

Oracle Financial Services

Discount Methods



Release 24D
G25741-01
February 2025

ORACLE®

Copyright © 2025, 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, MySQL, and NetSuite 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
1.2	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 Discount Methods

2.1	Create Discount Method Rule	2-3
2.2	Discount Method Examples	2-9
2.2.1	Spot Input	2-9
2.2.2	Spot Interest Rate Code	2-10
2.2.3	Forecast Original Term	2-10
2.2.4	Forecast Remaining Term	2-10
2.3	Associating Conditional Assumptions with Discount Methods	2-11

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.

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 also available in this guide.

1.3 Get Support

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

For accessible 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 did 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

Refer to following Documents:

- [See What's New](#)

2

Discount Methods

This module describes the procedure for working with and managing Discount Method Rules. Discount Method Rules allow users to define the method for discounting projected Cash Flows for market value and duration calculation purposes. For each combination of product and currency, you can choose one of the following discount methods:

- Spot Input
- Spot Interest Rate Code
- Forecast (Original Term)
- Forecast (Remaining Term)

The following table describes the methods and rate choices:

Table 2-1 List of Discount Methods

Method	Single Rate	Yield Curve
Spot Input	Discounts all cash flows by the Input Rate	Not applicable
Spot Interest Rate Code	Not applicable	Discounts each Cash Flow period by the equivalent term rate on the base Yield Curve chosen (the Yield Curve as of the start date). The term is defined by the remaining term of the cash flow. Refer Note
Forecast (Original Term)	Not applicable	Discounts each Cash Flow period by the Forecasted Value of the point on the yield curve corresponding to each transaction record's original term (fixed rate instrument) or repricing term (variable rate instrument). Refer Note
Forecast (Remaining Term)	Not applicable	Discounts each Cash Flow period by the Forecasted Value of the point on the Yield Curve corresponding to the remaining term until each cash flow. Refer Note
Effective Interest Rate	Effective Interest Rate (EIR) of account is used as discount rate.	Not applicable

**Note:**

In the case of Spot Interest Rate Code, if term point is not available, engine will use linear interpolation to determine the interest rate to discount cashflows.

When Discounting method of Forecast (Original Term) and Forecast (Remaining Term) is used, if term point is not available, engine will use Interpolation method defined for Interest rate code within Forecast Rate Rule. If Interpolation method defined in Forecast rate rule is Linear, engine will use Linear Interpolation. If Interpolation Method is cubic, engine will use Cubic Interpolation to determine interest rate to discount Cash Flows.

Discount Method Rule Summary

This page is the gateway to all Discount Method Rules and related functionality. You can navigate to other pages relating to Discount Method Rules from this point.

Figure 2-1 Discount Method Rule Summary

Discount Method Rule Summary									
<div> <input type="text" value="Field Search"/> Folder: CFESEG </div>									
<div> Page 1 of 1 (1-2 of 2 items) < 1 > </div>									
<input type="checkbox"/>	Code	Name	Dimension	Hierarchy	Folder	Last Modified Date	Last Modified By	Access Type	Action
<input type="checkbox"/>	1654239491554	Dis	Product	Dim_product_hier	CFESEG	03/06/2022 06:58:11	CFETEST	Read/Write	...
<input type="checkbox"/>	1654240100172	Dis1	Product	Dim_product_hier	CFESEG	03/06/2022 07:08:56	CFETEST	Read/Write	...

Search Discount Method Rule**Prerequisites:** Predefined Discount Method Rule

To search for a Discount Method Rule:

Click **Search** after entering the search criteria. The search results are displayed in a table containing all the Discount Method Rules that meet the search criteria.

Or

An alternative method to search a Discount Method rule is through the **Field Search** option. This is an inline wildcard UI search that allows you to enter a search value (such as code, name, etc.) partially or fully. Rows that contain the string you are searching for are fetched and displayed in the Discount Method Summary. You can enter the **Code**, **Name**, **Description**, **Dimension**, **Hierarchy**, and **Folder** of the Discount Method Rule and click **Search**.

The Discount Method rule Summary displays the following information:

Add: Click the Add icon on the page header to build a new Discount Method rule.

