

Oracle® Banking Treasury Management

Discount Accrual User Guide



Release 14.7.0.0.0
F76975-01
November 2022

ORACLE®

F76975-01

Copyright © 2020, 2022, 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

Preface

Audience	iv
Conventions	iv
List of Topics	iv
Related Resources	v
Symbols and Icons	v

1 Defining Discount Accrual Classes

1.1 Discount Accrual	1-1
1.1.1 Processing Discount Accrual	1-1
1.1.2 Define a Discount Accrual Class	1-2
1.1.3 Associating Discount Accrual Components to Products	1-3
1.1.3.1 Events and Accounting Entries for Discount Accrual	1-5
1.1.3.2 Specifying Status Change Details for Discount Accrual	1-7
1.1.3.3 Batch Processing for Discount Accrual	1-8
1.2 Computation of Net Discount Accrual Amount for a Processing Day	1-8

Index

Preface

This manual is designed to help you to quickly get acquainted with the Discount Accrual module of Oracle Banking Treasury Management. '

This preface has the following topics:

- [Audience](#)
- [Conventions](#)
- [List of Topics](#)
- [Related Resources](#)
- [Symbols and Icons](#)

Audience

This guide is intended for Back Office Data Entry Clerk, Back Office Managers/ Officers, Product Managers, End of Day Operators, and Financial Controller users.

Conventions

The following text conventions are used in this document:

Table 1 Conventions and Meaning

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

List of Topics

This guide is organized as follows:

Topics	Description
Defining Discount Accrual Classes	Explains the processing and maintenance of the discount accruals

Related Resources

For more information, see these Oracle Banking Treasury Management resources:

- *The Money Market User Manual*
- *The Securities Repo Manual*

Symbols and Icons

Table 2 Symbols

Icons	Function
	Exit
	Add row
	Delete row
	Option List

The images used in the documentation are of illustration purpose and need to be used only for reference.

1

Defining Discount Accrual Classes

This topic introduces the Discount Accrual User Manual and its functionalities.

In Oracle Banking Treasury Management, you can define the different types of charges that apply on a product as 'classes'. A charge class is a specific type of charge component (E.g. 'Charges for amending the terms of a loan'). When defining a product, you merely have to attach the required classes. In this manner, a contract processed under a particular product acquires the classes (components) associated with the product.

A discount accrual class can be made applicable for loans and contracts processed in Oracle Banking Treasury Management. To apply a discount accrual, you should first define attributes for each of the components.

- [Discount Accrual](#)
This topic describes how to process and define a discount accrual class and associate the discount accrual components to products.
- [Computation of Net Discount Accrual Amount for a Processing Day](#)
This topic describes the details on computation of net discount accrual amount, IRR calculation and IRR re-calculation.

1.1 Discount Accrual

This topic describes how to process and define a discount accrual class and associate the discount accrual components to products.

This topic contains the following sub-topics:

- [Processing Discount Accrual](#)
This topic describes how to process the discount accrual.
- [Define a Discount Accrual Class](#)
This topic describes the systematic instructions to define a discount accrual class.
- [Associating Discount Accrual Components to Products](#)
This topic describes the systematic instructions to associate discount accrual components to products.

1.1.1 Processing Discount Accrual

This topic describes how to process the discount accrual.

The following steps are involved in processing discount accrual:

- Defining discount accrual classes
- Associating discount accrual classes with a product

1.1.2 Define a Discount Accrual Class

This topic describes the systematic instructions to define a discount accrual class.

A discount accrual class specifies the accrual parameters for interest and charges. You can define the attributes of a discount accrual class in the **Treasury Discount Accrual Class Maintenance** screen.

1. On the Homepage, Enter **DADTRACL** in the text box, and click the next arrow.
The **Treasury Discount Accrual Class Maintenance** screen is displayed.

