Quantity* solver retrieves the total previous collateral quantity and the booked allocation quantity across all participating Exposure Groups and sums these values to come up with the total collateral quantity. The solver then multiplies each participating Exposure Group's signed ratio by the signed total collateral quantity to determine each participating Exposure Group's portion of the total collateral. The solver then subtracts this amount from the total previous collateral quantity for each participating Exposure

Group to determine each Exposure Group's excess or deficit. The solver then uses this number as the quantity for each Clearing Distribution trade which moves the collateral between the Exposure Group contract/book and the parent contract/book.

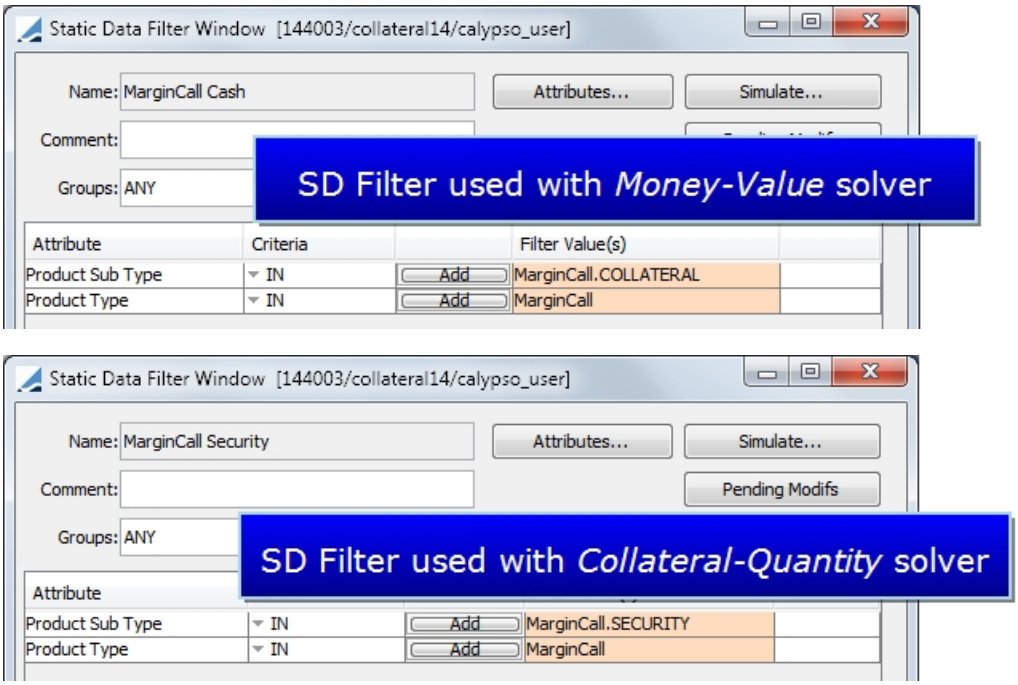
- The *Targeted-Allocation* solver facilitates the distribution of collateral from the Exposure Groups to the mater contract. This differs from the other two solvers which distribute collateral from the master contract to the underlying Exposure Groups. This solver is used in conjunction with the *Portfolio Based Distribution* flag that is set in the Details panel of the Margin Call contract.

The Margin-Filter constraint is the only constraint available and should be used with this optimizer. This constraint is used to determine which margin call trades will be distributed by this optimizer.



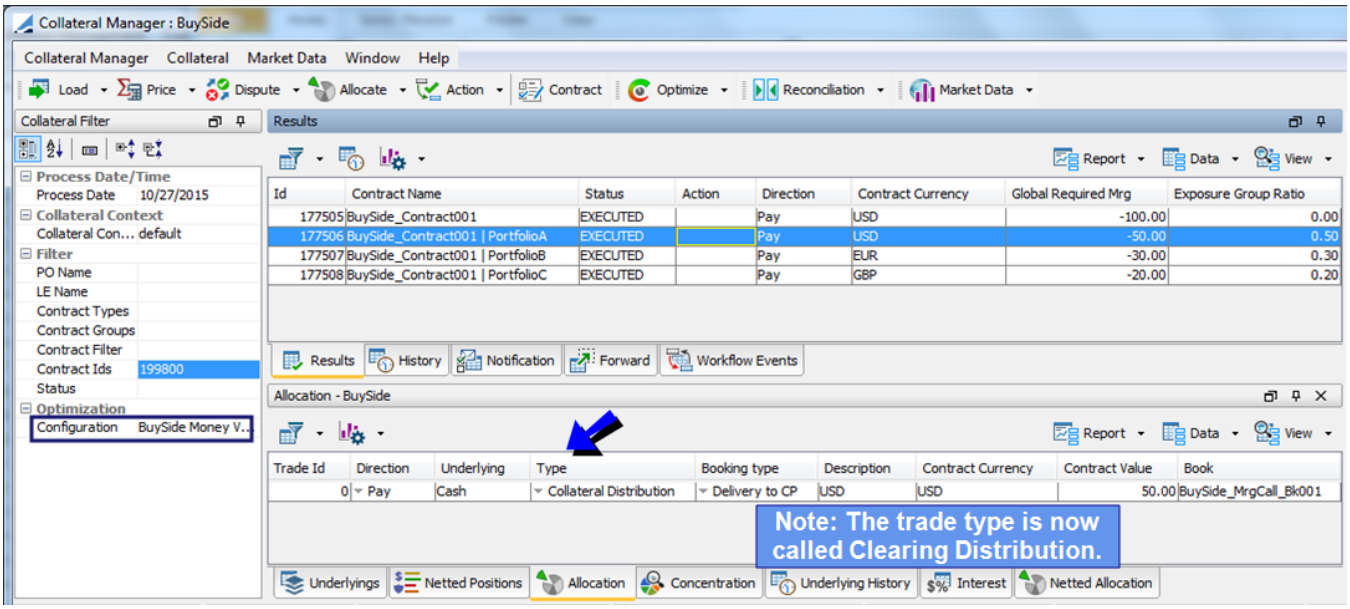
A static data filter is used to choose the appropriate margin call trades for the optimizer. At minimum, the static data filter needs two attributes

Product Type=*MarginCall* and Product Sub Type=*MarginCall.XXXX*.



Because the *Money-Value* Solver only deals correctly with cash margin call trades, the Product Sub Type used in a static data filter designed for the *Money-Value* solver should be *MarginCall.COLLATERAL*. Likewise, because the *Collateral-Quantity* solver only deals correctly with security margin call trades, the Product Sub Type that used with a static data filter designed for the *Collateral-Quantity* solver should be *MarginCall.SECURITY*.

After optimizing the contract using the optimizer configured above, a trade is generated for the Exposure Group *PortfolioA* contract.



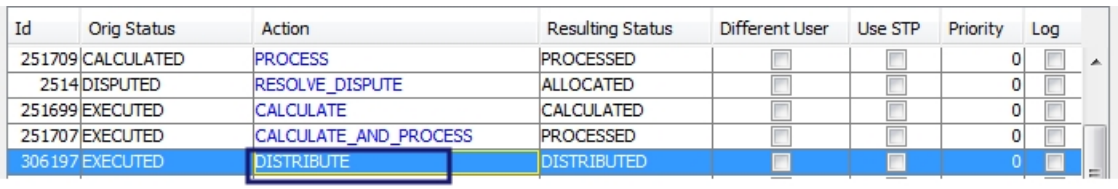
NOTE: It is not possible to perform a manual allocation for the allocation distribution. The allocation must be done using a properly configured optimizer.

When delivering collateral for pools with a negative net balance, Net Exposure = Net Balance (negative value) + Previous Margin (positive value) + Newly Allocated Margin (additional positive value). The pools with the largest negative net exposures will receive back incremental collateral so that their resulting net exposures are less and less negative.

A domain value is used to control how much collateral is allocated at each step of the new algorithm. The amount desired should be entered in the *ExposureGroupGrmComputationIncreaseAmount* domain value. When this is not set, the default value of 1000 is used.

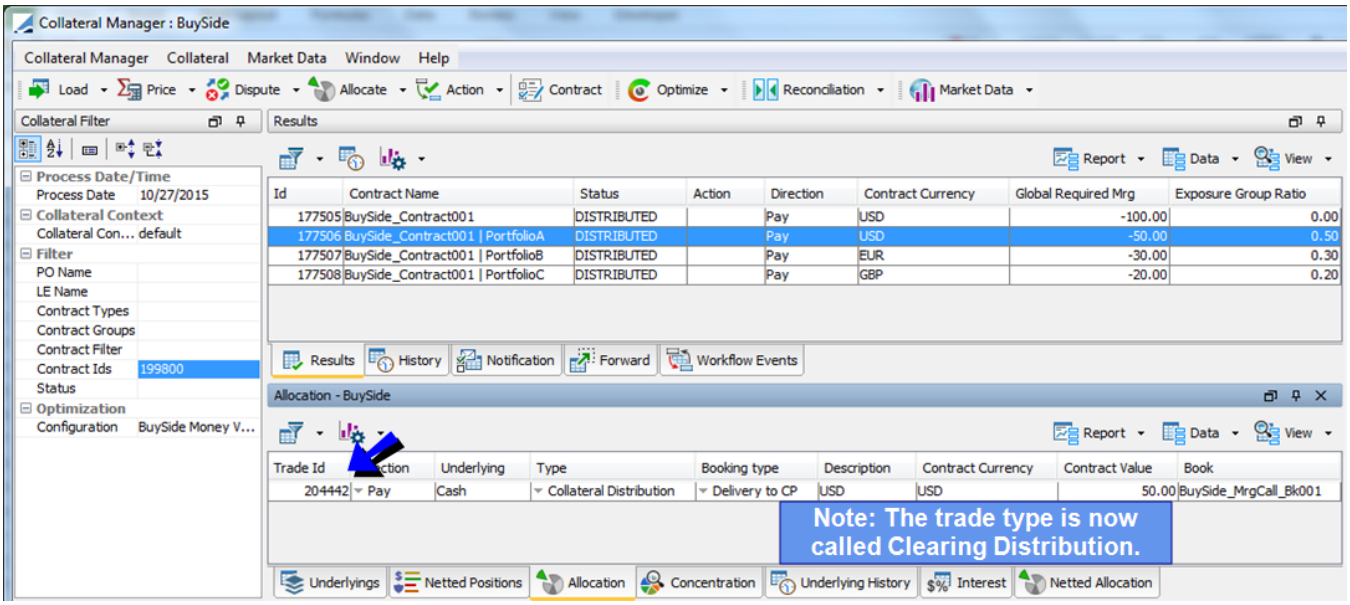
Distribution Workflow

The actual Clearing Distribution trades are not generated until the DISTRIBUTE workflow action is executed on the contract. The DISTRIBUTE action may need to be added to the *CollateralAction* domain value and the DISTRIBUTED trade status may need to be added to the *CollateralStatus* domain value. The workflow also needs to use the *Distribute* workflow rule on the EXECUTED - DISTRIBUTE - DISTRIBUTED transition (**Configuration > System > Domain Values**).

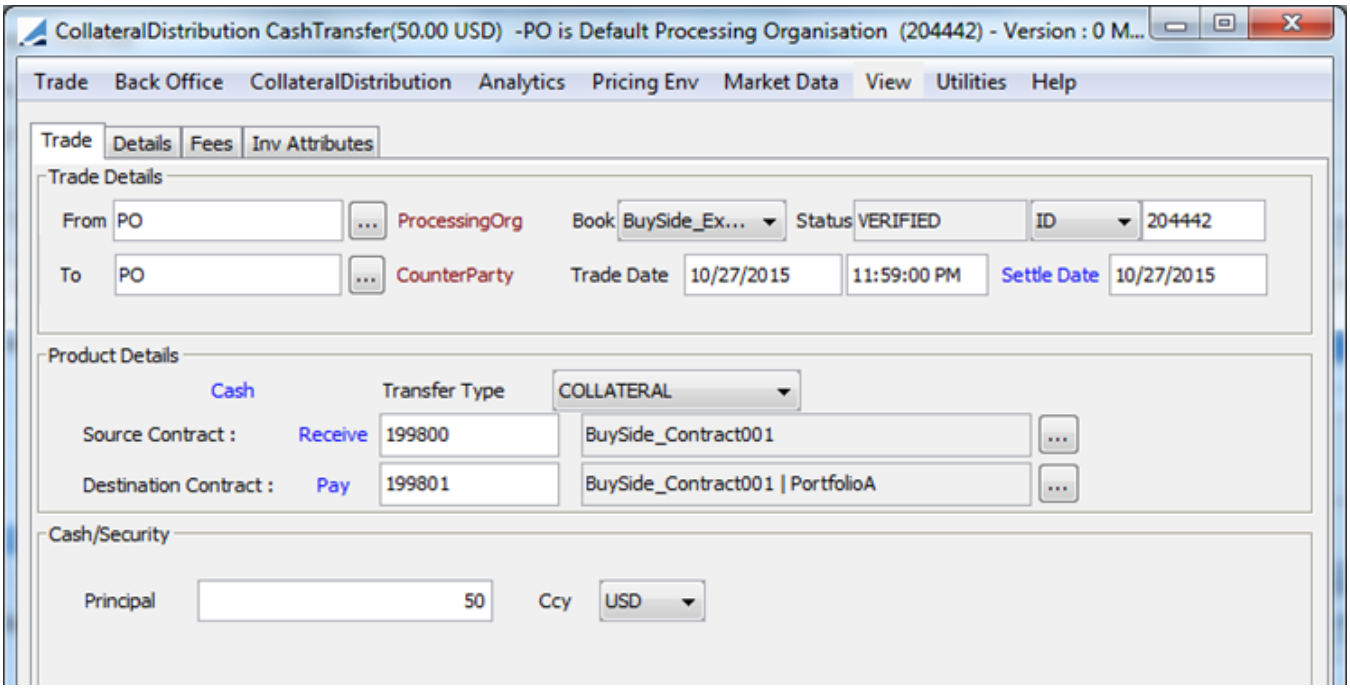


6.2.8 Clearing Distribution Trade

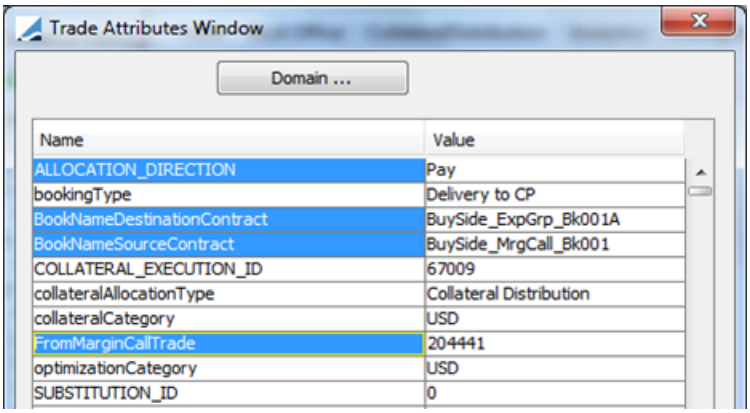
After the DISTRIBUTE workflow action is executed, a Clearing Distribution trade is created between the parent contract and its Exposure Group.



