

Oracle Financial Services Funds Transfer Pricing Cloud Service Add-on Rate Rules User Guide



Release 23.03.01
F78530-01
March 2023

ORACLE®

F78530-01

Copyright © 2022, 2023, Oracle and/or its affiliates.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle®, Java, and MySQL are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

1 Get Help

1.1	Get Help in the Applications	1-1
1.1.1	Additional Resources	1-1
1.2	Learn About Accessibility	1-1
1.3	Get Support	1-1
1.4	Get Training	1-1
1.5	Join Our Community	1-2
1.6	Share Your Feedback	1-2
1.7	Before You Begin	1-2

2 Add-on Rate Rules

2.1	Overview of Add-on Rate Rules	2-1
2.2	Navigating the Summary Screen	2-1
2.2.1	Search Pane	2-2
2.2.2	Add-on Rate Rules Summary	2-2
2.3	Create Add-on Rate Rule	2-3
2.4	Defining Add-on Rate Methods	2-4
2.4.1	Availability of Add-on Rate Methods	2-8
2.4.1.1	Add-on Rate Method Parameters	2-9
2.5	Defining Assumptions with the Default Currency	2-10
2.5.1	Add-on Rate Calculation Methods	2-11
2.5.1.1	Add-on Rate Rule - Fixed Rate	2-11
2.5.2	Add-on Rate Rule - Fixed Amount	2-12
2.5.3	Add-on Rate Rule - Formula Based Rate	2-13
2.5.4	Add-on Rate Rule - Use TP Method from Selected TP Rule	2-16
2.5.4.1	Setting up Purge Batch for the FSI_O_FTP_ADJ_TP_VALUES Table	2-17
2.6	Define the Breakage Charge Economic Loss Method	2-17
2.6.1	Breakage Charges	2-19
2.6.1.1	Breakage Charge – Economic Loss	2-19
2.6.1.2	Breakage Charge – Fixed Amount	2-21
2.6.1.3	Breakage Charge - Fixed Percentage	2-21

1

Get Help

Topics:

- [Get Help in the Applications](#)
- [Learn About Accessibility](#)
- [Get Support](#)
- [Get Training](#)
- [Join Our Community](#)
- [Share Your Feedback](#)
- [Before You Begin](#)

1.1 Get Help in the Applications

Use help icons to access help in the application.

Note that not all pages have help icons. You can also access the [Oracle Help Center](#) to find guides and videos.

1.1.1 Additional Resources

- Community: Use [Oracle Cloud Customer Connect](#) to get information from experts at Oracle, the partner community, and other users.
- Training: Take courses on Oracle Cloud from [Oracle University](#).

1.2 Learn About Accessibility

For information about Oracle's commitment to accessibility, visit the [Oracle Accessibility Program](#). Videos included in this guide are provided as a media alternative for text-based topics, and are also available in this guide.

1.3 Get Support

You can get support at [My Oracle Support](#).

For accessibility support, visit Oracle Accessibility Learning and Support.

1.4 Get Training

Increase your knowledge of Oracle Cloud by taking courses at [Oracle University](#).

1.5 Join Our Community

Use [Cloud Customer Connect](#) to get information from industry experts at Oracle and in the partner community. You can join forums to connect with other customers, post questions, and watch events.

1.6 Share Your Feedback

We welcome your feedback about Oracle Applications user assistance. If you need clarification, find an error, or just want to tell us what you found helpful, we would like to hear from you.

You can email your feedback to [My Oracle Support](#).

Thanks for helping us improve our user assistance!

1.7 Before You Begin

See the following Documents:

- See [What's New](#)
- [Getting Started with Funds Transfer Pricing Cloud Service](#)

2

Add-on Rate Rules

Add-on Rate Rules allow you to specify Methodologies to calculate Add-on Rates and Breakage Charges for the relevant products in your portfolio.

The Standard Transfer Pricing Process references the Methodologies contained in the Add-on Rate Rule.

2.1 Overview of Add-on Rate Rules

Add-on Rate Rules allow users to define Add-on Rates that are assigned incrementally on top of base Funds Transfer Pricing Rate to Account for a variety of miscellaneous risks such as Liquidity Risk or Basis Risk, or to supplement Strategic Decision-Making with Pricing Incentives, Breakage Charges, or other types of Add-On Rates.

Within the Standard Transfer Pricing Process, users can select an appropriate Add-on Rate Rule to calculate Add-on Rates or Breakage Charges.

Add-on Rates can be a Fixed Rate, a Fixed Amount, or a Formula Based Rate. Breakage Charges can be a Fixed Percentage, a Fixed Amount or can also be calculated on an Economic Loss Basis. The Add-On Rates are calculated and output separately from the base Funds Transfer Pricing Rate, so they can be easily identified and reported. Additionally, Add-on Rate Rules allow you to apply event-based logic with Conditional Assumptions that are applied or varied only if a specific condition is satisfied.

2.2 Navigating the Summary Screen

When you first navigate to the Add-on Rate Rules Summary Screen, the rules stored within your current default Folder are presented in a Summary Table. The Add-on Rate Rules Summary Screen displays the Search Pane and Add-on Rate Rule Summary Table.