- **Code:** The Code of Discount Method Rule.
- **Name:** The Discount Method Rule's short name.
- **Dimension:** The Dimension the Discount Method Rule belongs to.
- **Hierarchy:** Name of Hierarchy that is used to define Discount Method Rule.

- **Folder:** The Folder where the Discount Method Rule is saved.
- **Last Modified By:** The user who last modified the Discount Method Rule.
- **Last Modified Date:** The Date and Time when the Discount Method Rule was last modified.
- **Access Type:** The access type of the rule. It can be Read-Only or Read/Write.
- **Action:** Click this icon to view a list of actions that you can perform on the Discount Method rule.
 - **Multiple Delete:** Enables you to select and delete one or multiple rules in the table simultaneously.
 - **View/Edit:** Based on the user privilege assigned, you can either only view or edit existing Discount Method rules. To edit a rule, you must have Read/Write privilege.
 - **Save As:** You can reuse a Discount Method rule by saving it under a new name thus saving time and effort in entering data multiple times; it also leads to reduced data entry errors.
 - **Delete:** You can delete Discount Method rules that you no longer require. Note that only Discount Method rule owners and those with Read/Write privileges can delete Discount Method rules. A Discount Method rule that has a dependency cannot be deleted.
 - **Dependency Check:** You can perform a dependency check to know where a particular Discount Method rule has been used. Before deleting a rule, it is always a good practice to do a dependency check to ensure you are not deleting Discount Method rules that have dependencies. . A report of all rules that utilize the selected Discount Method rule is generated.

 **Note:**

This is functionality will intended for a future release.

You can copy, in total or selectively, the product assumptions contained within the Discount Method Rules from one currency to another currency or a set of currencies or from one product to another product or a set of products.

Also See:

- [Create Discount Method Rule](#)

2.1 Create Discount Method Rule

You create a Discount Methods rule to assign Discounting Methods to your products. To create a Discount Method Rule, follow these steps:

1. Navigate to the **Discount Methods Rule** Summary page.

Figure 2-2 Discount Method Rule

2. Click **Add**. The **Discount Method Rule** page is displayed.
3. Enter the following details:

Table 2-2 Discount Method Details

Fields	Description
Name	Enter the name of the Discount Method Rule.
Description	Enter the description of the Discount Method Rule. This is an optional field.
Folder	Select the Folder where the Discount Method Rule needs to be saved.
Access Type	Select the Access Type as Read-Only or Read/Write.

4. Select a **Product Hierarchy**. You can define methodologies at any level of the hierarchical product dimension. The hierarchical relationship between the nodes allows inheritance of methodologies from Parent Nodes to Child Nodes. Enter the following details for **Product Hierarchy** selection:

Table 2-3 Product Hierarchy Details section

Fields	Description
Folder	Select the Folder where Product Hierarchy is previously created
Hierarchy	Select the Hierarchy of the product
Currency	Select the Currency.

5. Select the **Dimension** as Common Chart of Accounts, Product, General Ledger Account, or MDBSS.

 **Note:**

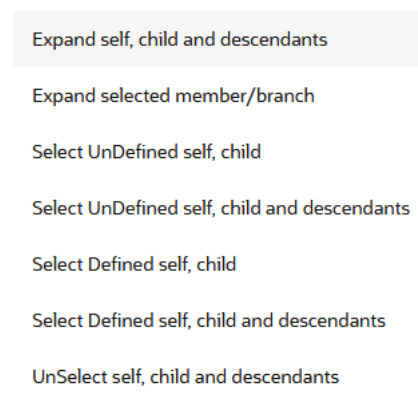
MDBSS is enabled only in ALM Cloud Service.

If any member is a currency in the MDBSS hierarchy (for example, INR) and selected currency is different (for example USD), then the member and its children nodes cannot be defined.

You can search the rule on any of the product dimension, searched dimension will be auto-populated while defining the rule; if you like, you can change the default product dimension.

6. Select **Member Node(s)** from Member Tree of Assumption Browser. The Assumption Browser has following two tabs: Member Tree and Search Results
 - **Member Tree:** Member Tree tab shows the hierarchical structure and allows you to define rules by selecting the node members from the browser. Select Node and Click Menu icon next to it to view the available options.