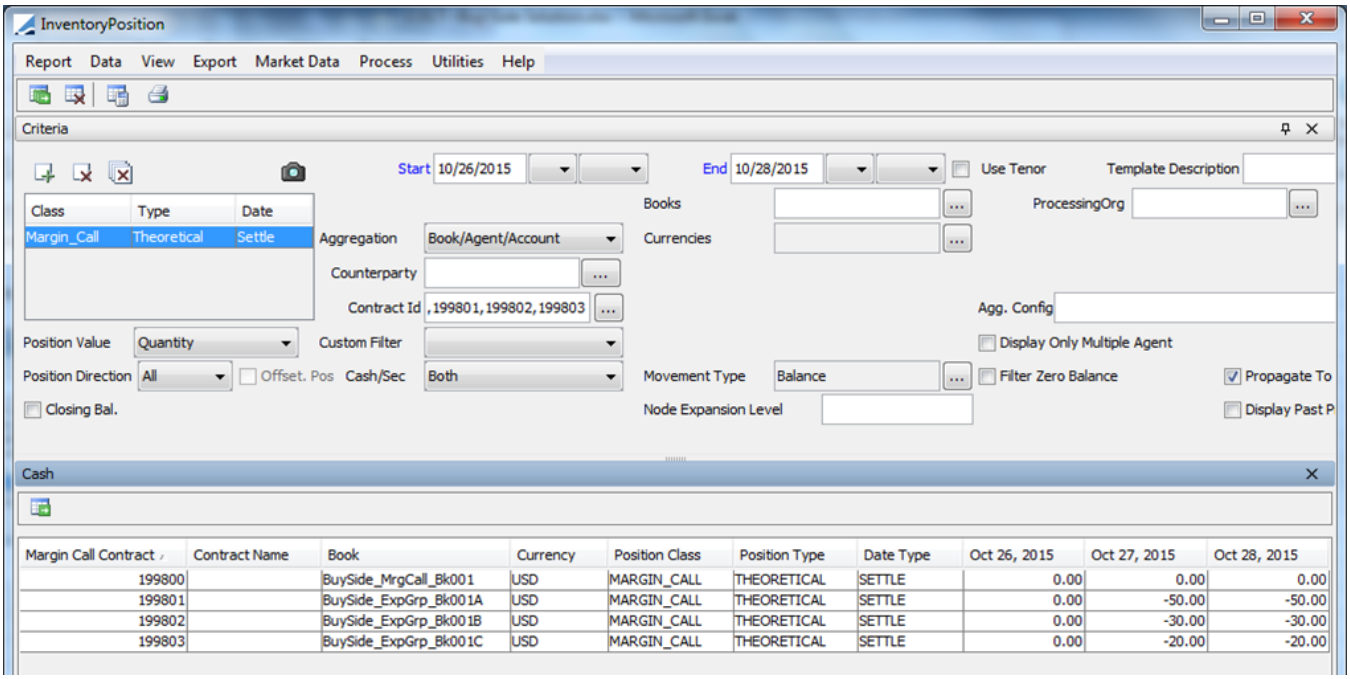
In the trade created above, you can see that the Source Contract is always the parent contract and the Destination Contract is always the Exposure Group contract. This is the case regardless of who is paying and receiving. In our example, the parent contract received and the Exposure Group paid. This is because the Exposure Group lost money and therefore needs to pay the parent.



Trade Attributes for the Clearing Distribution trade.



Now, the Inventory Position shows that the Parent Contract is even and the Exposure Group contracts have paid the Parent.



- It is possible to differentiate whether the Distribution Direction is a margin or a return from the Exposure Group's perspective. Using the bookingType field, which reflects the parent margin call trade direction, and whether the Exposure Group is paying or receiving, the value of the Distribution Direction is computed as follows:
  - Distribution Direction = RETURN if the PO is paying by either delivering new collateral or the PO is returning previous CP collateral back to the CP and the Exposure Group is receiving
  - Distribution Direction = MARGIN if the PO is paying by either delivering new collateral or the PO is returning previous CP collateral back to the CP and the Exposure Group is paying
  - Distribution Direction = RETURN if the PO is receiving by either the CP delivering new collateral or the CP returning previous PO collateral back to the PO and the Exposure Group is paying
  - Distribution Direction = MARGIN if the PO is receiving by either delivering new collateral or the CP is returning previous PO collateral back to the PO and the Exposure Group is receiving

  Distribution Direction refers to the distribution of the Exposure Group. It needs to be added in the *tradeKeyword* domain value and to the allocation attributes in the Allocation panel of Collateral Manager.
- A Clearing Distribution trade can generate a corresponding client transfer so that interest can be computed at the Exposure Group level. A keyword is set on the Collateral Distribution trade if the Cash Margin Call Account flag is enabled in the Eligible Currencies panel of the Margin Call contract. This indicates that a client transfer is needed. The keyword is called *Generate Client Transfer* and is set to True.
- It is possible to set different flow types on Clearing Distribution trades via a domain value called *ClearingDistribution.flow.Type*. There is one out-of-the-box value which is *Collateral*.

6.3 Collateral Distribution via Scheduled Task

Collateral Distribution can be preformed via the COLLATERAL_MANAGEMENT scheduled task. Simply choose the buy side optimization configuration in the Attributes section.

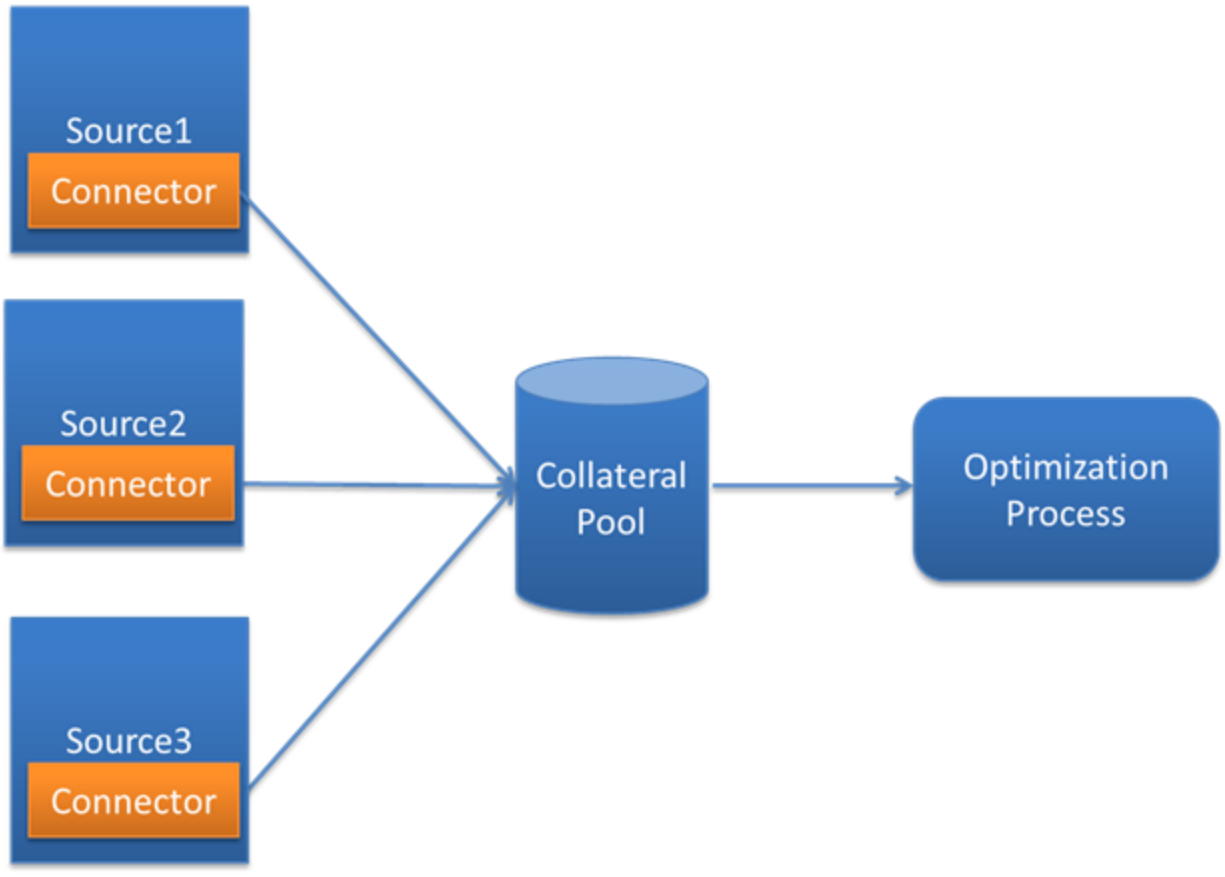
7. Collateral Pool

A collateral pool is a group of assets to which a user has access when executing an allocation, either automatic or manual. A collateral pool definition is used to create a collateral pool instance. A collateral pool instance is a list of assets, quantities and attributes (collateral positions). A collateral pool definition is defined by:

- an identifier (id/version/name/description)
- a set of collateral sources
- a pricing environment

The Collateral Pool functionality consists of three main components: a Source, a Connector and the pool itself.

The connector is responsible for importing assets to a source. A Source is a list of Connectors and as well as a set of rules to provide a set of securities as output. For example, the securities can come from a CSV file if they are managed outside of the Calypso system, or from the inventory if they are managed within Calypso. You are free to define your own connectors. The Pool consists of the securities available in the different sources that are selected.

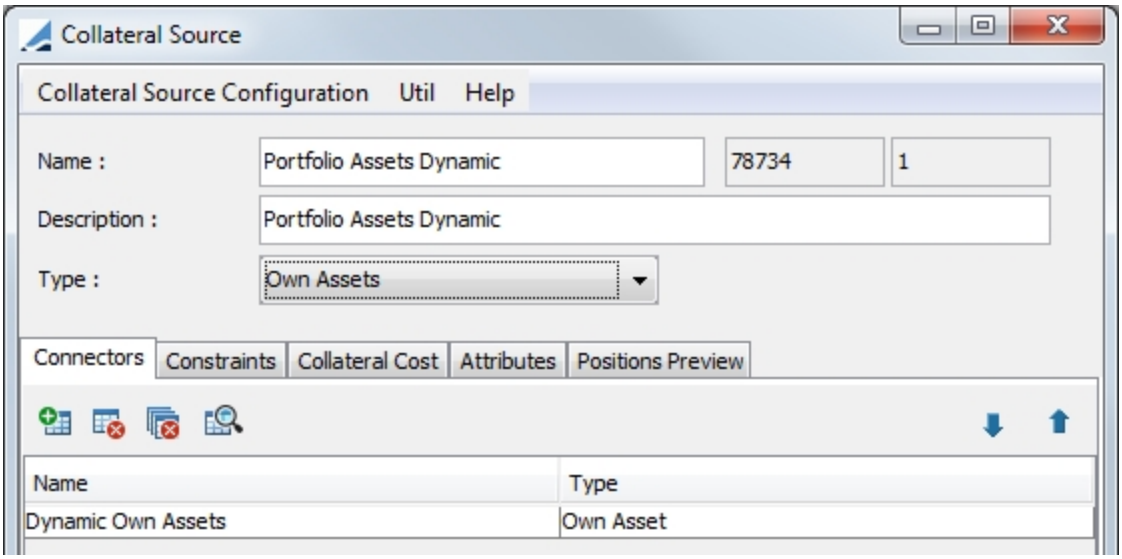


The Collateral Pool functionality is part of the Collateral Module.

7.1 Collateral Pool Setup

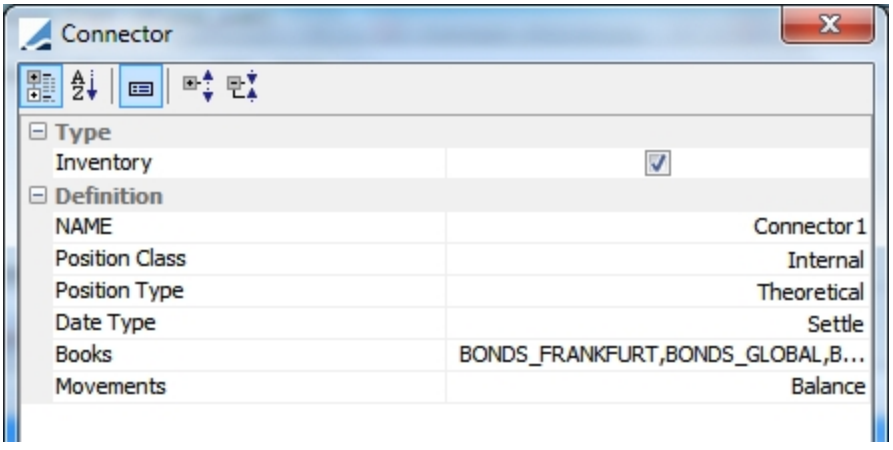
Below are the steps necessary to configure a collateral pool.

Step 1 - A source must first be created. To open the Collateral Source configuration window, from Collateral Manager, select **Window > Configuration > Collateral Source** from Collateral Manager.