Figure 1-1 Treasury Discount Accrual Class Maintenance

2. Specify the fields in the Treasury Discount Accrual Class Maintenance screen.
For information on fields refer to the below table:

Table 1-1 Treasury Discount Accrual Class Maintenance - Field Description

Field	Description
Class Code	Specify a unique identifier for the class.
Description	Enter a brief description for the class. A description would help you easily identify the class.
Module	The system defaults to the Discount Accrual module to which the class is associated.
Module Description	A brief description of the module is displayed here.
Accrual Preference	Specify whether Discount accrual should be performed for the class.
Discount Accrual Required	Select the Check box if discount accrual should be performed for the class.
Accrual Frequency	Specify the frequency at which discount accrual should be performed. This can be either Daily or Monthly. For monthly accruals, the discount accrual will be done on the last day of the month

Table 1-1 (Cont.) Treasury Discount Accrual Class Maintenance - Field Description

Field	Description
Acquisition Type	The Acquisition Type determines whether the initial cash flows for a C contract can be more (Premium) or less (Discount) or equal (Par) to the contract amount. The 'Acquisition Type' is determined by the cash flows of interest, charges and fees for which 'Consider as Discount' option is checked. The drop down list comprises of the following values: • Par • Par/Discount • Par/Premium • Par/Discount/Premium If the incoming cash flows of all the above components are greater than outgoing cash flows considering Incoming flow as Positive (In case of MM contract), the acquisition type is considered as Discount. If the incoming cash flows of all the above components are less than outgoing cash flows considering Incoming flow as Positive (In case of MM contract), the acquisition type is considered as Premium. If the incoming cash flows of all the above components are equal to outgoing cash flows considering Incoming flow as Positive (In case of MM contract), the acquisition type is considered as Par. NOTE: The acquisition type of a contract can change from premium to par/ discount or otherwise depending on the charges getting liquidated during the life cycle of the contract.
Handling of Foreclosure	Specify how foreclosures with respect to the contracts using the class must be handled. You can opt for the completion of pending accruals, or refund. In case the 'Acquisition Type' is 'Par', there are no refunds. Only the pending accruals are completed.
Class Currency Preferences and Day Count Method Details	You can specify the day count methods for each currency using the class. You can define the day count methods for both the Numerator and the Denominator.

1.1.3 Associating Discount Accrual Components to Products

This topic describes the systematic instructions to associate discount accrual components to products.

After building discount accrual classes you can associate the class with loans or contract products.

1. Click **Discount Accrual** in the Product Definition screen (For example, Money Market **Product Definition screen - MMDPRMNT**).

The **Discount Accrual Preference Association** screen is displayed.

Figure 1-2 Discount Accrual Preference Association**Figure 1-3 Discount Accrual Preference Association**

- To associate discount accrual class with a product, click Default From Class button in the Discount Accrual Preference Association screen. Select the appropriate discount accrual class from the list of classes.

The attributes defined for the discount accrual class defaults to the product. You have the option to modify the attributes defined for the class, to suit the requirement of the product you are creating. Alternatively, you can choose to define the discount accrual details for the product.

The system derives the acquisition type based on the following criteria:

Table 1-2 Treasury Discount Accrual Class Maintenance - Field Description

Product Type	Inflow / Outflow	Acquisition Type
Asset	Inflow > Outflow	Discount
Asset	Inflow < Outflow	Premium
Asset	Inflow = Outflow	Par

An asset here is a contract (Money Market or Security Repo) and Inflow/Outflow could pertain to the charges and discounted interest associated with a contract. Now, if the acquisition type derived by the system for a contract and the acquisition type of the discount accrual class linked at the product are different, system does not allow saving of a contract.

- [Events and Accounting Entries for Discount Accrual](#)
This topic describes the events and accounting entries for discount accrual.
- [Specifying Status Change Details for Discount Accrual](#)
This topic describes in which manner the discount accrual is processed in the event of status changes.
- [Batch Processing for Discount Accrual](#)
This topic describes the batch processing for Discount Accrual.

1.1.3.1 Events and Accounting Entries for Discount Accrual

This topic describes the events and accounting entries for discount accrual.

While defining the accounting entries for the Loans and MM modules you must identify the events and accounting entries that are required for discount accrual accounting. One of these is the yield to maturity (YTM) based Discount Accrual (YACR) event. It is meant to indicate the periodic discount accruals for the contract.