Figure 2-1 Add-on Rate Rules Summary Page

Name	Creation Date	Created By	Last Run Date	Last Run By	Access Type	Folder	Status	Action
SPInkAddition	15/06/2022 06:33:05	FTF_GAU/SER				5052	xxx	
CustomAddition02	15/06/2022 05:17:00	FTF_GAU/SER				5052	xxx	
per_AddOnRateRule1_LostTF	15/06/2022 04:40:47	FTF_GAU/SER				5052	xxx	
PS - Consolidated Add-on Rate Rule	05/06/2022 11:51:35	FTF_PMA/SER				5052	xxx	
CustomAddition_01	05/06/2022 07:10:04	FTF_GAU/SER				5052	xxx	
Sanitycheck	05/06/2022 13:22:07	FTF_GAU/SER				5052	xxx	

The title bar of the Summary Page provides several actions for the user. They are:

- **Add:** Click **Add** icon to create a new Add-on Rate Rule.
- **Multiple Delete:** Select one or more rules in the table and then click the Delete icon at the top right of the Summary Page to delete more than one Rule at the same time.

- **Refresh:** Click Refresh to refresh the Summary Page.
- **Help:** Click the Help icon to view the Add-on Rate Rules Help Page.

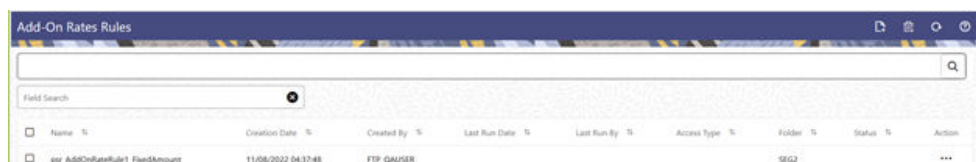
2.2.1 Search Pane

There are two Search options provided to search the Add-on Rate Rules on the Summary Page.

To search the Add-on Rate Rules, perform the following steps:

1. Click the **Search** icon on the Search Pane to collapse (display) the Criteria Window.

Figure 2-2 Search Window



2. Enter the Add-on Rate Rule **Name** or **Description** and click **Search** to display the Rule that match the criteria.
3. Click **Cancel** to remove the filter criteria on the Search Window and refresh the Window.
4. Click **Search** after entering the search criteria. The search results are displayed in a table containing all the Add-on Rate Rules that meet the search criteria.
5. The other method to search an Add-on Rate Rule is using the **Field Search** option. The Field Search is an inline wildcard UI search that allows you to enter value partially or fully and the rows that match the entered string in any of its column is fetched in the Summary table.

2.2.2 Add-on Rate Rules Summary

The Add-on Rate Rules Pane presents a table containing all Add-on Rate Rules that meet your search criteria.

The Add-on Rate Rules Summary Page displays the following columns.

- **Name:** Displays name of the rule.
- **Creation Date:** Displays the date and time when user created the rule.
- **Created By:** Displays the Name of the user who created the rule.
- **Last Modification Date:** Displays the Date and Time at which an Add-on Rate Rule was last modified.
- **Last Modified By:** Displays the name of the user who last modified an Add-on Rate Rule.
- **Access Type:** Displays the access type of the rule - Read/Write or Read Only property of an Add-on Rate Rules. Only the creator of a Rule may change its Access Type.
- **Folder:** Displays the folder name where the Rule is stored.

- **Action:** Displays the list of actions that can be performed on the Rule.

The **Action** column on the Add-on Rate Rules Summary page offers the following actions that allow you to perform different functions. The following actions are available for the Add-on Rate Rules.

- **View:** Click **View** in the Action column and select View to view the contents of an Add-on Rate Rules in Read/Write format.
- **Edit:** Click **Edit** in the Action column to edit the contents of an Add-on Rate Rules.
- **Delete:** Click **Delete** in the Action column to delete an existing Add-on Rate Rule.

You may select or deselect all the Add-on Rate Rules in the Summary Table by clicking the check-box in the upper left-hand corner of the Summary Table directly to the left of the Name Column header.

2.3 Create Add-on Rate Rule

You create an Add-on Rate Rule to define Add-on Rate Methodologies for your products.

To create the Add-on Rate Rule, follow these steps:

1. From the LHS menu, select **Assumption Specification**, and then select **Add-on Rate Rule**.

Figure 2-3 Add-on Rate Rule - Definition Mode

2. Select the Add-on Rate Type from the Add-on Rate Type Selection Section.

Figure 2-4 Add-on Rate Type Selection

Product	Method	Conditional Assumption	Status	Action
Asset	Formula Based Rate	No	Defined	...
Loan A	Fixed Amount	No	Defined	...
Loan B	Formula Based Rate	No	Defined	...

3. Conditional Assumptions - The Conditional Assumption feature allows you to segregate your product portfolio based on common characteristics, such as Term to Maturity, Origination Date, and Repricing Frequency, and assign specific Add-on Rate Methodologies to each of the groupings.

Figure 2-5 Conditional Assumption

Note:

If an instrument record does not meet any of the conditions, then the rule logic reverts to the Standard Assumption that is directly assigned to the Product/Currency combination.

2.4 Defining Add-on Rate Methods

The definition of Add-on Rate Methods is part of the Create or Edit Add-on Rate Rule.