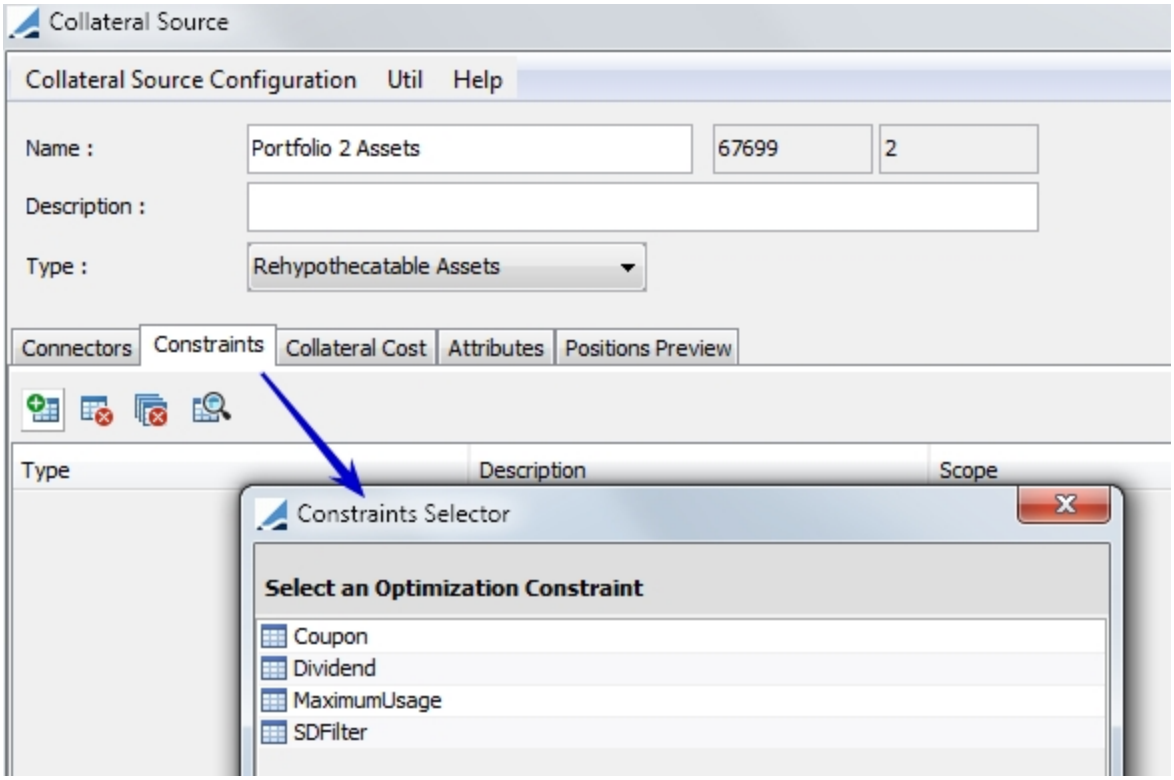


Select a Source Type.

Step 2 - Define a Connector for the source. Choose from your defined connectors. Connector choices vary depending on selected Source Type.



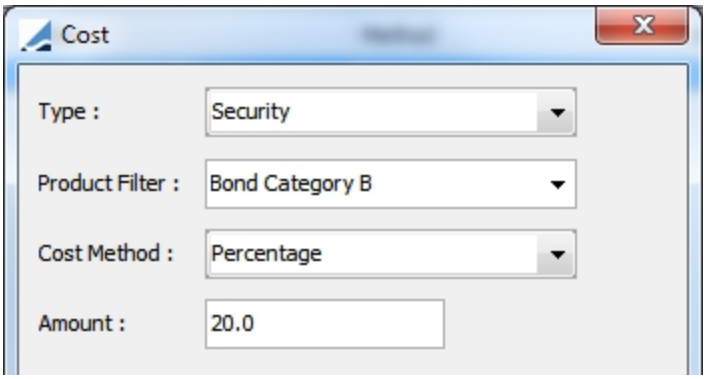
Step 3 - You may then define constraints that apply to all of the securities of this source. The definition of constraints is not mandatory.



Additional constraints can be defined in the *Collateral.Pool.Constraint* domain value.

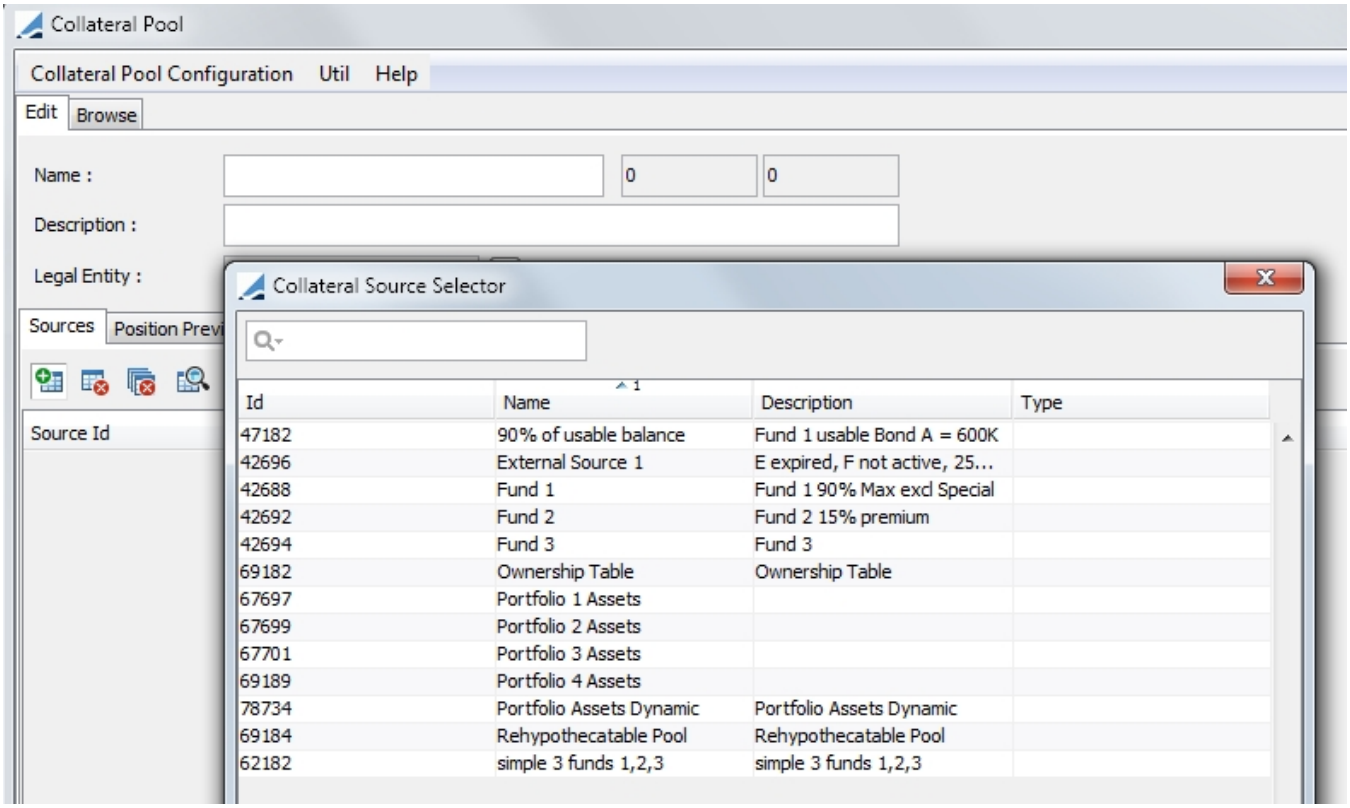
Step 4 - Collateral Cost modifies the optimization cost. It tells the optimizer the extra cost of the collateral. You must define how to configure this extra cost for each source using a static data filter.

This is also not mandatory.



The options for selection are *Cash*, *Security* or *Source*. The *Source* option allows any asset within the source to share a single cost, as well as allowing individual additional costs on assets within the Collateral Source.

Step 5 - Once the source information has been created, the pool can be defined. From Collateral Manager, select **Window > Configuration > Collateral Pool**.

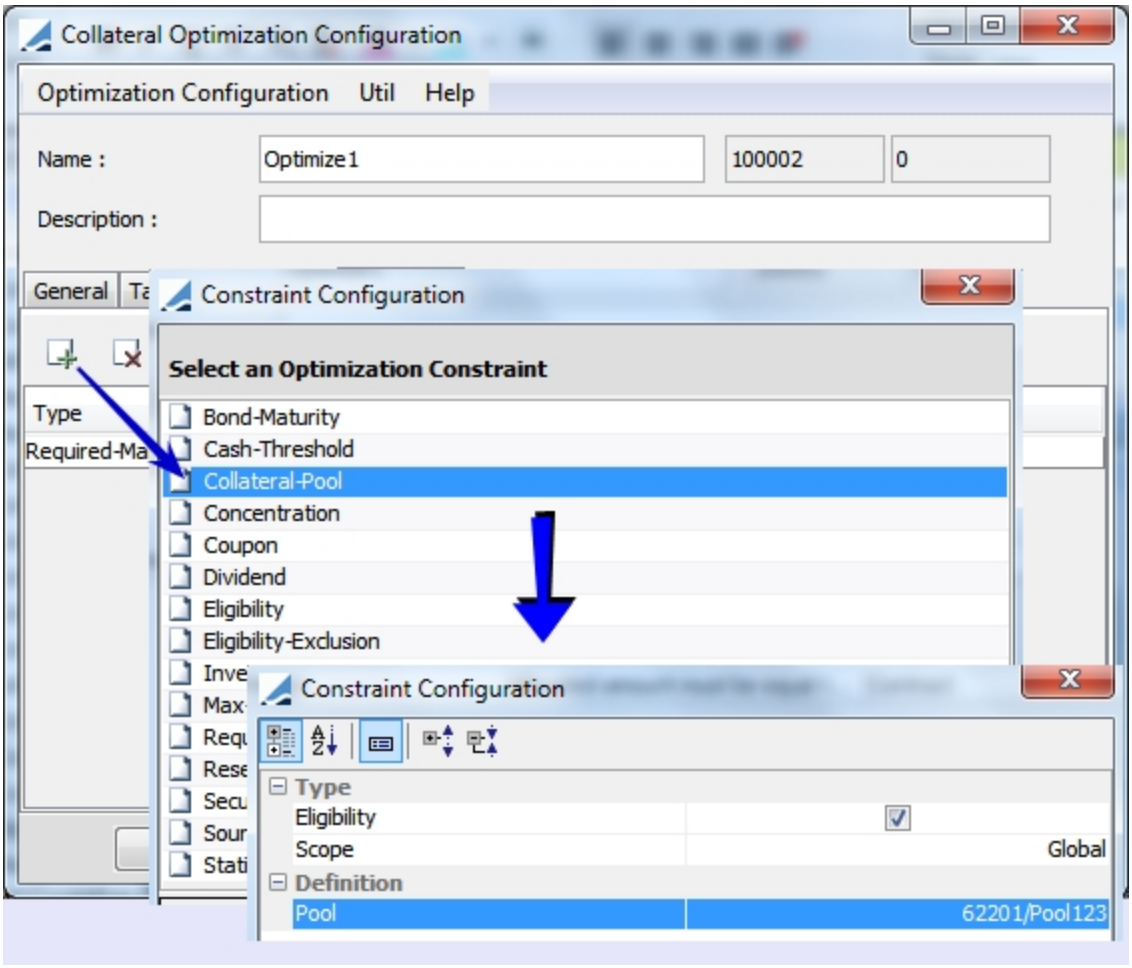


In the Source panel, you are able to select from the sources defined previously.

Step 6 - In the Position Preview panel, select pricer configuration details for the pool and preview the pool positions. From this panel, you are also able to price the positions, check market data, add, remove or edit positions. Attributes that pertain to the pool can be specified in the Attributes panel. The

You may create as many collateral pools as you wish.

Step 7 - Replace the Inventory constraint from your Optimization Configuration with a Collateral-Pool constraint. Select **Windows > Configuration > Optimization Configuration** to display the Optimization Configuration window.



7.2 Collateral Source Configuration Window

The Collateral Source Configuration window contains a source Type field as well as five panels, which are described below.

7.2.1 Source Type

The Type field is used to designate the source type to be used. The available options are:

- Fund Ownership - This source analyzes the Fund Ownership Table which contains information about each Fund's ownership in other funds. It will determine, for a given fund, which funds it has an ownership in and will populate the source with a percentage of each asset within those funds. When a fund utilizes assets from another fund, the system tracks the initial, used and available quantities of these assets.

  The Ownership Connector defined on this source allows the user to define how many levels to "look-through" to determine if a fund only has access to funds in which it has a direct ownership, or whether it should also look-through to sub funds. For example, if Fund 1 owns 10% of Fund 2 and Fund 2 owns 50% of fund 3, then Fund 1 can,

in theory, have access to 5% of Fund 3's assets. Define 1 level to only look at Fund 2's assets. Define 2 levels to also look at Fund 3's assets.

The Ownership Table used in the Connector for this source references the Ownership Ratio that is defined in the Fund window. Refer to Asset Management documentation for details on this window.

This is a dynamic Source Type, which means that this source needs to be defined only once in the system. When this source is added to a Collateral Pool, the system will determine the available assets for this source by fetching the assets for the Legal Entity tied to the Collateral Pool.

- Rehypothecatable Assets – This source looks for contracts which have received rehypothecatable assets. It then looks at underlying funds which have computed a Rehypothecation Ratio on these contracts and will determine how much of that rehypothecatable collateral is available for a given fund to pledge towards other obligations on other contracts.

  This is a dynamic Source Type, which means that this source needs to be defined only once in the system. When this source is added to a Collateral Pool, the system will determine the available assets for this source by fetching the assets for the Legal Entity tied to the Collateral Pool.

  When using this source, to view the breakdown of netted Margin Call positions, the domain value *breakdownNettedMarginCallPositions* must be set to True. Note: This is a useful view for other sources as well.
- Own Assets – This source is an inventory of one or more trading book positions.

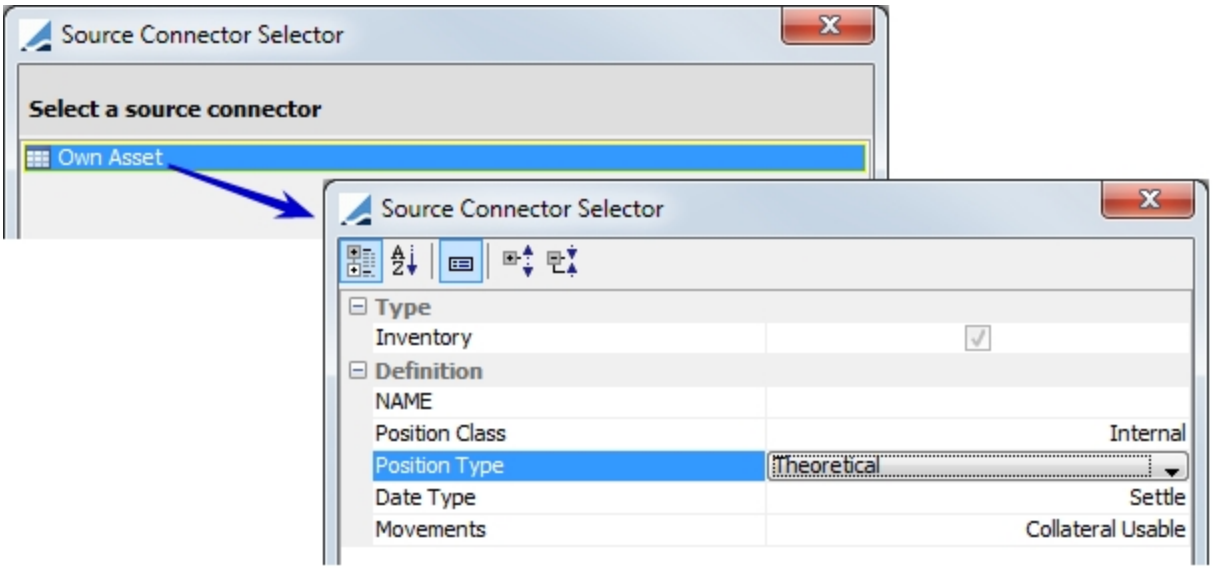
  This is a dynamic Source Type, which means that this source needs to be defined only once in the system. When this source is added to a Collateral Pool, the system will determine the available assets for this source by fetching the assets for the Legal Entity tied to the Collateral Pool.
- Other
- External Assets

7.2.2 Connectors

A connector is responsible for importing assets to a source. Click  to configure a connector. The available connectors vary depending on the Source Type selected.