Figure 2-3 Member Tree



Status of node is also displayed in Member Tree section, for example Selected, and so on. To select member hierarchy, following options are available:

- **Expand self, child and descendants:** Allows to expand the selected node itself along with its child and descendants.
- **Expand selected member/branch:** Allows to expand the selected node
- **Select UnSelect self, child:** Allows to unselect the selected node itself along with its child
- **Select UnSelect self, child and descendants:** Allows to unselect the selected node itself along with its child and descendants.
- **Select Defined self, child:** Allows to select the selected node itself along with its child.
- **Select Defined self, child and descendants:** Allows to select the selected node itself along with its child and descendants.
- **UnSelect self, child and descendants:** Allows to unselect the selected node itself along with its child and descendants.

Use **Show Numeric Code Values (Left)** icon to view the code value left to the Node name.

Use **Show Numeric Code Values (Right)** icon to view the code value right to the Node name.

Here, you can perform the following tasks on the selected node(s):

- Add
 - Edit
 - View
 - Delete
 - Copy
- **Search Results:** You can also search the members based on the filters. This section shows the searched node(s). To search a member, follow these steps:
 - a. Navigate to **Assumption Browser** section of the Rule Definition page.

**Note:**

Before using the Member Search in Assumption Browser, you must execute the batch **Member_Browser_Refresh**. For more information, see note in [Create MDBSS](#) section.

- b. Enter the Member ID, Name, Status, or Is Leaf in Search Criteria.

Figure 2-4 Search Criteria

Member Id Name
Status Is Leaf ☐

- c. Click **Search**. The searched member(s) will be displayed in **Search Results** section of **Assumption Browser**

Figure 2-5 Searching Members

Member	Behavior Pattern Name	Status	Action
Asset Products			...
Asset-Prepay Loan			...

Here, you can perform the following tasks on the searched node(s):

- Add
- Edit
- View

- Delete
- Copy

Click **Show Parentage icon** to view the Parent-child Node level hierarchy details of selected Node.

Use **Show Numeric Code Values (Left)** icon to view the code value left to the Node name.

Use **Show Numeric Code Values (Right)** icon to view the code value right to the Node name.

- Click **Add** from Assumption Browser section.
- Define Conditions for Product Definitions. For more information see [Conditional Assumptions](#) section.
- After defining the conditions, navigate to **Discount Method** section.

Figure 2-6 Discount Method section

- Enter the following details:

Table 2-4 Discount Method Section

Fields	Description
Discount Method	Select the Discount Method from Discount Method List.
Discount Rate	Enter Discount Rate if Spot Input Method is selected.
Interest Rate Curve	From Interest Rate Code List, select an appropriate Interest Rate Code. The list of Interest Rate Codes depends on the selected currency. If the selected currency is the default currency, all Interest Rate Codes appear. For other currency selections, the list of interest rate codes includes only interest rate codes whose reference currency is the same as the selected currency.

Table 2-4 (Cont.) Discount Method Section

Fields	Description
Spread Source	<p>You can optionally choose to add a spread of margin over the Interest Rate derived from IRC. Spread can be defined in the Discount Method Rule or it can be given along with Instrument record.</p> <p>You can select source of the spread as Discount Rule or Account Data is method is Spot IRC, Forecast (Original Term) and Forecast (Remaining Term).</p>
Spread	<p>When Discount Rule is selected as Spread Source then you can specify the amount of spread/margin here.</p> <p>Spread field is enabled when spread Source is given as Account Data.</p> <p>Type the percentage difference (+ or -) between the selected rate index and the value you want to use for the discount rate(s) within market value calculations.</p> <p>Input a Rate Spread, type 1.0000.</p> <p>A spread of 1% returns a discount rate of 1.00% above the reference interest rate. Type a negative number for a spread below the reference interest rate.</p>

 **Note:**

You can use negative product IDs when defining the Discount Method Rule.

11. Navigate to **Cash Flow Details** section. The **Cash Flow Definition Details** section is used in unique instances to specify the portion of the Cash Flow that is used to calculate a Market Value.
12. Enter the following details:

Table 2-5 Cash Flow Details Section

Fields	Description
Cash Flow Type	<ol style="list-style-type: none"> a. Interest Only : ignores all principal runoff for market value purposes. Use this option for Off-balance sheet items where principal is equal to Notional Principal and is therefore not a true Cash Flow. b. Principal & Interest : calculates principal and interest both for Market Value purposes. c. Principal Only : ignores all interest rate Runoff for market value purposes.