When you click Save in the Create Add-on Rule Process, the rule is saved and the Add-on Rate Rule Summary Page is displayed. However, Add-on Rate Assumptions have not yet been defined for any of your products at this point. You would start defining your Add-on Assumptions for Product-Currency combinations before clicking **Save**. To define an Add-on Method, follow these steps:

1. Navigate to the Add-On rate Assumption Browser Page.

Figure 2-6 Add-on Rate Rule Assumption Browser

Product	Method	Conditional Assumption	Status	Action
▼ ☒ Asset				...
☐ Loan A				...
☐ Loan B				...
☐ Loan C				...
☐ Loan D				...

2. Select an appropriate Add-On Rate Type: Liquidity Rate, Basis Risk Costs, Pricing Incentives, Other Add-On Rates, or Breakage Charge by opening the Add-On Rate Type Selector Window. You can enable one or more Add-on Rate Types within a single Add-on Rate Rule and apply more than one Add-on Rate to a single product.

Note:

The Product Hierarchy refreshes when you change your Add-on Rate Type selection, but note that all selections made within the Rule are saved. For example, when Liquidity Rate is selected, the Hierarchy displays the status of Liquidity Rate mappings within the Hierarchy. If you change your Add-on Rate Type selection to Basis Risk Cost, the Hierarchy will refresh and you will see the status of all Basis Risk Cost mappings, and so on.

3. Select a **Product Hierarchy**. Based on the selected Hierarchy, the application displays a list of all the products (for which you can define Assumptions).
4. Specify a **Currency** from list of active currencies.
5. Select the check-box for one or more products for which you want to define Add-on Rate Method details.
6. Select an Add-on Rate Method and enter the appropriate parameters.

Note:

The Add-on Rate Methods available depends on the Selected Add-on Rate Type. Depending on the Add-on Rate Type and Add-on Rate Method combinations selected, certain required and optional parameter fields are displayed. You can update these fields as required.

7. Click **Apply**. If only one product was selected, the Assumption Browser Page is displayed. If more than one product was selected on the Assumption Browser Page, then each subsequent product in the select list will appear in the Selected Product drop-down list and each item should be defined appropriately. After completing the Assumption Details for each selected product, the Assumption Browser Page is displayed. At this point you can:
 - a. Continue defining Assumptions for additional Product-Currency combinations for the selected Add-on Rate Type, by repeating the above procedure.

- b. Select a new Add-on Rate Type and continue defining Assumption Details for the required set of products.
- c. Complete the process by clicking Save. The new assumptions are saved and the Add-on Rate Rule Summary Page is displayed.

Oracle Funds Transfer Pricing Cloud Service provides you with the option to copy, in total or selectively, the Product Assumptions contained within the Add-on Rates Rule, Transfer Pricing, and Prepayment Rules from one currency to another currency or a set of currencies or from one product to another product or set of products.

Table 2-1 Fields and Descriptions for Add-on Rate Method Specification Screen

Term	Definition
Reference Term	The associated term is used for the Add-on Rate assignment. You can select one of the following types of reference terms: • Original Term (the contractual term to the maturity of the account) • Repricing Frequency (the frequency at which the account reprices) • Remaining Term (the number of months until the account matures).
Interest Rate Code	Used for the Rate Lookup for the Formula Based Rate, and in the Breakage Charge - Economic Loss Method when discounting Cash Flows.
Assignment Date	Allows you to choose the date for which the Yield Curve values are to be sourced. Choices available are: • As-of-Date • Last Repricing Date • TP Effective Date • Origination Date • Commitment Start Date • Adjustment Effective Date

Table 2-1 (Cont.) Fields and Descriptions for Add-on Rate Method Specification Screen

Term	Definition
Lookup Method	The method used to derive an Add-on Rate for different reference Term Values. - Specify Range as the Lookup Method if you want the application to apply the rates defined in the Add-on Rate Rule to a range of Reference Term values, using the terms defined in the Rule to specify the lower end of the range. Note that for values less than the lowest term point, the application uses the value associated with the lowest point. - Specify Interpolation as the Lookup Method if you want the application to interpolate Add-on Rate Values for applicable Reference Terms falling between node points specified in the Add-on Rate Rule, using straight-line interpolation between the term points. Deals that are outside of range or ranges will not be populated with any values.
Term	In conjunction with the Multiplier, this field allows you to specify the value for the Reference Term for a given Lookup Tier.
Multiplier	The unit of time applied to the Term. The choices are: - Days - Months - Years
Rate	The Add-on Rate to be applied to instruments where the Reference Term is the product of the Term and Multiplier defined for the row. The rate should be in percentage form, for example, 1.25 percent should be input as 1.25.
Amount	The Add-on Amount to be applied to instruments where Reference Term is the product of Term and Multiplier defined for the row.
Formula	The mathematical formula used in the Formula Based Rate Method to determine the Add-on Rate: (Term Point Rate * Coefficient) + Rate Spread.
Rate Floor and Rate Cap	The minimum and maximum rate. If the calculated value is less than the Floor or more than the Cap, then these rates will be applied. These boundaries are applicable only to Formula Based Method and Use the TP Method from TP Rule add-on rate Method types. These are optional inputs. Ensure that the Rate Floor value is always less than or equal to the Rate Cap Value.