Own Asset Connector

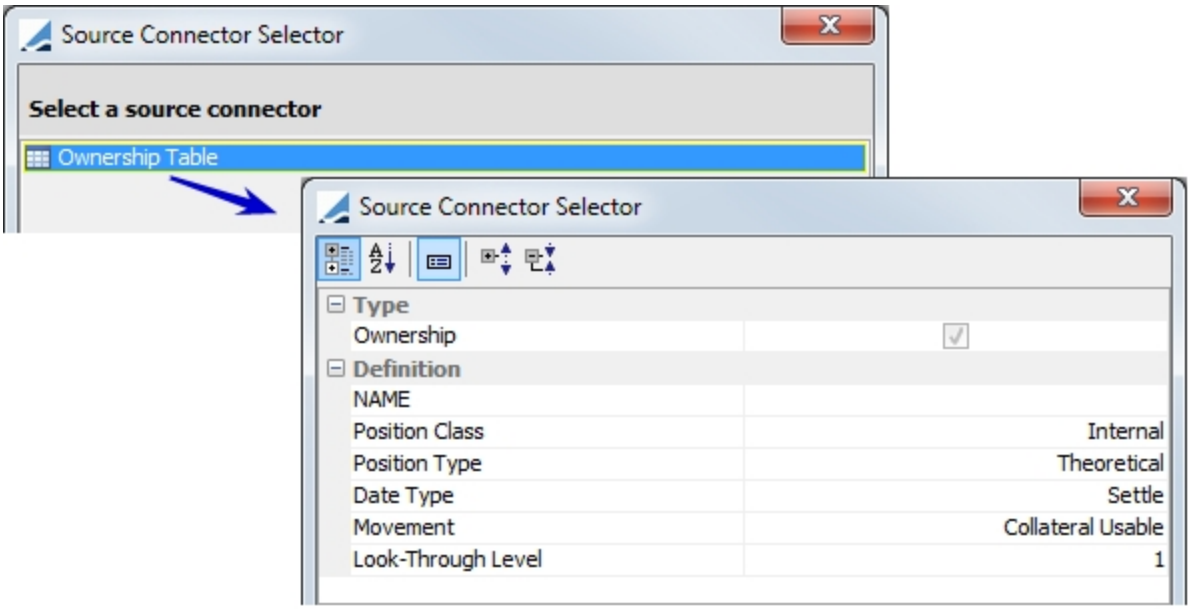
This connector is used with the *Own Assets* Source Type.



Field	Description
NAME	Enter a name for the connector
Position Class	Position class filter will always be Internal
Position Type	This can be any position defined in the Inventory Position such as Actual, Not Settled, Theoretical, etc...
Date Type	Date type used for the positions in this connector. Available, Booking, Settle or Trade Date
Movements	This will always be Collateral Usable

Connector Ownership Table

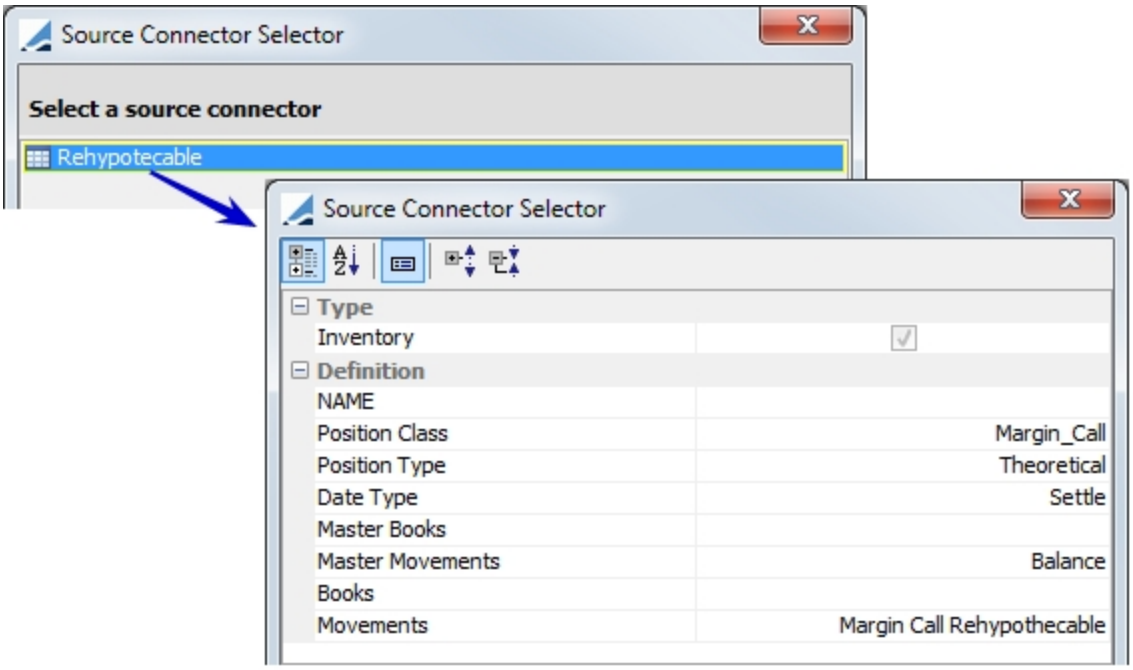
This connector is used with the *Fund Ownership* Source Type.



Field	Description
NAME	Enter a name for the connector
Position Class	Position class filter will always be Internal
Position Type	This can be any position defined in the Inventory Position such as Actual, Not Settled, Theoretical, etc...
Date Type	Date type used for the positions in this connector. Available, Booking, Settle or Trade Date
Movement	This will always be Collateral Usable
Look-Through Level	Specify the number of levels to "look through" to determine if a fund only has access to funds in which it has a direct ownership or whether it should also look through to sub funds. For example, if Fund 1 owns 10% of Fund 2 and Fund 2 owns 50% of fund 3, then Fund 1 can, in theory, have access to 5% of Fund 3's assets. Define 1 level to only look at Fund 2's assets. Define 2 levels to also look at Fund 3's assets.

Connector Rhypothecable

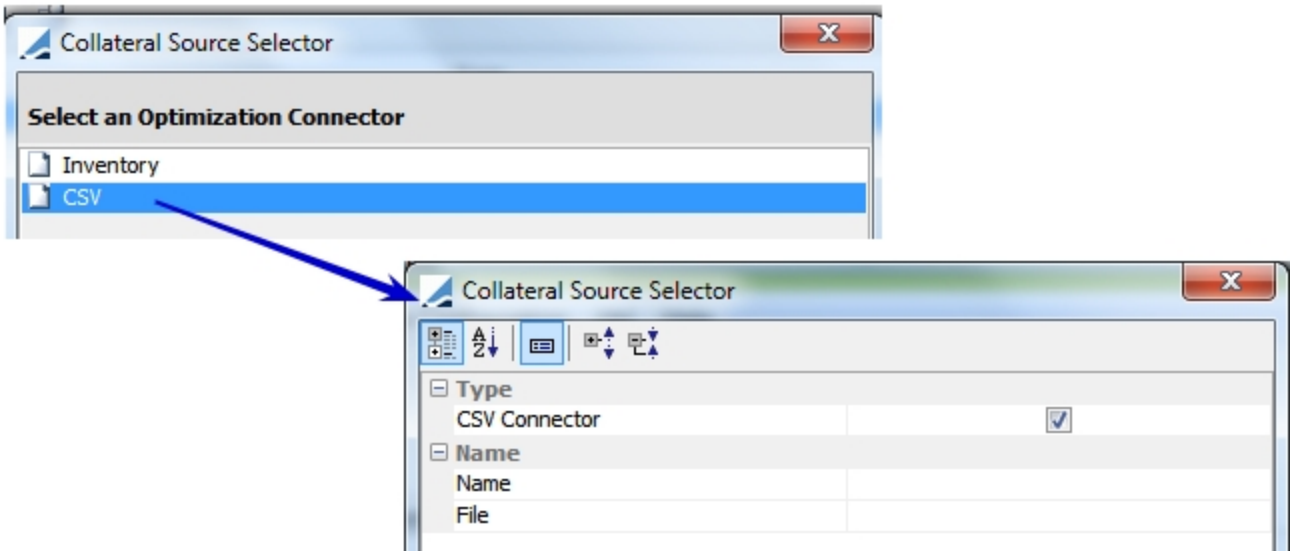
This connector is used with the *Rhypothecable Assets* Source Type.



Field	Description
NAME	Enter a name for the connector
Position Class	Position class filter will always be Margin_Call
Position Type	This can be any position defined in the Inventory Position such as Actual, Not Settled, Theoretical, etc...
Date Type	Date type used for the positions in this connector. Available, Booking, Settle or Trade Date
Master Books	Select
Books	
Movement	This will always be Collateral Margin Call Rehypothecable

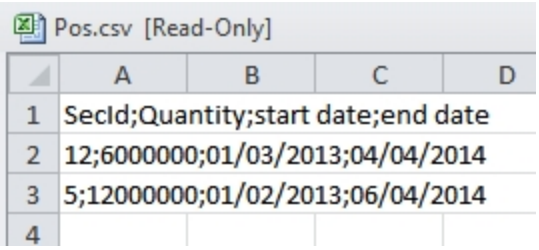
Inventory & CSV Connectors

The Inventory and CSV connectors are used with both the *External Assets* and *Other* Source Types.



Field	Description
Name	Enter a name for the CSV connector
File	Select the name of the CSV file

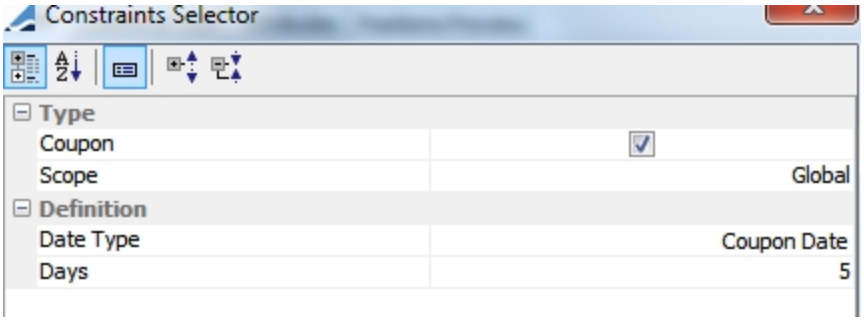
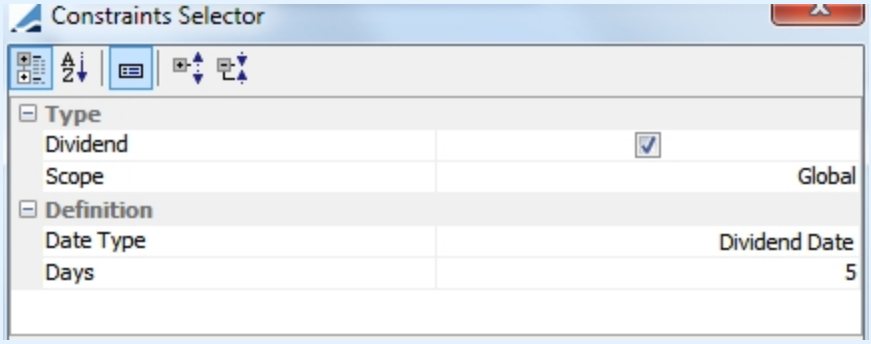
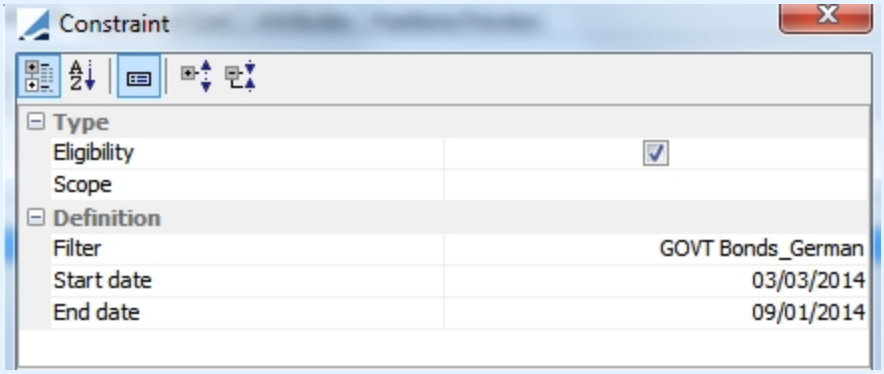
Example of CSV file:



7.2.3 Constraints

This panel allows you to define constraints that apply to the securities of this source. The designation of constraints is not mandatory.

Constraint	Description
Coupon	Do not use a position if a coupon payment is to occur in the next 'x' number of days.

Constraint	Description
	 **Date Type:** select Coupon Date or Record Date **Days:** If a coupon payment is to occur under the designated number of days, the security is not used as part of the collateral source. These are business days, using the security holiday calendar.
Dividend	Do not use a position if a dividend payment is to occur in the next 'x' number of days.  Date Type: Date type description, Coupon Date or Record Date Days: If a dividend payment is to occur under the designated number of days, the security is not used as part of the collateral source. These are business days, using the security holiday calendar.
MaximumUsage	This limits a position usage to a designated maximum percentage.
SDFilter	Do not use a position if a security belongs to a designated static data filter.  **Filter:** Select the desired static data filter

Constraint	Description
	Start date: Exclude positions if a security matches a static data filter after the start date. The start date is compared against the value date of the margin call entry. **End date:** Exclude positions if a security matches a static data filter before the end date. The end date is compared against the value date of the margin call entry.
Volatility	Exclude a security when the volatility is lower than the minimum authorized, based on the security's holiday calendar. Enter the minimum number of days needed between the value date and the end date of the security.

