29 PRICE ALIGNMENT INTEREST (PAI)

29.1 OVERVIEW

PAI is the interest charged on the cumulative amount of variation margin received or interest paid on the cumulative variation margin that has been paid, it is the overnight cost of funding collateral. PAI is debited from the receiver and transferred to the payer to cover the loss of interest on posted collateral.

PAI can only be calculated on cleared swaps (See Cleared Swap Section 5.378) This is new InvestOne functionality which will allow users to calculate Price Alignment Interest on cleared swaps. A new enterprise only screen ‘CALCPAI’ has been developed which will allow the users to process PAI by account and date using the accumulated variation margin of selected cleared swaps. Swaps are selected to be included in the PAI processing by using a new PAI clearing broker field to link a dummy security with the same currency to the clearing broker.

The new screen will then automatically pick cleared swaps (Type =C), asset groups TW, IW, CW and DW that has the new clearing broker populated on the swap entry screen. The new screen will also generate an RTK report, once the PAI is posted.

29.1.1 Price Alignment Interest (PAI) calculations on Cleared Swaps:

The calculation is:

Prior Business Day's Variation Margin Balance * Fed Funds/EONIA/SONIA) / 360 * -1 = 1 day PAI balance

Flexibility in the PAI calculation is required so that different rates (Fed Funds Rate, EONIA rate, SONIA rate and MUTAN rate, etc.) and day count (360 or 365) can be entered across multiple Clearing Brokers/Currencies.

The following are inclusions and exclusions of Fund Types and Fund Structures for the calculation of Price Alignment Interest (PAI).

Price Aligned Interest is valid for the following fund types only:

- Mutual Funds (fund type N or L)
- Hedge Funds (fund type H or I)
- Commingled Funds (fund type blank)
- Open Ended Investment Company (fund type O)
- AUS Corporation (fund type A)
- AUS Trust Fund (fund type T)
- AUS Superannuation (fund type Z)

Price Aligned Interest is not valid for the following fund types:

- Japanese Institutional funds (fund type J)
- Separate Accounts (fund type S)
- UK Unit Trusts (fund type U)
- Top Level Mutual Funds (fund type M)
- Investment Pool (fund type P)
- Top Level OEIC Funds (fund type C)
Price Aligned Interest is valid for the following fund structures only:

- Non-MCS
- MCS Mutual Fund
- Multi-Currency MCS
- Group G Accounts
- Group M Accounts
- Group V Accounts
- Multi-View Accounts
- Master/Feeder Funds
- Investment Book
- Hierarchical Valuation
- Dual Priced OEIC Funds
- MCS OEIC

Note: For Multi-View Accounts, PAI is calculated for the FA view only although it will flow to other attached views.

Price Aligned Interest is **not** valid for the following fund structures:

- Reporting Accounts
- Shadow Accounts
- Separate Accounts
- Accounts that are set up for Interim Earnings (Local Process flag on AASP)
- Unit Trusts

### 29.2 GLOSSARY OF TERMS:

<table>
<thead>
<tr>
<th>Term #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing Broker</td>
<td>Broker number defined for the broker/dealer through whom the transaction was cleared.</td>
</tr>
<tr>
<td>Cleared Swap</td>
<td>Swaps traded through Central Clearing Parties that use marked to market transactions to adjust for changes in market value.</td>
</tr>
<tr>
<td>Price Alignment Interest (PAI)</td>
<td>Interest charged on the cumulative amount of variation margin received or interest paid on the cumulative variation margin that has been paid.</td>
</tr>
</tbody>
</table>

### 29.3 SECURITY DEFINITION

#### 29.3.1 PAI Dummy Security:

1. The client is required to setup a dummy security for each Clearing Broker and currency combination they want to post PAI cash transaction.
a. The dummy security must be set up as a Bond (Asset Group B or FB), utilize accrual method U (not computed), and populate the currency (issue, income, trade will be same) the broker pays PAI in. Dummy Securities should not be setup with qualifier or date.

b. A new field (PAI) will be added to the Security Master screens (BOBD/STST) to allow the user to indicate that the security will be used for posting PAI. The Y/N field must be set to Y to permit the user to post PAI to the security.

c. A dummy security needs to be set up for the currency for which PAI is being posted. The user can post PAI from one clearing broker with matching currency to a single dummy security or set up multiple dummy securities with the same currency and selectively post PAI by clearing broker to any dummy security.

d. A dummy position (Buy/Sell like transactions) will not be allowed against dummy securities.

e. CALCPAI generated transactions cannot be maintained manually although user can change C/S DATE, AS DATE, TRD BASE AMT and STL BASE AMT from transaction change screens (DAFT, DATE, etc.)