Table 2-1 (Cont.) Fields and Descriptions for Add-on Rate Method Specification Screen

Term	Definition
Term Point	In conjunction with the Multiplier (Day, Month, or Year), it is used in the Formula Based Rate Method when looking up the rate for the designated Interest Rate Code.
Coefficient	Coefficient by which the Term Point Rate should be multiplied.
Rate Spread	The spread added to the Interest Rate read from the selected Interest Rate Code. Rate Spread is used in the Formula Based Rate and Breakage Charge - Economic Loss Add-on Rate Methods. For the Formula Based Rate Method, the spread is added to the result of the Term Point Rate * Coefficient. Enter the Rate Spread in percentage form, for example, 1.25 percent should be input as 1.25.
Minimum Charge	Used in the Fixed Percentage and Economic Loss Add-on Rate Methods for Breakage Charges. If the calculated Break Funding Amount is less than the Minimum Charge, then the Minimum Charge overrides the calculated amount and is written to the Break Funding Amount column.
Original Term	Select to apply Original Term to both Fixed and Adjustable Rate Instruments.
Standard Term	Standard Term is the traditional approach used in Funds Transfer Pricing, which is the Original Term for Fixed-Rate Instruments and Repricing Terms for Adjustable-Rate Instruments.
Repricing Frequency	Repricing Frequency is the frequency of rate change of a product.
Remaining Term	The Remaining Term is the number of months remaining until the instrument matures.

2.4.1 Availability of Add-on Rate Methods

The list of Add-on Methods depends on the Add-on Rate type that you select: Add-on Rate Types are (Liquidity Add-on, Basis Risk Costs, Pricing Incentives, and Other Add-on), or Breakage Charges. The following table describes the Add-on Methods available for each of the Add-on Types.

Add-on Method	Add-on Type: Add-On Rates (Liquidity Add-on, Basis Risk Costs, Pricing Incentives, and Other Add-on)	Add-on Type: Breakage Charges
Do Not Calculate	Yes	Yes
Fixed-Rate	Yes	
Fixed Amount	Yes	Yes
Formula Based Rate	Yes	

Add-on Method	Add-on Type: Add-On Rates (Liquidity Add-on, Basis Risk Costs, Pricing Incentives, and Other Add- on)	Add-on Type: Breakage Charges
Use TP Method from Selected TP Rule	Yes	
Economic Loss		Yes
Fixed Percentage		Yes

**Note:**

If you select **Do Not Calculate** as the calculation method, no Add-on Assumptions will be assigned to the particular Product-Currency combination. This is a particularly useful option when using Node-Level Assumptions because it allows you to exclude a particular Child from inheriting a Parent's assumption.

2.4.1.1 Add-on Rate Method Parameters

To define an Add-on Calculation Method, you must specify one or more parameters, depending on the method. The parameter fields may display a default value, which you can override.

The following tables describes the parameters associated with the Add-on Methods for different Add-on Types.

Table 2-2 Parameters Applicable to the Add-on Rate Methods for the Add-on Rate Types

Add-on Rate Method	Referen ce Term	Lookup Method	Term	Multipli er	Rate	Amount	Assign ment Date	Interest Rate Code	Formul a
Do Not Calculat e									
Fixed- Rate	Yes	Yes	Yes	Yes	Yes				
Fixed Amount	Yes	Yes	Yes	Yes		Yes			
Formula Based Rate	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Use TP Method from Selected TP Rule			Yes						



Note:

The Add-on Rate Types include Liquidity rate, Basis Risk Costs, Pricing Incentives, Other Add-on rate and Breakage Charge.

Table 2-3 Parameters Applicable to the Add-on Rate Methods for the Breakage Charge Calculations

Add-on Rate Method	Break Funding Amount	Break Funding Rate	Interest Rate Code	Rate Spread	Minimum Charge
Do Not Calculate					
Fixed Amount	Yes				
Economic Loss			Yes	Yes	Yes
Fixed Percentage		Yes			Yes

2.5 Defining Assumptions with the Default Currency

For cases where you have the same Assumption (Method and IRC) which is applicable to all currencies or multiple currencies, you can define Rules for the combination of Product and "Default Currency".

To define Assumptions for the Default Currency, select a Product from the hierarchy and "Default Currency" from the Currency list and proceed with the Assumption Definition as described above. When processing data, the Transfer Pricing engine will first look for an Assumption that exactly matches the Product/Currency of the Instrument Record. If not found, the engine will then look for the combination of the Product and the Default Currency. This is a useful option to utilize during setup when the same product exists across multiple currencies and shares the same Add-on Rate Assumption and Interest Rate Code.

Figure 2-7 Add-on Rule Definition with Default Currency

Assumption Browser		Assumption List		
Product	Method	Conditional Assumption	Status	Action
Asset	Formula Based Rate	No	Defined	...
Loan A	Fixed Amount	No	Defined	...
Loan B	Formula Based Rate	No	Defined	...
Loan C	Use TP Method from Selected TP Rule	No	Defined	...
Loan D			Inherited	...
Loan E			Inherited	...

Default Currency setup example: If you have two instrument records of the same Product, each with a different currency, for example, 1 is 'USD' and the other is 'AUD', you have two configuration choices. You can either:

- Define the Assumptions individually for each Product-Currency combination using direct input or copy across.
- You can create one Assumption for the combination of Product and Default Currency. When you use “Default Currency”, the Transfer Pricing Engine applies this assumption to all currencies (unless a direct assumption is available for the product + currency being processed). In the case where users have many individual currencies that utilize the same Add-on Rate Method and reference IRC Rates, this is a useful option because you only have to define the Assumption each time and it applies to many different Product-Currency combinations.