7.2.4 Collateral Cost

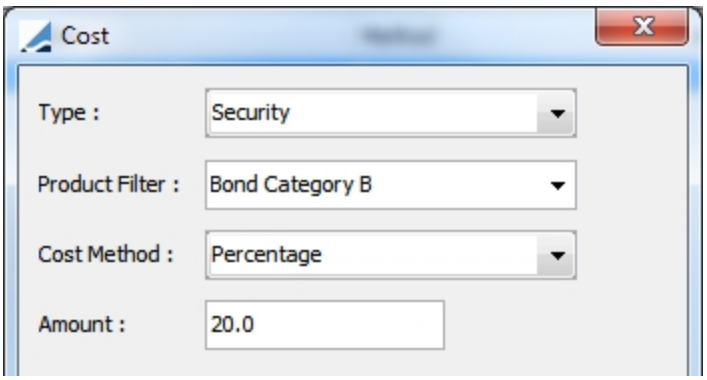
This panel allows you to specify an extra optimization cost for the collateral issued by this source. The *Source* option allows any asset within the source to share a single cost, as well as allowing individual additional costs on assets within the Collateral Source.

The collateral source will provide what is the extra optimization cost for the collateral issued by this source.

The cost will be defined by several methodologies:

- Percentage (add 2% to the collateral cost)
- Add (add x basis point to the collateral cost)
- Override (set the collateral cost to x)
- No Modification

The collateral cost will be defined by security category

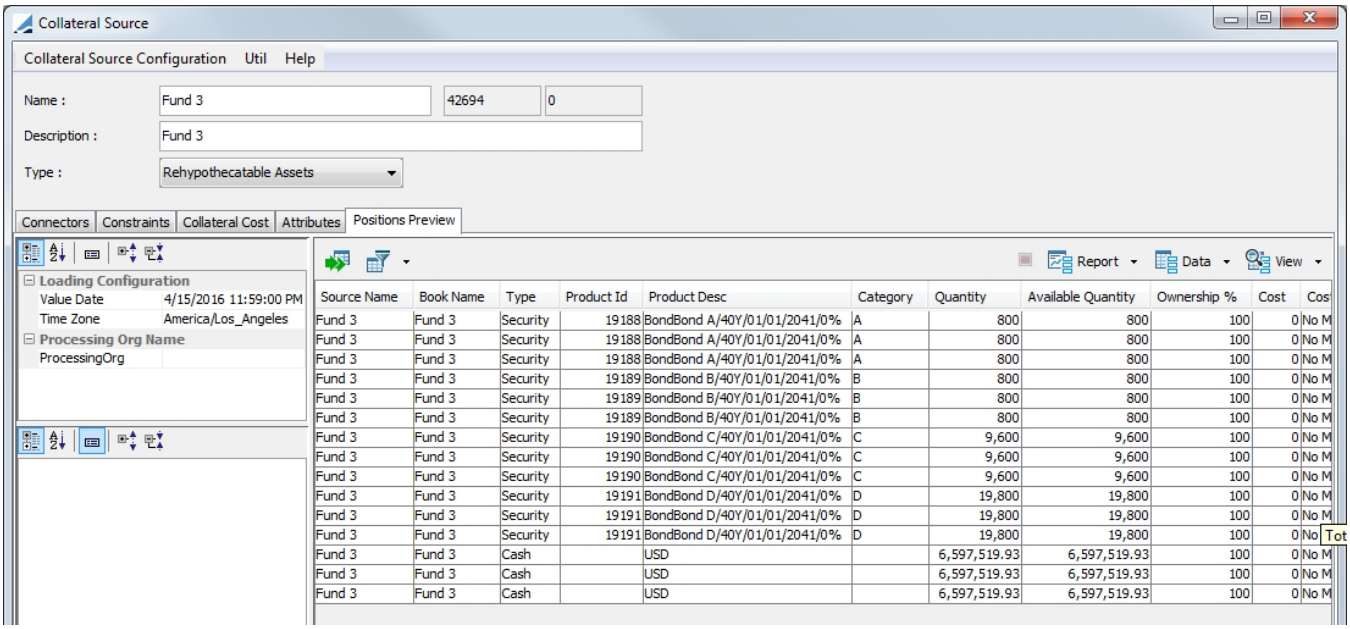


7.2.5 Attributes

Attributes are information that you can put on your pool or on your sources, such as a custom rule. They are not used by Calypso, but they may be used in client custom code.

7.2.6 Positions Preview

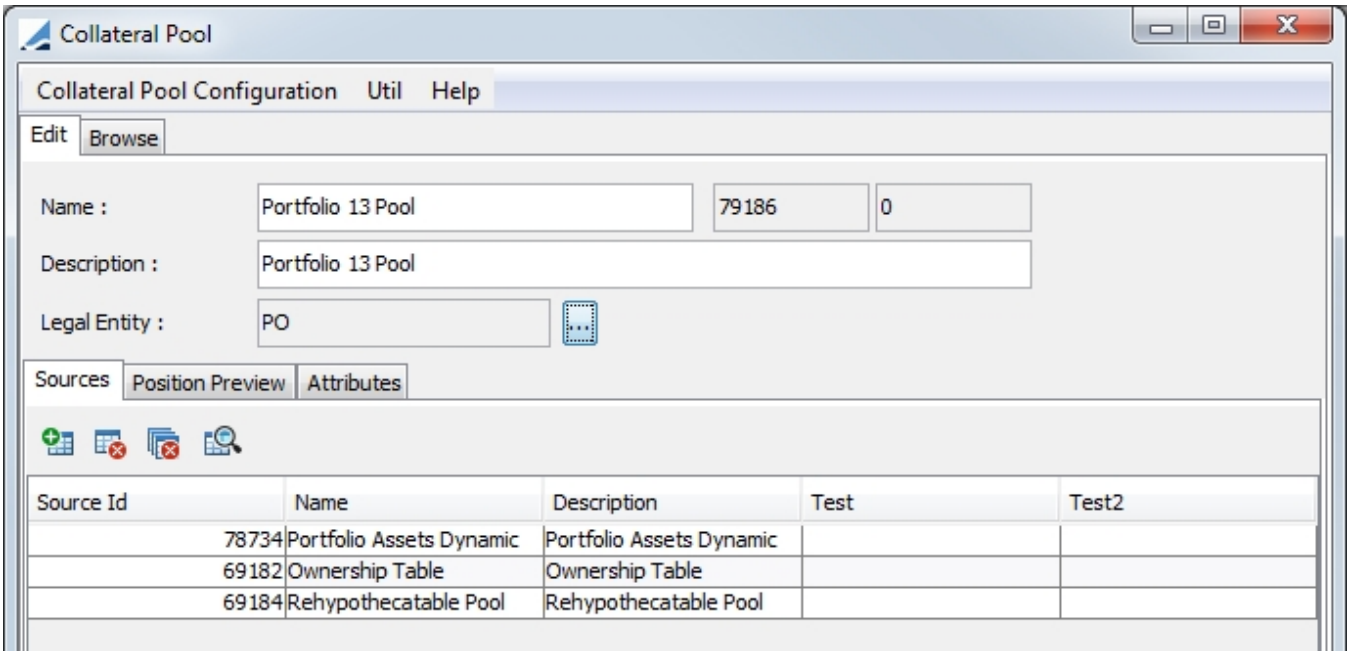
This panel provides a preview of the positions which are included in this source as well as the ability to configure the display of this information.



7.3 Collateral Pool Configuration Window

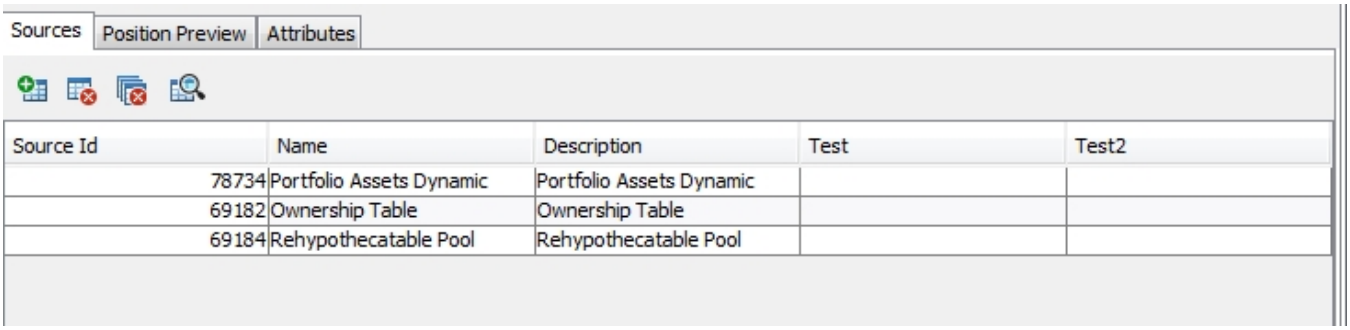
Below is a description of the panels in the Collateral Pool Configuration window.

Enter the Name and Description of the Collateral Pool. The Legal Entity designation is used when allocating collateral, indicating which Collateral Pool to fetch when allocating to an Exposure Group.



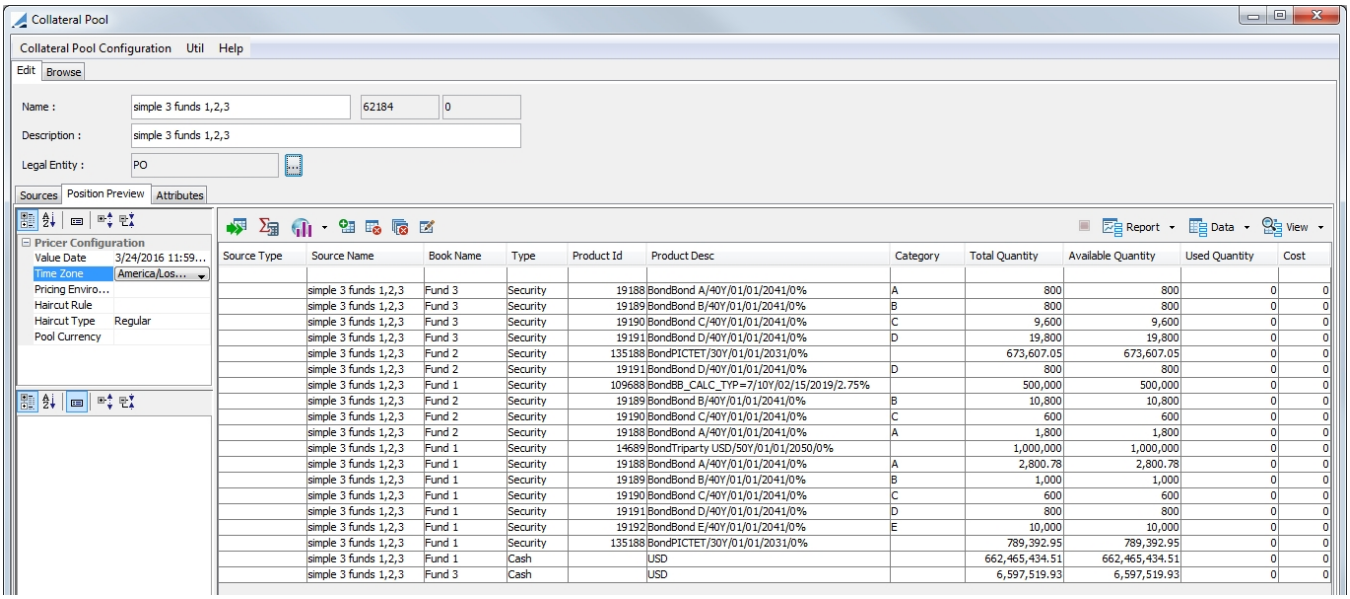
7.3.1 Sources

From this panel, you are able to select the source or sources for the Collateral Pool. You are also able to select a source and click the edit button  to display the Source Configuration window and directly edit the source.



7.3.2 Position Preview

This panel allows you to display a preview of the positions which are included in this Collateral Pool as well as configure the display of this information.



7.3.3 Attributes

Attributes are information that you can put on your pool or on your sources, such as a custom rule. They are not used by Calypso, but they may be used in client custom code.

8. Concentration & Limits

Concentration risk arises when significant amounts of the same securities are taken as collateral with the unintended effect that the institution finds itself relying on that collateral too much. Concentration risk can also arise with sectors, currencies, maturities and even with custodians, if too much collateral is being held in one location.

In order to reduce this risk, Concentration Limits are defined. They are meant to protect against the effect of a collapse in the instrument's price and avoid a prolonged sale of the collateral. Collateral concentration limit is the limit of collateral, in nominal amount and /or percentage, that can be provided according to a set of parameters. Defining concentration limits enables the reduction of risk by limiting the exposure to a particular issuer, for example. Concentration limits can also be applied to currencies, security ratings, countries or other criteria.

Below is a description of what concentration limits are and how they work within the Calypso Collateral Management module.

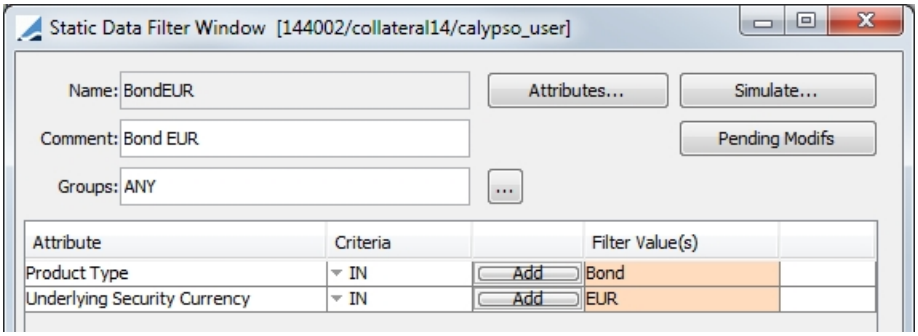
The following set up requirements are needed to use the concentration limit functionality:

- Static Data Filters
- Concentration Rules
- Margin Call / Clearing Member Contract

8.1 Static Data Filter Setup

You must define static data filters that cover all of the eligible security collateral. The Static Data Filter window is accessed through **Configuration > Filters > Static Data Filter**.

The number of filters that are set up vary depending upon your concentration limits. Below is an example of one static data filter used in the examples, a filter that covers all product type bonds with currency type of EUR.