2. A new PAI Y/N flag has been added to BOBD to be used to identify if the security is eligible to be used in the PAI processing. For an active Dummy Security, the PAI Flag can’t be changed from Y to N and vice versa.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description. Fields Shaded Gray are Required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAI</td>
<td>Y/N flag - used to identify if the security is eligible to be used in the PAI processing</td>
</tr>
</tbody>
</table>

3. A new PAI flag has been added to STST to be used to identify if the security is eligible to be used in the PAI processing.
29.3.2 Cleared Swap Security

1. The client will have to define their Swap Security with a PAI Clearing Broker, which is a new field created for the PAI calculation. A security level PAI Clearing Broker field (SWPCLR) has been created specifically for Cleared Swaps.

   a. In order to tag the Swap Security with a PAI Clearing Broker, the new PAI Clearing Broker field has been added to the Swap entry screens (DECDSO, DEIRS, DECSWO, DETRT, and DETRSC).

   b. In order to message in the Security Level PAI Clearing Broker, the new PAI Clearing Broker field will be added to the Inbound Security Maintenance Message, and Transaction Maintenance.

   c. In order to extract the Security Level PAI Clearing Broker, the new PAI Clearing Broker code will be added to Security Distribution. The new Security Level PAI Clearing Broker code will be added to Flexible Outbound Messaging Interface (FOMI), Spectra, the Multi-View Extract, and Reporting Toolkit (RTK) in FA View only.

2. The default value of this new field will be blanks. Only a valid broker that has already been defined in MDBR screen will be allowed.

3. All Swap transaction entry screens have the new PAI Clearing Broker (PAICLR) field that is needed to update the PAI Clearing Broker associated for a particular swap. The below screen shows the PAICLR field for Interest Rate Swaps (IW). The same field has been added to Credit Default Swaps (DW), Currency Swaps (CW) and Total Return Swaps (TW).
Field | Description. Fields Shaded Gray are Required.
--- | ---
PAICLR | PAI Clearing Broker – The broker number defined for the broker/dealer through whom the transaction was cleared.

4. On the STAD Screen, the PAI clearing broker field (PAICLR) has been added. The value of PAI Clearing Broker defined on Swap transaction screens can be modified using the STAD screen. Users making changes in STAD will need to make sure that the PAI Clearing Broker is being changed for each leg of the swap.

29.3.3 PAI Calculations and Posting
A new enterprise only screen ‘CALCPAI’ has been developed for PAI calculations which will allow the users to process PAI by account and date using the accumulated variation margin of selected cleared swaps. Swaps are selected to be included in the PAI processing by using a new PAI clearing broker field to link a dummy security and currency. The PAI transaction can then be posted to the appropriate dummy security.

The new screen will automatically pick cleared swaps (Type =C), asset groups TW, IW, CW and DW that have the new PAI clearing broker populated on the swap entry screen. The new screen will also generate an RTK report, once the PAI is posted.

CALCPAI screen can be accessed either by going to Transactions→Swap Transactions→Entry→PAI Calculation and Posting.

1. The new Enterprise screen CALCPAI runs at an account level for a specified date.
2. After entering the above required data in the initial screen, the Clearing Broker/Currency combinations on all Cleared Swaps with the PAICLR field populated will be shown. The screen can be operated in the following modes.

a) ADD: The user will input values for Security, Rate field, Day Count and Lag Days fields to add PAI posting for a particular day. If there is any previous day data available, then those values will be available to the user as a preference. INT / INT – transactions will be generated for every successful PAI posting depending on whether PAI is being paid or received. PAI will be received (INT will be generated) when there is negative variation margin and PAI will be paid (INT - will get generated) when there is positive variation margin.

b) CHANGE: The user has the option to change the previously added data for a particular date. The user can change the Security, Rate, Day Count and Lag Days. The Change button will be activated only if there is previous data available for that particular day as entered by the user in the Date field. Any change in previously added data will result in adding new PAI (INT/INT-) posting and the old one being deleted.

c) DELETE: In this mode, the user can delete the PAI data for a particular day provided ‘Days of Accrual’ is same as previously entered. For every successful deletion of PAI posting, corresponding INT / INT- transaction will be deleted.

d) VIEW: In this mode, the user can view previously added data for any particular day, provided the days of accrual is the same as previously entered.