2.5.1 Add-on Rate Calculation Methods

You can use any of the following methods in an Add-on Rule when the selected Add-on Rate Type is Liquidity Premium, Basis Risk Cost, Pricing Incentive, or Other Add-on Rate:

- [Add-on Rate Rule - Fixed-Rate](#)
- [Add-on Rate Rule - Fixed Amount](#)
- [Add-on Rate Rule - Formula Based Rate](#)
- [Add-on Rate Rule - Use TP Method from selected TP Rule](#)

Alternatively, you can use any of the following methods in an Add-on Rate Rule when the selected Add-on Rate Type is Breakage Charge:

- Economic Loss
- Fixed Amount
- Fixed Percentage

2.5.1.1 Add-on Rate Rule - Fixed Rate

Figure 2-8 Add-on Rate Rule Details

The screenshot displays the 'Add-on Rate Rule Details' configuration window. It includes sections for defining the adjustment rule, setting the fixed rate, and defining parameters. The 'Fixed Rate' section shows a dropdown for 'Reference Term' set to 'Original Term', a 'Lookup Method' of 'Range', and 'Interest Calculation Logic' set to 'Shift Dates Only'. A dropdown menu for 'Holiday Calendar' is open, showing options like 'Original Term', 'Repining Frequency', 'Remaining Term', 'Duration', and 'Average Life'. The 'Parameters' section at the bottom shows a table with columns for Operator, Term, Multiplier, Operator, Term, Multiplier, and Rate. The first row contains: Operator '=', Term '1', Multiplier 'Days', Operator '=', Term '30', Multiplier 'Years', and Rate '\$'.

The Fixed Rate Method allows the user to associate a rate with specific terms or term ranges. Reference Term selections include the following:

- **Repricing Frequency:** The fixed rate is matched to the specified Reprice Frequency of the instrument. If the instrument is a Fixed Rate and, therefore, does not have a Reprice Frequency, the fixed rate lookup happens based on the Original Term of the instrument.
- **Original Term:** The calculation assigns the fixed rate based on the Original Term on the instrument.
- **Remaining Term:** The calculation assigns the Fixed Rate based on the Remaining Term of the instrument.

The Remaining Term value represents the Remaining Term of the contract and is expressed in Days.

Remaining Term = Maturity Date – As-of-Date

- **Duration (read from the TP_DURATION column):** The calculation assigns the Fixed Rate based on the Duration of the instrument, specified in the TP_DURATION column.
- **Average Life (read from the TP_AVERAGE_LIFE column):** The calculation assigns the Fixed Rate based on the Average Life of the instrument, specified in the TP_AVG_LIFE column.

You can create your Reference Term ranges and assign a particular Add-on Rate to all instruments with a Reference Term falling within the specified range.

- **Holiday Calendar:** Select if a Holiday Calendar is applicable for calculating the charges/credits.
- **Rolling Convention:** Select the appropriate Business Day Rolling Convention if a Holiday Calendar is selected.
- **Interest Calculation logic:** Select the appropriate option to indicate how the Interest Payment should be adjusted when a Holiday Date is encountered.



Note:

All Add-on Rates should be input as Annual Rates.

2.5.2 Add-on Rate Rule - Fixed Amount

The Fixed Amount Add-on Rate Method allows the user to associate an amount with specific terms or term ranges. Reference term selections include the following:

- **Repricing Frequency:** The calculation retrieves the amount for the term point equaling the Reprice Frequency of the instrument. If the instrument is a Fixed Rate and, therefore, does not have a Reprice Frequency, the calculation retrieves the amount associated with the Term Point equaling the Original Term on the instrument.
- **Original Term:** The calculation retrieves the amount for the Term Point equaling the Original Term on the instrument.
- **Remaining Term:** The calculation retrieves the amount for the Term Point corresponding to the Remaining Term of the instrument. The Remaining Term value represents the Remaining Term of the contract and is expressed in days.
Remaining Term = Maturity Date – As-of-Date.

- **Duration (read from the TP_DURATION column):** The calculation retrieves the amount for the Term Point corresponding to the Duration of the instrument, specified in the TP_DURATION column.
- **Average Life (read from the TP_AVERAGE_LIFE column):** The calculation retrieves the amount for the Term Point corresponding to the Average Life of the instrument, specified in the TP_AVG_LIFE column.

You can create your Reference Term ranges and assign a particular Add-on Amount to all instruments with a Reference Term falling within the specified range.

- **Holiday Calendar:** Select if a Holiday Calendar is applicable for calculating the charges/credits.
- **Rolling Convention:** Select the appropriate Business Day Rolling Convention if a Holiday Calendar is selected.
- **Interest Calculation logic:** Select the appropriate option to indicate how the Interest Payment should be adjusted when a Holiday Date is encountered.

2.5.3 Add-on Rate Rule - Formula Based Rate

The Formula Based Rate Add-on Rate Method allows the user to determine the add-on rate based on a lookup from the selected Yield Curve, plus a spread amount, and then the resulting rate can be associated with specific Terms or Term Ranges. Reference term selections include:

- **Repricing Frequency:** The calculation retrieves the rate based on defined formula for the term point equaling the reprice frequency of the instrument. If the instrument is a fixed rate and, therefore, does not have a reprice frequency, the calculation retrieves the rate based on defined formula, associated with the term point equaling the original term on the instrument.
- **Original Term:** The calculation retrieves the rate based on defined formula for the term point equaling the original term on the instrument.