Table 2-5 (Cont.) Cash Flow Details Section

Fields	Description
Interest Type	<p>The Cash Flow Interest Type determines which interest component is included in the cash flow definition. The Cash Flow Interest Type can be one of three values:</p> <ul style="list-style-type: none"> • Net Rate • Gross Rate <p>For typical processing, you will use the Net Rate for the interest component of the cash flow. Special processing objectives, such as valuation of the funding center, may require you to use the other cash flow interest types.</p>
Mature at Repricing	<p>Calculates a market value and YTM for a given transaction up to the repricing date. For market value and YTM purposes the transaction is assumed to mature on the repricing date. Duration is always calculated to the next reprice date, not to maturity, regardless of the mature at repricing selection.</p>
Ignore Origination Cash Flows for Forward-Starting Instruments	<p>This feature allows the cash flow engine to ignore the origination Principal Cash Flows of any forward-starting instrument. The corresponding market value, duration, convexity and yield calculations will not reflect the Origination Amount. Origination principal Cash Flow will still be reported.</p>
Use Principal in Market Value Calculations (Off-Balance Sheet Only)	<p>This feature allows the Cash Flow Engine to consider principal in the calculation of market value, duration, convexity and yield calculations, even if principal is not actually exchanged.</p>

13. Click **Apply**.

14. Click **Save**.

2.2 Discount Method Examples

The following examples assume the Interest Rate has a format of zero-coupon yield with annual compounding. The instrument used in each example is an annual-pay, 2-year instrument originated on the As_of_Date. See the Oracle Financial Services Cash Flow Engine Reference Guide for details on discount factor derivation used in Cash Flow Calculations.

- [Spot Input](#)
- [Spot Interest Rate Code](#)
- [Forecast Remaining Term](#)
- [Forecast Original Term](#)

2.2.1 Spot Input

In the Spot Input Method, the discount factor does not vary with Forecast Rate - interest rate scenarios. The discount factor calculations assume the input interest rate to reflect a format of zero coupon yield, annual compounding, and actual/actual accrual basis.

Spot Input Rate = 6.00%

The formula for the market value of the account, for any rate scenario, is:

$$\text{Market Value} = \text{Cash Flow1} / (1 + 0.06) + \text{Cash Flow 2} / ((1 + 0.06)^2)$$

Cash Flow1 is the cash flow at the end of year 1. Cash Flow2 is the Cash Flow at the end of year 2.

2.2.2 Spot Interest Rate Code

(Required) <Enter a short description here.>

In the Spot Interest Rate Code Method, the discount factor depends on the term of the Cash Flow, but does not vary with interest rate scenario.

Interest Rate Code = Treasury Yield Curve

The formula for the Market Value of the account, for any rate scenario, is:

$$\text{Market Value} = \text{Cash Flow1} / (1 + 1 \text{ Year Treasury}) + \text{Cash Flow2} / ((1 + 2 \text{ Year Treasury})^2)$$

Cash Flow1 is the Cash Flow at the end of year 1. Cash Flow2 is the Cash Flow at the end of year 2. The values for 1 Year Treasury and 2 Year Treasury reflect the values from the Historical Interest Rate Data, beginning with the As_of_Date.

2.2.3 Forecast Original Term

The Forecast Original Term Method uses the forecasted Interest Rate Data to determine the discount factor.

Interest Rate Code = Treasury Yield Curve

The formula for the market value of the account is:

$$\text{Market Value} = \text{Cash Flow1} / (1 + 2 \text{ Year Treasury Rate at the 1 year point in the forecast}) + \text{Cash Flow2} / ((1 + 2 \text{ Year Treasury Rate at the 2 year point in the forecast})^2)$$

Cash Flow1 is the Cash Flow at the end of year 1. Cash Flow2 is the cash flow at the end of year 2. Note that Cash Flow1 is discounted at the 2 year Treasury rate. The 2 Year rate is used with this method, because the Forecast Original Term method always uses the term equivalent to the original term of the instrument.

2.2.4 Forecast Remaining Term

The Forecast Remaining Term Method uses forecasted Interest Rate Data to determine the discount factor.