8.2 Concentration Rules

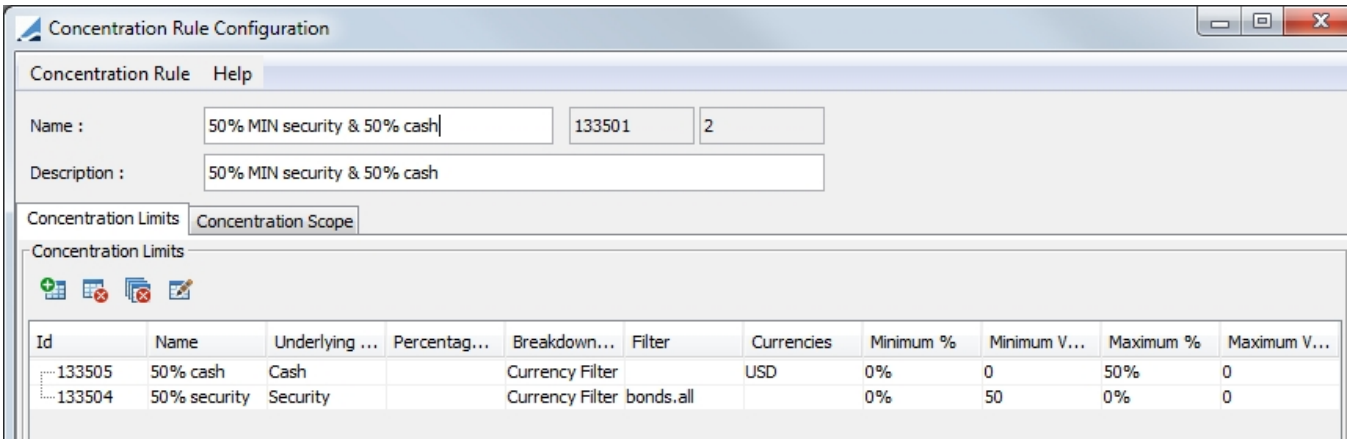
The Concentration Rule Configuration window is available through **Configuration > Fees, Haircut and Margin Calls > Margin Call Concentration**. If this window is unavailable in this menu, you may add it through the Main Entry Customizer (**Utilities > Main Entry Customizer**) `refdata.concentration.ConcentrationRuleWindow`

A concentration rule is a group of concentration limits. In Calypso, you can define three types of concentration limit:

- Category - defines how much or how little (in percentage or value) of a certain category is allowed in the allocation. The calculation is based on the "Total Collateral" Value.

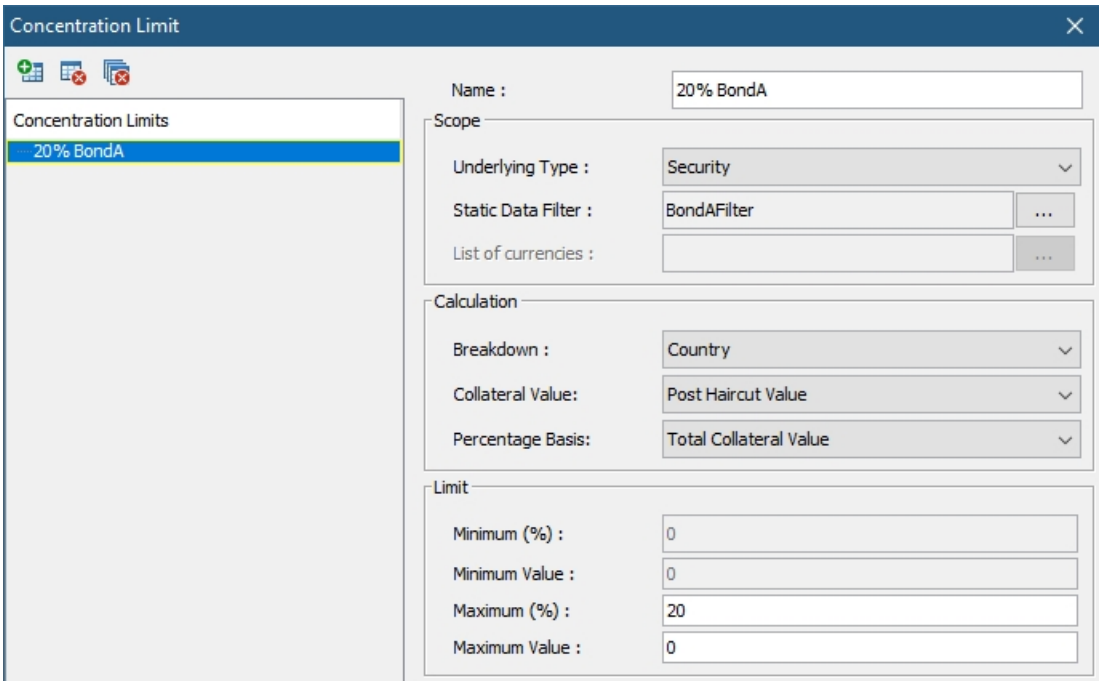
  Limit % = Category Collateral Value / Total Collateral Value
- Issuer - defines how much, in percentages, of the allocation can come from the same issuer. The calculation is based on the Category Collateral Value.
- Issue - defines how much, in percentages, of a same issuance (bond or equity) can be sued for the collateral allocation. The calculation is based on the product definition.

Each concentration rule has a type (Category, Issue and Issuer). It is not possible to have different types in the same concentration rule.



8.2.1 Concentration Limits

Click  to add a new limit rule.



The fields and configuration options of the Concentration Limit Rule window are described below.

Fields	Description
Scope	
Underlying Type	The Underlying Type can be either Cash or Security
Static Data Filter	If Security is selected as the Underlying Type, select the static data filter to be used for the rule
List of currencies	If Cash is selected as the Underlying Type, select the currencies to be included in the rule
Calculation	
Breakdown	Specify how the calculation should be broken down, whether by issuer Country, Issuer, Ultimate Issuer (Issuer Group), Security, Product Code or have no breakdown at all.
Collateral Value	Option to compute the concentration limit using the pre-haircut or the post-haircut value (in contract currency) of each collateral asset allocated on the contract that is eligible for the concentration limit rule.
Percentage Basis	Choose from Total Collateral Value, Category Collateral Value, Total Issued, Net Asset Value, Margin Required or Average Daily Trading Volume (available only when Breakdown is Security). ▶ See Percentage Basis Calculations below for a description of how Percentage Basis is calculated.

Fields	Description
Limit	
Minimum (%)	The minimum for the concentration ratio, percentage under which it will not be accepted.
Minimum (Value)	The minimum amount the concentration limit can be in value. It is the value under which the limit will not be accepted. This is applicable for the Category rule type only.
Maximum (%)	The maximum for the concentration ratio. It is the percentage over which it will not be accepted.
Maximum (Value)	The maximum amount the concentration limit can be in value. It is the value over which the limit will not be accepted.

To add a concentration limit row, click the  to display the Concentration Limit window.

Cash concentration limits are considered when using the Allocation-Rule solver with concentration and/or substitution rule set. The Concentration Limit should be set with No Breakdown, Collateral Value = Pre-Haircut Value and Percentage Basis can be either Net Exposure Value or Category Collateral Value with the maximum based on a percentage or fixed value.

8.2.2 Percentage Basis Calculations

Category Collateral Value

This Percentage Basis is NOT required to meet regulatory requirements.

- Breakdown by Issuer - Usage (%) = Collateral Value of asset issued by the same issuer / Category Collateral Value

  Collateral Value of asset issued by the same issuer is the dirty post-haircut value (Contract Value) of all assets held by the Margin Call contract and issued by the same issuer.

  Category Collateral Value is the dirty post-haircut value (Contract Value) of all assets eligible for the specified static data filter.

- Breakdown by Country - Usage (%) = Collateral Value of collateral asset issued by issuers from the same country / Category Collateral Value

  Collateral Value of asset issued by issuers from the same country is the dirty post-haircut value (Contract Value) of all assets held by the Margin Call contract and issued by issuers from the same country.

  Category Collateral Value is the dirty post-haircut value (Contract Value) of all assets held by the Margin Call contract and eligible for the specified static data filter.

  The collateral assets must be grouped by Issuers domiciled in the same country and be determined by the Country field in the product definition.

- Breakdown by Ultimate Issuer - Usage (%) = Collateral Value of the collateral asset issued by an ultimate issuer / Category Collateral Value

  The ultimate issuer is based on the product code ULTIMATE_ISSUER_ID.

  Collateral Value of the collateral asset issued by an ultimate issuer is the dirty post-haircut value (Contract Value) of all assets held by the Margin Call contract and eligible for the specified static data filter.

  Category Collateral Value is the dirty post-haircut value (Contract Value) of all assets held by the Margin Call contract and eligible for the specified static data filter.

Total Collateral Value

This Percentage Basis IS required to meet regulatory requirements.

- Breakdown by Issuer - Usage (%) = Collateral Value of assets issued by the same issuer / Total Collateral Value

  Collateral Value of assets issued by the same issuer is the dirty post-haircut value (Contract Value) of all assets held on the Margin Call contract and issued by the same issuer.

  Total Collateral Value is the dirty post-haircut value (Contract Value) of all assets held on the margin call contract.
- Breakdown by Country - Usage (%) = Collateral Value of the collateral assets issued by issuers from the same country / Total Collateral Value

  Collateral Value of the collateral assets issued by issuers from the same country is the dirty post-haircut value (Contract Value) of all assets held by the Margin Call contract and issued by the issuers from the same country.

  Total Collateral Value is the dirty post-haircut value (Contract Value) of all assets held on the Margin Call contract.

  The collateral assets must be grouped by Issuers domiciled in the same country and be determined by the Country field in the product definition.
- Breakdown by Ultimate Issuer - Usage (%) = Collateral Value of collateral assets issued by an ultimate issuer / Total Collateral Value

  The ultimate issuer is based on the product code ULTIMATE_ISSUER_ID.

  Collateral Value of the collateral asset issued by an ultimate issuer is the dirty post-haircut value (Contract Value) of all assets held by the Margin Call contract and issued by issuers belonging to the same group.

  Total Collateral Value is the dirty post-haircut value (Contract Value) of all assets held on the Margin Call contract.

There are additional columns available in Collateral Manager to clarify the allocation process when the Percentage Basis is Total Collateral Value.

Column Name	Calculation	Description
Total Collateral (Current)	Total Prev Mrg + Cash Margin + Security Margin	Total Collateral column at Margin Call Entry level
Total Collateral (Projected)	Total Prev Mrg + Global Required Margin	Used as the denominator in the project concentration limit calculation

Column Name	Calculation	Description
Max Value (Current)	Total Collateral (Current) × Maximum % of the concentration limit rule	Maximum amount of collateral that can be added in the concentration limit bucket without breaching the limit. Concentration limit calculation based on the Total Collateral (Current)
Max Value (Projected)	Total Collateral (Projected) × Maximum % of the concentration limit rule	Maximum projected amount of collateral that can be added in the concentration limit bucket without breaching the limit. Concentration limit calculation based on the Total Collateral (Projected)
Usage(%) (Projected)	Total Allocation ÷ Total Collateral (Projected)	With current allocations and previous collateral, this column gives the Usage (%) in the concentration bucket, with the assumption that the contract is fully covered (Remaining Margin = 0). Concentration limit calculation based on the Total Collateral (Projected)
Available (Total) (Projected)	Total Allocation – Max Value (Projected)	How much collateral can be added to the concentration limit bucket if the contract is fully covered (Remaining Margin = 0)
Status (Projected)	"In Limit" if Usage (%) (Projected) < Maximum % of the concentration limit rule. "Out of limit" if Usage (%) (Projected) > Maximum % of the concentration limit rule	Status under the assumption that the contract is fully covered (Remaining Margin = 0). Concentration limit calculation is based on the Total Collateral (Projected)

Total Issued

Usage(%) = Issue Nominal ÷ Total Issued

where *Total Issued* is the value stored in the Total Issued field specified in the product definition of the bond or equity.

Net Asset Value

Available for all Breakdown types

Usage(%) = Collateral Value of assets considering the concentration limit Scope and the breakdown / market quote (*Fund.<Fund Name linked to the contract legal entity>.NAV * FX.<Fund currency to Contract Currency>*)

Average Daily Trading Volume

Available only for Security Breakdown

The ADTV is the market data from the market data providers specific to a given asset. This should be stored in a specific market quote in Calypso *<Product Name>.<Bond Name>.ADTV*. For example:

Bond.<Bond Quote Name>.ADTV for bonds

Equity.<Equity Quote Name>.ADTV for equities

Usage(%) = quantity of the bond held on the position / *Bond.<Bond Quote Name>.ADTV*

Usage(%) = quantity of the equity held on the position / *Equity.<Equity Quote Name>.ADTV*

Total Net Balance

Computes the concentration limits based on the current *Total Exposure Amount* (Net Balance) of the contract. Available for all breakdowns.

For example:

Contract Total Exposure (Net Balance) = 1,000,000

French Bond allocated = 300,000 in value

Limit = BOND issued by French government should not exceed 40% of Total Exposure Amount

Limit = 300,000 / 1,000,000 = 30%

Status = In Limit

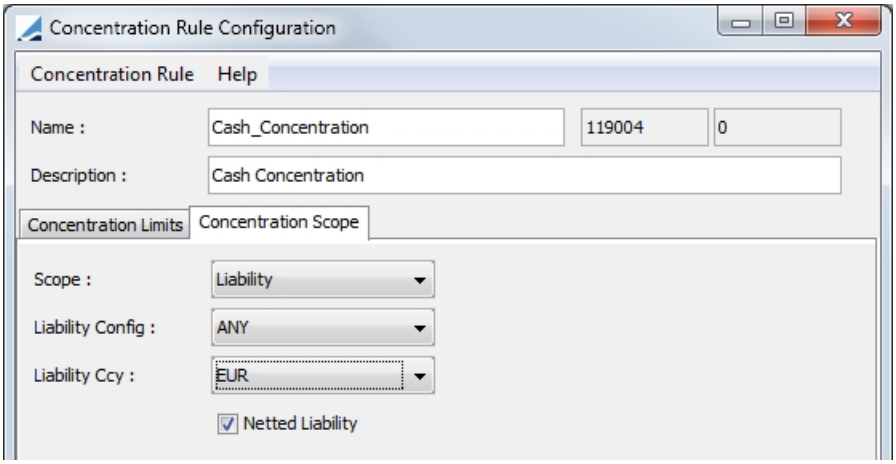
Margin Required

Computes the concentration limits based on the Margin Required of the contract.