Figure 2-9 Add-on Rule Details - Formula Based Rate (Reference Term)

Define Adjustment Rule

Selected Product: Loan/20A Terms:

Adjustment Method: Fixed Amount ☐ Output Audit Detail

Fixed Amount

Reference Term: Repricing Frequency
Original Term
Repricing Frequency
Remaining Term
Duration
Average Life

Holiday Calendar:

Rolling Convention:

Lookup Method: ☒ Range ☐ Interpolation

Interest Calculation Logic: ☒ Shift Dates Only ☐ Recalculate Payment

Parameters

Operator	Term	Multiplier	Operator	Term	Multiplier	Amount
☐ +	1	Months	☐ +	5	Months	5
☐ +	5	Months	☐ +	30	Months	5.5

- **Remaining Term:** The calculation retrieves the rate based on defined formula for the term point corresponding to the remaining term of the instrument. The remaining term value represents the remaining term of the contract and is expressed in days.
Remaining Term = Maturity Date – As-of-Date

- **Duration (read from the TP_DURATION column):** The calculation retrieves the rate based on defined formula for the term point corresponding to the Duration of the instrument, specified in the TP_DURATION column.
- **Average Life (read from the TP_AVERAGE_LIFE column):** The calculation retrieves the rate based on defined formula for the term point corresponding to the Average Life of the instrument, specified in the TP_AVG_LIFE column.

You can create your Reference Term ranges and assign a particular Formula Based Rate to all instruments with a Reference Term falling within the specified range.

With this method, you also specify the Interest Rate Code and define an Assignment Date for the Rate Lookup. The Interest Rate Code can be any IRC defined within Rate Management, but will commonly be a Hybrid IRC defined as a Spread Curve (for example, Curve A – Curve B).

Figure 2-10 Add-on Rule Details - Formula Based Rate (Assignment Date)

The screenshot shows the 'Define Adjustment Rule' form. The 'Define Adjustment Rule' section has 'Selected Product' set to 'Node01', 'Term' set to 'Standard', and 'Adjustment Method' set to 'Formula Based Rate'. There is an unchecked checkbox for 'Output Audit Detail'. The 'Formula Based Rate' section has 'Reference Term' set to 'Repricing Frequency', 'Interest Rate Code' set to 'Repricing Frequency', 'Assignment Date' is empty, 'Lookup Method' is 'Range' (selected), and 'Interest Calculation Logic' is 'Shift Dates Only' (selected). A dropdown menu for 'Reference Term' is open, showing options: 'Original Term', 'Repricing Frequency' (highlighted), 'Remaining Term', 'Duration', and 'Average Life'.

Assignment Date selections include:

- As-of-Date
- Last Repricing Date
- Origination Date
- TP Effective Date
- Adjustment Effective Date
- Commitment Start Date

Each term range additionally allows users to input a Rate Cap and a Rate Floor. These boundaries will only apply to the 'Formula Based Method' and 'Use TP Method from TP Rule' based add-On Rates. These are optional inputs. This input limits the Max or Min rate regardless of the rate passed by the Formula/TP Rule. Sometimes, there may be major external events that cause a short-term spike in rates and certain accounts may be negatively impacted as a result. Applying a rate cap (or floor) allows business users to limit these spikes.



Note:

Term range considers one month equal to 30.416667 days and 1 year = 365 days, therefore, 12 Months would marginally be more than one year by 0.000004 days.

The formula definition is comprised of the following components.

- **Term Point:** This allows you to associate a specific term point from the IRC to each Term Range.
- **Coefficient:** This allows you to define a multiplier that is applied to the selected rate.
- **Rate Spread:** This allows you to define an incremental rate spread to be included on top of the IRC Rate.

Figure 2-11 Add-On rate Rule Definition Formula

Adjustment Rule Definition Formula

Interest Rate Code: 987 Term: 1M

▼ **Assumptions**

Term Point: 3 Multiplier: Months ▼

Coefficient: 1.3 Rate Spread: 1.31

Apply Cancel

The resulting formula for add-on rate: (Term Point Rate * Coefficient) + Spread



Note:

For increased precision, you can reduce the Term Ranges to smaller term increments allowing you to associate specific IRC rate tenors with specific terms.

- **Holiday Calendar:** Select if a Holiday Calendar is applicable for calculating the charges/credits.
- **Rolling Convention:** Select the appropriate business day rolling convention if a Holiday Calendar is selected
- **Interest Calculation Logic:** Select the appropriate option to indicate how the interest payment should be adjusted when a Holiday Date is encountered.

2.5.4 Add-on Rate Rule - Use TP Method from Selected TP Rule

The Use TP Method from Selected TP Rule selection allows the user to calculate the add-on rate based on any TP Method available in the selected Transfer Pricing Rule.

Figure 2-12 Add-on Rate Rule – Use TP Method (Transfer Pricing Rule Selection)

Users can attach any Transfer Pricing Rule on the Add-on Rate Rule Summary Page separately for each type of add-on rate. The TP Methods mapped to product hierarchy members in the TP Rule will be read during the add-on rate calculation process and applied during the calculation of the Add-on Rate(s). Outputs will be written to the respective Add-on Rate column, for example, Basis Risk Cost Rate, Liquidity Premium Rate, Pricing Incentive Rate, or Other Add-on Rate.