Interest Rate Code = Treasury Yield Curve

The formula for the market value of this account is:

$$\text{Market Value} = \text{Cash Flow1} / (1 + 1 \text{ Year Treasury Rate at the 1 year point in the forecast}) + \text{Cash Flow2} / ((1 + 2 \text{ Year Treasury Rate at the 2 year point in the forecast})^2)$$

Cash Flow1 is the Cash Flow at the end of year 1. Cash Flow2 is the cash flow at the end of year 2. The values for 1 Year Treasury and 2 Year Treasury reflect the scenario specific values from the forecast rates - interest rate data. Cash Flow1 is discounted at the 1 year Treasury rate, from the 1 year point of the forecast and Cash Flow2 is discounted at the 2 year Treasury rate, from the 2 year point of the forecast.

2.3 Associating Conditional Assumptions with Discount Methods

The Discount Method UI provides the setup and maintenance of assumptions by integrating the conditional logic (optional) into the setup of discount methods. You can define discount methodologies using IF-THEN-ELSE logic based on the underlying characteristics of your financial instruments, such as dates, rates, balances, and code values.

The conditional logic is defined through use of Data Filters. These existing objects provide the building blocks for defining Conditional logic. This type of Data Filter can be selected within the Conditional Assumption section.

The logic included in a Conditional Assumption determines the specific discount method assumption that the system will assign to each individual instrument record at run time.

The Conditional Assumption section allows users to select explicit conditions (from Data Filters) and apply methods and rule selections to each condition directly. The Filter Conditions are processed by the engine in the order that they appear on the section. As soon as a condition is satisfied, the related assumption is applied.

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.

Conditional Assumptions can be applied only to detailed account records (data stored in the Instrument Tables).

To define conditional assumption, follow these steps:

1. Navigate to Conditional Assumptions section.

Figure 2-7 Conditional Assumption

2. Select the Filter Folder and Filter, then click **Go**. The condition is displayed based on selected filter.
3. Here, you can select either group of conditions using **Conditional Group** or Individual condition using the filter section.
 - You can select the conditional groups from the **Conditional Group** drop-down. You can create a new condition group using the **Create Group** button. To create a new condition group, follow these steps:
 - a. Select filters using the **Filter** drop-down list.



Note:

You must select more than 2 filters to define a condition group.

- b. Select the conditions (filters) using the corresponding check-boxes.

- c. Click **Create Group**.
 - d. The **Save Condition Group** window is displayed. Provide the **Group Name** and select the **Folder** where you want to save the condition group. Click **Save** in **Save Condition Group** window. You can use this saved group from **Condition Group** down-down.
- Else, select Individual condition using the corresponding check-box.
4. Click **Define**.

Figure 2-8 Conditional Assumption

Product Definition

Folder: ALMSEG Select Filters Go Folder: ALMSEG Conditional Groups Go ...

Create Group Delete

Condition	Action	Status
Product = All Products and Currency = USD	Define	
<input checked="" type="checkbox"/> [FIL_170192925575] = FSLD_ASSET.ACTUAL_ACCOUNT_NUMBER IN ('CF-SC-0024')	Define	
<input type="checkbox"/> [FIL_170367828485] = FSLD_ASSET.ACCOUNT_NUMBER IN ('CF-SC-0024_NAMRT_EMBOPT_FIX_002_ARR_PRICE')	Define	

Use **Delete** button to delete the defined condition(s)

5. Define Discount Method, and then click **Apply**. The status of condition assumption is updated as **Defined**.

 **Note:**

You can edit the condition using **Edit**.

6. Click **Save**. The status of conditional assumption is also updated in Assumption Browser.

Figure 2-9 Status of Conditional Assumption

Search

Member Tree Search Results

Member	Method	Conditional Assumption	Status	Action
<ul style="list-style-type: none"> <input type="checkbox"/> All Products <ul style="list-style-type: none"> <input type="checkbox"/> Asset Products <ul style="list-style-type: none"> <input type="checkbox"/> Liability Products <ul style="list-style-type: none"> <input type="checkbox"/> Off Balance Sheet Products <ul style="list-style-type: none"> <input type="checkbox"/> Other Residual Products 		Yes	Defined	...