Usage(%) = Cash allocated / Margin required

8.2.3 Concentration Scope

Concentration scope is used to determine what type of concentration rule configuration is used, either Contract or Liability. A Liability configuration is used for Cover Distribution. A Liability concentration can be defined at the liability group (across all liability currencies) or each liability currency within a liability group. The default Concentration Scope is Contract.

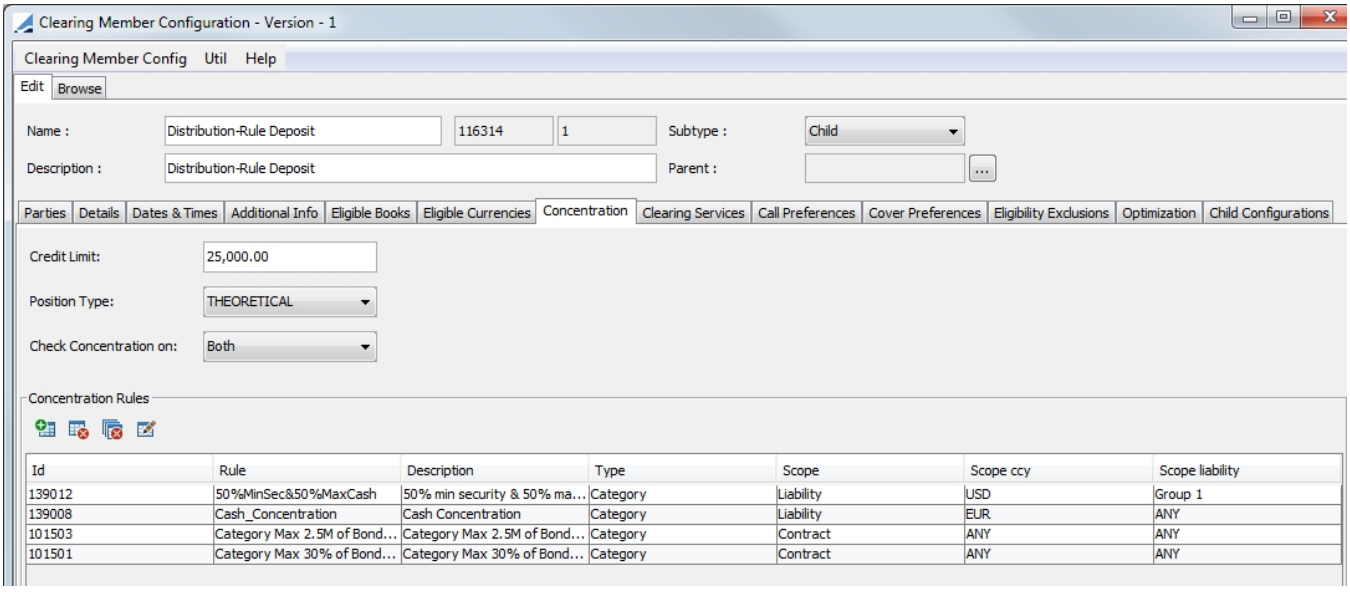


Fields	Description
Scope	Select either Contract or Liability. Contract is the default selection.
Liability Config	If Liability is selected for the Scope, this field is made available for selection. You may select from any of the configured Liability Groups. The selection defaults to ANY.
Liability Currency	If Liability is selected for the Scope, this field is made available for selection. You may choose a specific liability currency for the concentration. The selection defaults to ANY.
Netted Liability	If Liability is selected for the Scope, this field is made available for selection. Selecting this includes liability offsetting which allows the use of positive liabilities to offset negative liabilities. This flag is used solely for concentration purposes. This is not affected by the Liability Offsetting rule in the Liability Group Configuration.

8.3 Concentration Limits and Margin Call / Clearing Member Contracts

After all of the concentration rules have been created, they can be added to the margin call or clearing member contract.

Once Concentration rules have been created for a contract, they will apply for each allocation on that contract.

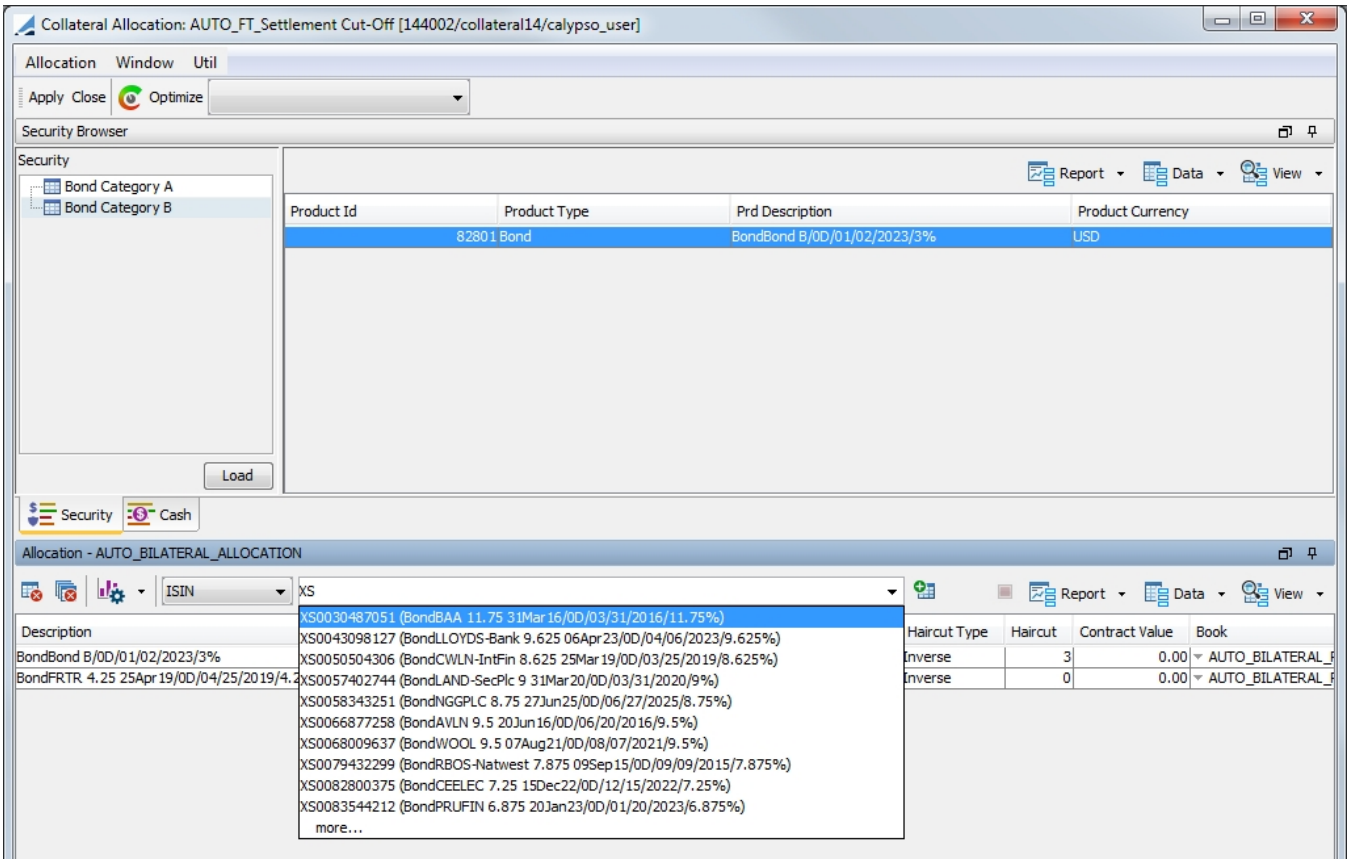


Fields	Description
Credit Limit	A credit limit may be specified for the counterparty. The credit limit is the amount that a client can borrow against the pledged securities. It is possible for the counterparty to pledge securities with a

Fields	Description
	value above the limit but the value that exceeds the limit is not included in the total collateral value. The amount is in the contract currency and may vary from contract to contract. Additionally, there are certain columns that can be displayed in Collateral Manager pertaining to the Credit Limit. They are: • *Credit Limit* – static data from the margin call contract • *Margin (including Credit Limit)* – displays the smaller of these two values: – Total Collateral (previous collateral and today's collateral) – Credit Limit (static data from the margin call contract) • *Amount Over Credit Limit* – If Credit Limit > Total Collateral then this field displays 0 – If Credit Limit < Total Collateral then this field displays the difference between the two (Credit Limit – Total Collateral) • *Available Credit Limit* – If Credit Limit < Total Collateral then this is 0 – If Credit Limit > Total Collateral then this displays the difference between the two (Total Collateral – Credit Limit) • *Credit Limit Status* – either Over the Limit or Under the Limit
Position Type	Select THEORETICAL or ACTUAL Defines which type of position you would like to use for your 'previous allocation'.
Check Concentration On	Select either Both, Outgoing or Incoming. • **Both -** If the concentration limit should be checked on incoming and outgoing collateral. • **Outgoing -** If the concentration limit should be checked on outgoing collateral only. (For example, if the Global Required Margin < 0, then the PO owes collateral to the counterparty.) • **Incoming -** If the concentration limit should be checked on incoming collateral only. (For example, if the Global Required Margin > 0, then the counterparty owes collateral to the PO.)

8.4 Concentration Limit Process

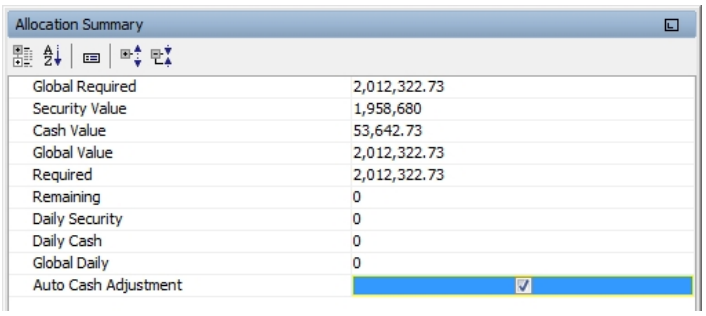
To do a manual allocation once the exposure has been calculated in the Collateral Manager, you can allocate it in the Allocation window.



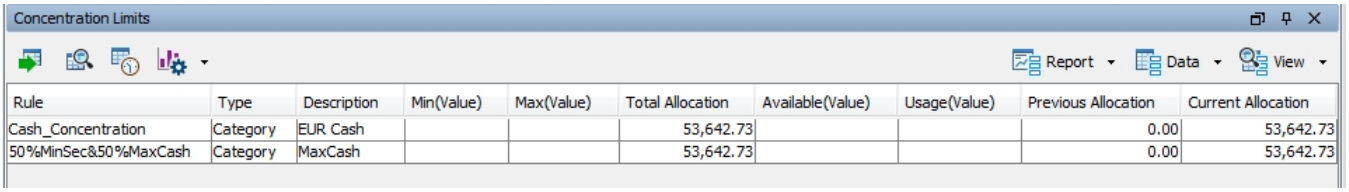
There are two ways of allocating collateral:

- Select the collateral (Cash or Security) in the Security Browser section of the window, then double-click the collateral. It will then appear in the Allocation portion of the window below.
- In the Allocation section of the window, select ISIN from the drop-down list. Either enter a list of ISIN codes of the securities or begin typing the first few letters of the code to view available securities in Calypso. Click  to insert the securities.

Below is an example of a completed allocation.



Select the Concentration tab to display the Concentration Limits window.



The default columns in this panel are described below.

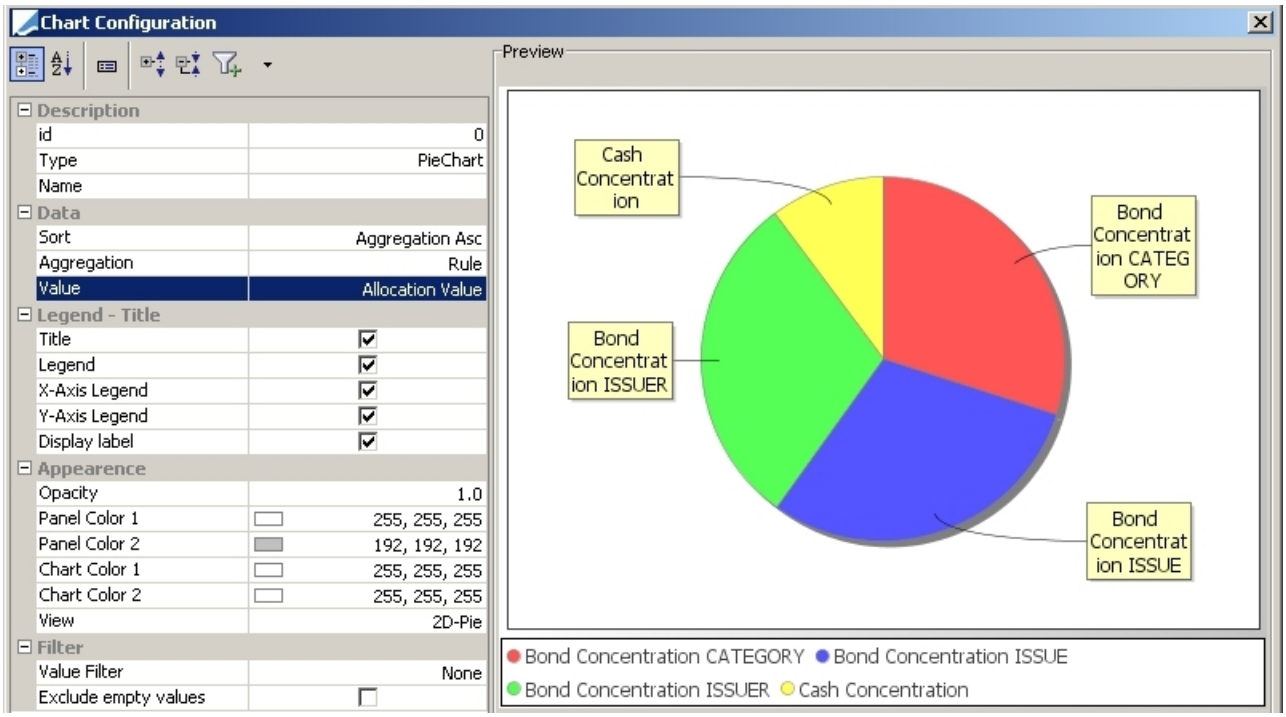
Column	Description
Previous Allocation	Value of previously allocated collateral
Current Allocation	Value of today's allocated collateral
Total Allocation	The Previous Allocation + Current Allocation
Min (Value)	From the contract / concentration definition. The minimum amount the concentration limit can be in value. It is the value under which the limit will not be accepted. This is applicable for the Category rule type only.
Max (Value)	From the contract / concentration definition. The maximum amount the concentration limit can be in value. It is the value over which the limit will not be accepted.
Available (Value)	For limit type CATEGORY, equal to Max (Value) - Used (Value) For limit types ISSUE and ISSUER, not applicable.
Usage (Value)	For limit type CATEGORY, equal to Used (Value) / Max (Value) for limit types ISSUE and ISSUER, not applicable.