- Term: The following Term Types are available:
 - **Standard Term:** Add-on rate would be calculated as per the repricing period for adjustable-rate instruments and use the original term (maturity date - origination date) for fixed-rate instruments.
 - **Original Term:** Add-on Rates would be calculated as per the original term like a fixed-rate instrument.

Figure 2-13 Add-On rate Method – Use TP Method (Term Selection)

If the underlying TP method is (Cash Flow: Average Life or Cash Flow: Duration) and output average life or duration is selected.

A table FSI_O_FTP_ADJ_TP_VALUES has been introduced to store average life or duration values for each of the Add-on Rate types. Each value will be tagged to a particular Add-on Rate type based on the following Code Values:

- Liquidity Rate (1)

- Basis Risk Cost (2)
- Pricing Incentive (3)
- Other Add-on Rate (4)

The same account can have multiple average life/duration values stored against each particular Add-on Rate type; as values are not overwritten and can be uniquely identified using Batch Run ID.

Add-on Rate using cash flow TP methods will generate cash flows and be stored in the FTP_O_CASH_FLOW_OUTPUT table, irrespective of whether TP Average Life or TP Duration is updated in the instrument record or not.

Additionally, a Delete Batch procedure is introduced – This purge batch has been provided to delete records in FSI_O_FTP_ADJ_TP_VALUES as per selected from and to “As-of-Date”.

**Note:**

Add-on Rates are always processed row by row rather than in bulk, so care should be taken when selecting a TP Method for use in calculating an Add-on Rate. Specifically, bulk methods should be tested to ensure results and performance are as expected.

2.5.4.1 Setting up Purge Batch for the FSI_O_FTP_ADJ_TP_VALUES Table

To delete records containing average life/duration for Add-on Rate Calculations from the

FSI_O_FTP_ADJ_TP_VALUES

table.

For more information on Creating a Batch, see the [Batch and Scheduler Services User Guide](#).

2.6 Define the Breakage Charge Economic Loss Method

The Breakage Charge option has the following methods:

- **Do Not Calculate:** No Add-on Assumptions will be assigned to the particular product-currency combination.
- **Fixed Amount:** Allows users to directly input the amount of the breakage charge.
- **Economic Loss:** Used to compute the cost to the organization (economic loss) incurred after terminating the account (asset/funding liability).
- **Fixed Percentage:** Allows you to input a percentage that is multiplied by the Breakage Amount to determine the Breakage Charge.

Defining the Economic Loss Breakage Charge Assumption requires the following additional steps:

Figure 2-14 Add-on Rule Definition Mode – Breakage Charge (Economic Loss) Calculations

The screenshot shows the 'Define Adjustment Rule' section with the following fields:

- Selected Product:** Asset
- Term:** Standard
- Adjustment Method:** Economic Loss
- Output Audit Detail:** ☐

The 'Economic Loss' section includes:

- Interest Rate Code:** PS - ZCB Curve
- Rate Spread:** 1.4
- Minimum Charge:** -9999999999999999
- TP Cash Flow Interest Type:** All in TP Rate
- Exclude Accrued Interest:** ☐
- Interest Only:** ☐
- Holiday Calendar:** None
- Rolling Convention:** Unadjusted
- Interest Calculation Logic:** ☐ Shift Dates Only, ☒ Recalculate Payment

1. Select the **Interest Rate Code** and **Rate Spread** to use for discounting the remaining term Cash Flows.
2. Select the minimum charge amount. Default to -99999 if you want to calculate both gains and losses.
3. Select the **TP Cash Flow Interest Type**. This interest rate will be used to generate Interest Cash Flows.

Figure 2-15 Add-on Rule Definition Mode – TP Cash Flow Interest Type

The screenshot shows the 'Define Adjustment Rule' section with the following fields:

- Selected Product:** Asset
- Term:** Standard
- Adjustment Method:** Economic Loss
- Output Audit Detail:** ☐

The 'Economic Loss' section includes:

- Interest Rate Code:** (empty)
- Rate Spread:** 1.4
- Minimum Charge:** -9999999999999999
- TP Cash Flow Interest Type:** (dropdown menu open)
- Exclude Accrued Interest:** ☐
- Interest Only:** ☐
- Holiday Calendar:** None
- Rolling Convention:** Unadjusted
- Interest Calculation Logic:** ☐ Shift Dates Only, ☒ Recalculate Payment

The dropdown menu for 'TP Cash Flow Interest Type' is open, showing the following options:

- All in TP Rate
- Basis Risk Cost Rate
- Liquidity Premium Rate
- Other Adjustment Rate
- Other Adjustment Rate Alternate Output
- Pricing Incentive Rate
- Remaining Term Transfer Rate
- Remaining Term Transfer Rate Alternate Output
- Transfer Rate
- Transfer Rate Alternate Output

4. Select the option to **Exclude Accrued Interest** if applicable.
5. Select the **Interest Only** option to discount only the Interest Cash Flows.
6. Select a Holiday Calendar if you want to adjust Cash Flows for Holidays and Weekends. The default selection for Holiday Calendar is None. If this option is selected, then Holiday Calendar will not be applied to cash flow dates. If you wish to apply Holiday Calendar Add-on, then select the appropriate Calendar.
7. Select the appropriate Rolling Convention. When Holiday Calendar has been selected in the preceding field, this drop-down list becomes active and contains 4 values:
 - Following Business Day
 - Modified following Business Day
 - Previous Business Day
 - Modified previous Business Day
8. Select the appropriate Interest Calculation Logic from the following:
 - Shift Dates Only
 - Recalculate Payment
9. Select **Apply**.