e) RESET: The button can be used to reset data for Account Number, Days of Accrual and Date.
### Field Description. Fields Shaded Gray are Required.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing Broker</td>
<td>Broker number defined for the broker/dealer through whom the transaction was cleared.</td>
</tr>
<tr>
<td>Currency</td>
<td>Issue Currency of Swap.</td>
</tr>
<tr>
<td>Variation Margin</td>
<td>Variation Margin Sum.</td>
</tr>
<tr>
<td>Security</td>
<td>Dummy Security against which PAI posting will be done.</td>
</tr>
<tr>
<td>Rate</td>
<td>Input by the user - Fed Funds Rate, EONIA rate, SONIA rate and MUTAN rate.</td>
</tr>
<tr>
<td>Day Count</td>
<td>Input by the user - Only 360 or 365.</td>
</tr>
<tr>
<td>Daily Rate</td>
<td>A calculated value - (Rate * Days of Accrual)/Day Count.</td>
</tr>
<tr>
<td>Daily PAI</td>
<td>A calculated value - Variation Margin * Annualized Rate.</td>
</tr>
<tr>
<td>Lag Days</td>
<td>This denotes the number of days that will be added to the effective date to determine the settlement date of the transactions.</td>
</tr>
</tbody>
</table>

3. Validation on User input: There are validations in place to check invalid entries in user input fields.
   a. Days of Accrual: Valid values are from 1 to 99.
   b. Security: Only valid dummy security (Currency should be same in currency field on screen as well as in dummy security). The field is required.
   c. Rate: Valid values are from -100 to 100. The field is required.
   d. Lag Days: Valid values are from 0000 to 9999. The field is optional.
   e. No empty rows allowed.

4. Once the user has provided all input to screen, Daily rate and Daily PAI will be populated automatically.

The user has the following three options after PAI is calculated:

a. Submit: User can submit data for posting PAI. If there are no errors in any of the defined fields then the user will get a message “PAI posting initiated. Please go to Process Manager (PMPROCMON) to check the status of posting.”
If there are errors in any of user defined fields then there will be a proper error message explaining the error related to that particular field.

b. Reset: User can reset values of user input fields.
c. Cancel: User can go back to screen 1.

5. Historical data for the user input fields and calculated Daily PAI is maintained for 30 days, after which the data is no longer available.

6. Process Manager: Once the posting is complete, the user can go to process manager to view the status of the posting. There will be two posting activities displayed, the first is for the PAI Posting and second is for the PAI Report. By clicking over these two task names, the user can see the detailed record of the process monitor task.

29.4 REPORTING AND MESSAGING

29.4.1 RTK Report

- This report will be generated when the user hits post PAI.
- The report will be submitted via process manager and will be available for 5 days.
- The user may save the report in order to reference historical PAI data that was generated when the PAI process was posted.
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Asset Arena Investment Accounting

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account</td>
<td>The account number for the report generated.</td>
</tr>
<tr>
<td>Date</td>
<td>The date the report is run.</td>
</tr>
<tr>
<td>Days of Accrual</td>
<td>The days of accrual as entered by user in CALCPAI</td>
</tr>
<tr>
<td>PAI Security</td>
<td>The dummy security, where the PAI is posted.</td>
</tr>
<tr>
<td>Associated Swaps</td>
<td>The Swap securities with which the dummy security is associated.</td>
</tr>
<tr>
<td>Currency</td>
<td>The currency of Dummy security (issue currency).</td>
</tr>
<tr>
<td>Clearing Broker</td>
<td>Broker number defined for the broker/dealer through whom the transaction was cleared.</td>
</tr>
<tr>
<td>Variation Margin</td>
<td>The total of Variation Margin Sum for previous day grouped together per clearing broker/currency.</td>
</tr>
<tr>
<td>Rate</td>
<td>Rate as entered by user (Fed Funds Rate, EONIA rate, SONIA rate and MUTAN rate, etc.).</td>
</tr>
<tr>
<td>Day Count</td>
<td>Day count as entered by user on screen 1 (360 or 365).</td>
</tr>
<tr>
<td>Daily Rate</td>
<td>The calculated value from CALCPAI. ((Rate * Days of accrual)/Day Count).</td>
</tr>
<tr>
<td>Tran Code</td>
<td>This field will have INT /INT-</td>
</tr>
<tr>
<td>Transaction Settlement Date</td>
<td>This denotes the number of days that will be added to the effective date to determine the settlement date of the transactions.</td>
</tr>
<tr>
<td>Transaction Amount</td>
<td>The PAI (INT/INT-) posted against the designated dummy security.</td>
</tr>
</tbody>
</table>

29.4.2 Inbound Messaging

The new security level field ‘PAICLR’ for Swaps is available on both Security and Transaction messages.

The Dummy security ‘PAI’ flag is available on the security message.