Column	Description
Min (%)	From the contract / concentration definition. The minimum for the concentration ratio. It is the percentage under which it will not be accepted.
Max (%)	From the contract / concentration definition. The maximum for the concentration ratio. It is the percentage over which it will not be accepted.
Usage (%)	For limit type CATEGORY, equal to Used (Value) / Global Required Margin For limit type ISSUE, equal to Used (Value) / Total issue amount as defined in the product definition For limit type ISSUER, equal to Used (Value) / Sum of Used (Value) for all bonds of the same category
Available (%)	For all limit types, equal to Max (%) - Used (%)
Status	If the Available (Value) or the Available (%) is >, the status indicates 'in limit'. If the Available (Value) or the Available (%) is ≤ 0, the status indicates 'out of limit'. Note: A Concentration Limit column can be added in Collateral Manager Results panel. This field will indicate if the concentration limit is 'out of limit'.

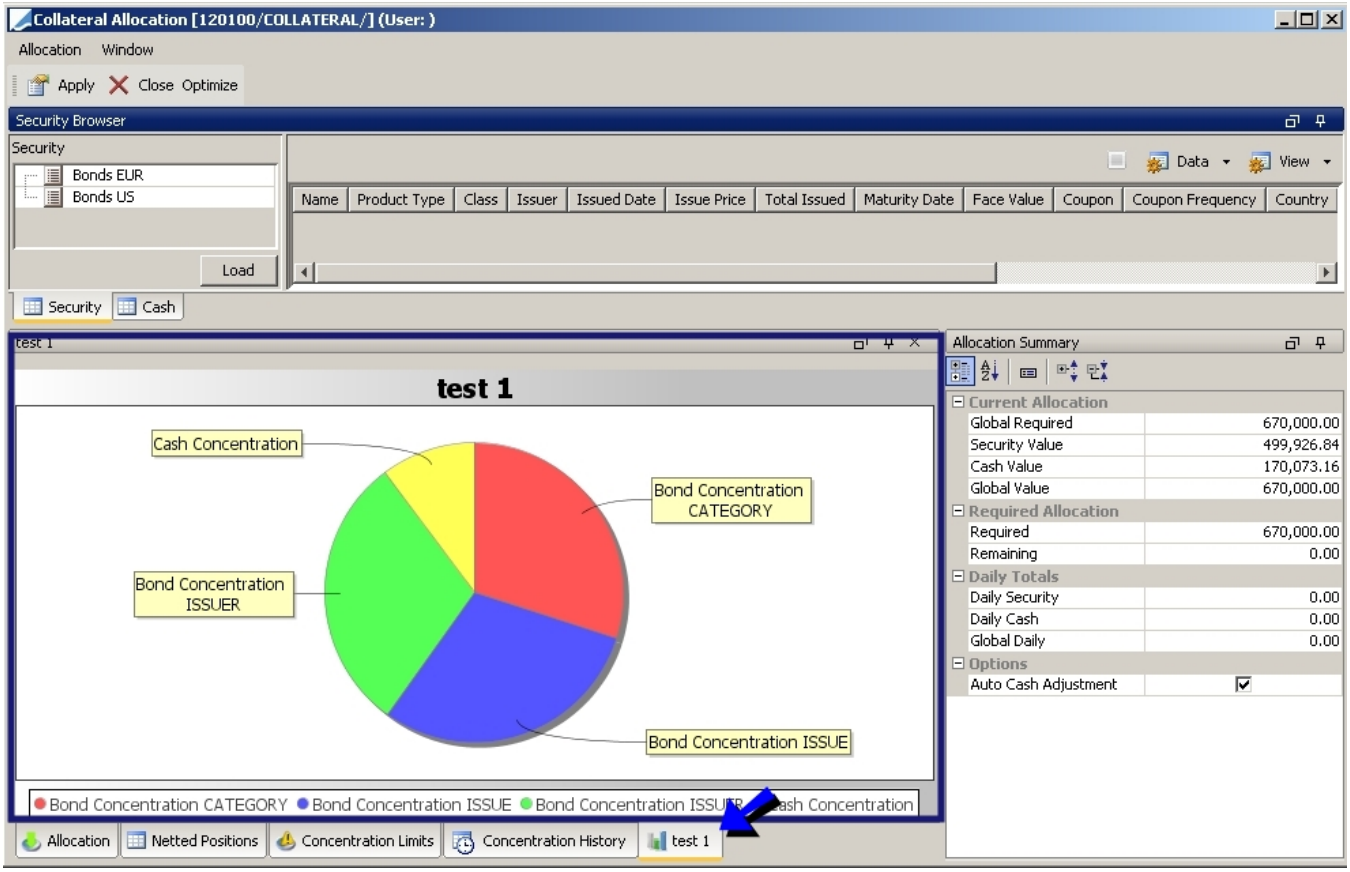
8.4.1 Graphics

You may add a graph based on the concentration calculations in both the Allocation window and in the Collateral Manager. The steps required to set this up are the same for both.

To view a graphic, select  > Create. You then can select what sort of graph you would like to generate. (In the screen shot below, the allocation value is segregated by concentration rule type.



The graph can be added to the Allocation window as a new panel by choosing  > Add. The list of all the graphs created and saved appears. Choose the graph you would like and click Select. As a result, a new panel appears in the bottom section of the screen.



8.4.2 History

You may view the history of your concentration limits from the Concentration History panel.

9. Rehypothecation of Collateral

The term Rehypothecation refers to the ability for a collateral receiver to reuse collateral provided by its counterparty. If the collateral is rehypothecable, then it can be redelivered to another counterparty to fulfill a margin obligation. If the collateral is not rehypothecable, then it cannot be reused and must remain in a specified account.

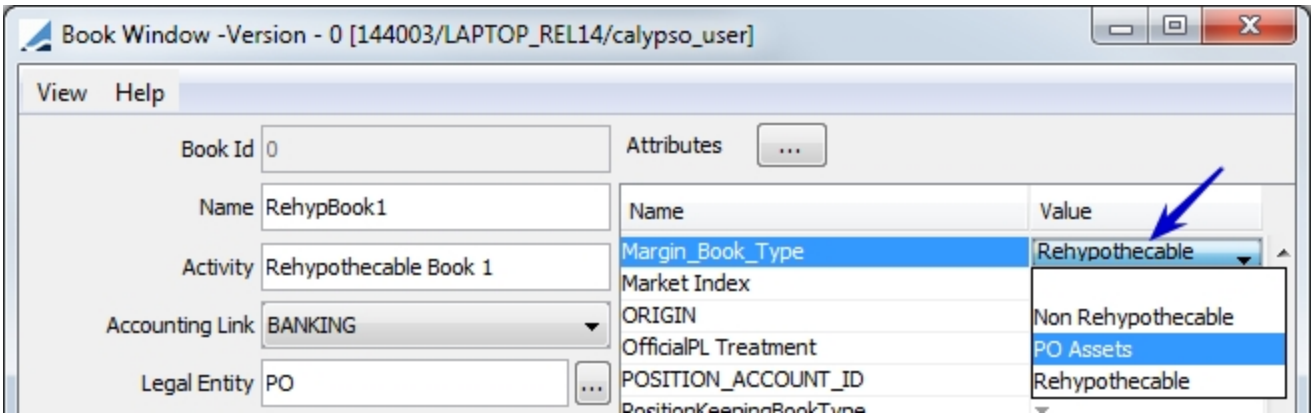
The setup of this functionality, requires two settings. One setting is a book attribute and the other is in the Details panel of the Margin Call Contract. Both the book and contract configurations need to be done for the Rehypothecation functionality to be enabled.

Warning messages appear if an attempt is made to receive into a book or pay from a book which is not eligible according to the Rehypothecation settings of the Contract.

9.1 Rehypothication Book Attributes

The book attribute Margin_Book_Type indicates whether a book can be used for rehypothecated assets. There are three options for this attribute. This attribute must be set in some way to enable the Rehypothecation functionality.

The Book window is displayed from Calypso Navigator by selecting, **Configuration > Books & Bundles > Trading Book**.



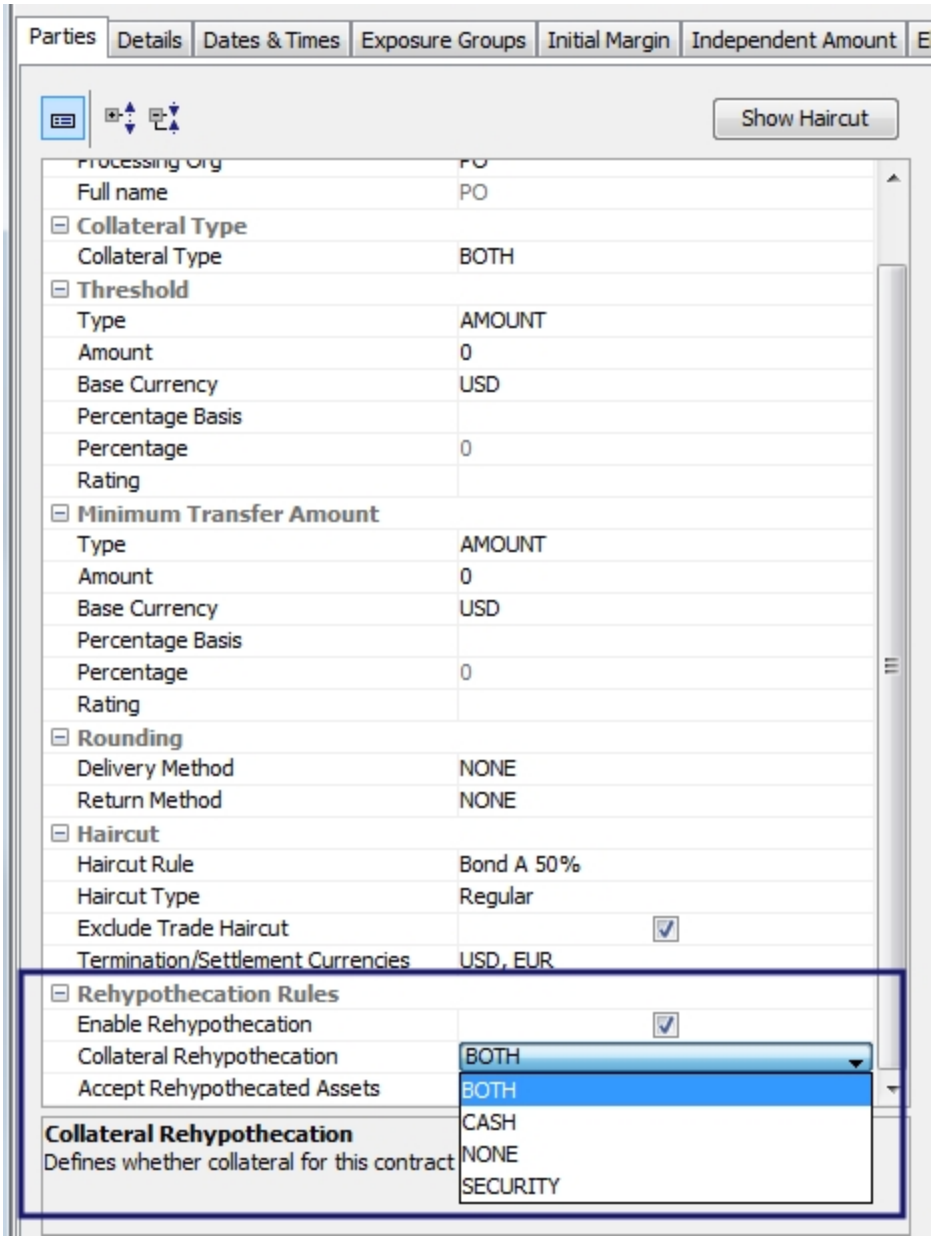
- A selection of *Rehypothecable* means that rehypothecable collateral (collateral that is able to be reused on a different contract) can come into the book. The collateral that comes into the book will then be redelivered to another contract.
- A selection of *Non Rehypothecable* means that only non-rehypothecable collateral can go into the book. The collateral will stay there until it is returned back to the counterparty.
- A selection of *PO Assets* means that the collateral in the book belongs to the PO and the PO can do with it as it chooses.

If a book has no selection, it will function the same as a book with a *PO Assets* selection.

The Optimizer will treat the books with set attributes as either eligible or ineligible as appropriate.

9.2 Rehypothecation Setup in Margin Call Contract

The settings in the Parties panel of the margin call contract determine if the contract has the ability to receive and/or re-pledge collateral or if the contract is prohibited from doing so. The movements of the collateral are restricted to contracts that share the same Processing Org (PO).



Select the *Enable Rehypothecation* flag to enable the enable the Rehypothecation functionality in the Margin Call contract and to display the Rehypothecation related fields, *Collateral Rehypothecation* and *Accept Rehypothecated Assets*.

- *Collateral Rehypothecation:* A selection in this field indicates that either the PO or the CP in the contract are permitted to rehypothecate collateral. The options are that BOTH cash and securities can be rehypothecated, CASH can be rehypothecated, SECURITY can be rehypothecated or no collateral from the contract can be rehypothecated (NONE).
- *Accept Rehypothecated Assets*: A selection in this field indicates that either the PO or the CP in the contract accept rehypothecated collateral. The options are that BOTH cash and securities are accepted, only CASH is accepted, only securities (SECURITY) are accepted or no rehypothecated collateral is accepted (NONE).

On the PO side of the contract, the Accept Rehypothecated Assets flag is for information purposes only because it is not possible to govern what collateral the CP sends.

On the CP side of the contract, the Collateral Rehypothecation flag is for information purposes only because it is not possible to govern what CP does with their collateral.

NOTE: If the Rehypothecation Rules are set in the contract but none of the contract's Eligible Books do not have the appropriate MARGIN _BOOK_TYPE set, the Rehypothecation logic will not work and the user will not see any error messages.

Incoming cash and non-cash collateral against a non-rehypothecable contract where the allocation book has a null value for MARGIN _BOOK_TYPE BOOK ATTRIBUTE impacts non-rehypothecable balances.

In this scenario, delivery to PO and return to CP transfers from allocations for contracts which have the *Enable Rehypothecation* flag selected, and which have the *Collateral Rehypothecation* field set to NONE for the PO side of the Parties tab are impacted.