2.6.1 Breakage Charges

A Breakage Charge represents the cost of breaking a contractual obligation. In Bank Finance this means the early prepayment of a loan by a customer or the early withdrawal of deposit funds by a customer. “Early” in this sense means before the contractual maturity date.

The gain or loss to the Bank from such early prepayments and withdrawals is the opportunity cost of not being able to replace the spread earned on the asset or deposit being lost. For example, the early withdrawal of funds from a 2-year Term Deposit exposes the bank to the risk of replacing that funding in a higher rate environment and thereby reducing the Net Interest Margin earned before the withdrawal. With Matched-Term Transfer Pricing, this risk is split between the Line Unit and Treasury. The Line Unit holds the risk of deteriorating credit spread, but Treasury holds the funding risk (the risk that the funding spread between the Bank's assets and liabilities will narrow).

The following Breakage Charge methods are available including:

- Economic Loss
- Fixed Amount
- Fixed Percentage

2.6.1.1 Breakage Charge – Economic Loss

The Economic Loss Breakage Charge Method sets out to compute the cost to the organization (economic loss) incurred for terminating the funding liability (also known as the shadow liability). The calculation assumes the funding liability has the exact attributes of the funded/terminated instrument.

The rate of the funding liability is equal to the Transfer Rate. Economic Loss is computed as follows:

For Assets:

Economic Loss = BV - MV

For Liabilities:

Economic Loss = MV - BV

Where:

MV: Market Value of the funding Liability

BV: Book Value of the broken instrument

The following is a simplified example of the Economic Loss calculation for a standard Term Deposit:

Book Value: \$1,000.00

Original Term: 24 Months

Break after: 12 Months

Original TP Rate: 2.40% (based on straight term method)

Table 5: Reference Rates

Effective Date	1 M	12 M	24 M
At Origination	2.00	2.40	1.75
At Month 12	2.00	2.40	1.75

Table 6: Cash Flows of remaining Funding after Break Event

Month	Principal	Original TP COF @ 2.40%	Total CF Orig TP
13		\$ 2.00	\$2.00
14		\$2.00	\$2.00
15		\$2.00	\$2.00
16		\$2.00	\$2.00
17		\$2.00	\$2.00
18		\$2.00	\$2.00
19		\$2.00	\$2.00
20		\$2.00	\$2.00
21		\$2.00	\$2.00
22		\$2.00	\$2.00
23		\$2.00	\$2.00
24	\$1,000.00	\$2.00	\$1,002.00
Market Value at Month 12		1,003.957	
Book value		-1,000.00	
Breakage charge		3.957	

2.6.1.2 Breakage Charge – Fixed Amount

The Fixed Amount method allows users to directly input the amount of the Breakage Charge.

Figure 2-16 Add-On Rate Rule Details – Add-On rate Method as Fixed Amount

The screenshot shows the 'Define Adjustment Rule' section with the following fields:

- Selected Product:** A dropdown menu with 'Asset' selected.
- Term:** A dropdown menu with 'Standard' selected.
- Adjustment Method:** A dropdown menu with 'Fixed Amount' selected.
- Output Audit Detail:** An unchecked checkbox.

Below this section is the 'Fixed Amount' section with the following field:

- Break Funding Amount:** A text input field containing the value '50'.

This method would be used in cases where the Cash Flows and the Economic Loss Method are not appropriate for determining the Breakage Cost.

The only input required for this method is the Breakage Charge Amount.

2.6.1.3 Breakage Charge - Fixed Percentage

An alternative to the Fixed Amount Method, the Fixed Percentage approach allows you to input a percentage that is multiplied by the breakage amount to determine the Breakage Charge.

Figure 2-17 Add-on rate Rule Details – Add-On Rate Method as Fixed Percentage

The screenshot shows the 'Define Adjustment Rule' section with the following fields:

- Selected Product:** A dropdown menu with 'Asset' selected.
- Term:** A dropdown menu with 'Standard' selected.
- Adjustment Method:** A dropdown menu with 'Fixed Percentage' selected.
- Output Audit Detail:** An unchecked checkbox.

Below this section is the 'Fixed Percentage' section with the following fields:

- Break Funding Rate:** A text input field containing the value '1.3'.
- Minimum Charge:** A text input field containing the value '.0000000000000000'.

Calculation:

$$\text{Breakage Charge} = \text{Break Amount} \times (\text{Charge \%} / 100)$$

If the resulting amount is greater than the specified minimum charge, the calculated amount is output. Otherwise, the minimum charge will be output.

2.6.1.4 Prerequisites for calculating Breakage Charges

The following prerequisites to be met for calculating breakage charges:

1. Break Event Records should be populated in the FSI_D_BREAK_FUNDING_CHARGES table. This can be done directly through a manual data loading process or can be automated using an FTP Break Identification Process.
2. An Add-on rate Rule should be defined with Breakage Charge assumptions created for all of the relevant Product / Currency combinations.
3. A Standard TP Process should be defined with the following: (see [Standard Transfer Pricing Process](#) Documentation).
 - The Break Funding Charges Table selected on the Product Selection Block.
 - Add-on rate calculations must be selected on the Calculation Elements Block.
 - An add-on rate Rule containing the required Breakage Charge Assumptions must be selected.