The Accounting Roles that should be associated with the event YACR are:

Table 1-3 Accounting Roles

Accounting Role	Acquisition Type	Product Type	Description
EIMDISCRIA	Discount	Asset	Effective Interest Based Discount To Be Accrued
EIMDISCINC	Discount	Asset	Effective Interest Based Discount Accrued Till Date
EIMPREMPIA	Premium	Asset	EIM Premium paid in advance
EIMPREMEXP	Premium	Asset	EIM Premium Expense
EIMINTADJREC	Par	Asset	EIM Interest Adjustment Receivable
EIMINTADJINC	Par	Asset	EIM Interest Adjustment Income

Table 1-4 Amount Tags for the YACR Event

Amount Tag	Description
EIMDISC_ACCR	Net Discount Accrual amount for the processing day
EIMDISC_ADJ	Discount accrual refund amount
EIMPREM_ACCR	Net premium accrual amount for processing day
EIMINTADJ_ACCR	Interest adjustment amount
EIMPREM_ADJ	Premium accrual refund amount

Table 1-5 Entries Maintained for the YACR Event

Accounting Role	Amount Tag	Dr/Cr Indicator
EIMDISCRIA	EIMDISC_ACCR	Debit
EIMDISCINC	EIMDISC_ACCR	Credit
EIMDISCRIA	EIMDISC_ADJ	Debit
CUSTOMER	EIMDISC_ADJ	Credit
CUSTOMER	EIMPREM_ADJ	Debit
EIMPREMPIA	EIMPREM_ADJ	Credit
EIMINTADJREC	EIMINTADJ_ACCR	Debit
EIMINTADJINC	EIMINTADJ_ACCR	Credit
EIMPREMEXP	EIMPREM_ACCR	Debit

Table 1-5 (Cont.) Entries Maintained for the YACR Event

Accounting Role	Amount Tag	Dr/Cr Indicator
EIMPREMPIA	EIMPREM_ACCR	Credit

The account head mapped to the accounting role EIMDISCRIA and account heads mapped to the subsystem specific RIA (Received in Advance) accounting roles should be maintained as the same account.

For discount accrual, you must also maintain the following accounting set-up for the Charge Liquidation event. The charge liquidation event is the event in the life of a contract at which the charge is going to be levied; you would have specified this while building a charge class or while attaching a charge class to the product.

Table 1-6 Accounting Roles for LIQD Event

Accounting Role	Description
component_RIA*	Charge amount Received in Advance

**Note:**

The component_RIA will be replaced by the appropriate Charge Rule

Table 1-7 Amount Tags for the LIQD Event

Amount Tag	Description
component_DISC*	Charge Amount to be discounted
component_PIA	Charge amount paid in advance

**Note:**

The component is replaced by the appropriate Charge Rule.

Table 1-8 Entries to be Maintained for LIQD Event

Accounting Role	Amount Tag	Dr/Cr Indicator
<Charge rule>_RIA	<Charge rule>_DISC	Credit
CUSTOMER	<Charge rule>_DISC	Debit
<Charge rule>_INC	<Charge rule>_LIQD	Credit
CUSTOMER	<Charge rule>_LIQD	Debit
<Charge rule>_PIA	<Charge rule>_PREM	Debit
CUSTOMER	<Charge rule>_PREM	Credit

Table 1-9 Additional Accounting Entries required for LIQD Event

Accounting Role	Amount Tag	Dr/Cr Indicator
EIMDISCRIA	EIMDISC_ADJ	Debit
CUSTOMER	EIMDISC_ADJ	Credit

1.1.3.2 Specifying Status Change Details for Discount Accrual

This topic describes in which manner the discount accrual is processed in the event of status changes.

You must maintain the following details as part of status maintenance for contracts:

- Whether discount accruals should be stopped or reversed
- The transfer GLs for discount accrual

Table 1-10 Accounting Roles

Accounting Role	Description
EIMDISCRIA	Effective Interest Based Discount To Be Accrued
EIMDISCINC	Effective Interest Based Discount Accrued Till Date
EIMPREMPIA	EIM Premium Paid In Advance
EIMPREMEXP	EIM Premium Expense
EIMINTADJREC	EIM Interest Adjustment Receivable
EIMINTADJINC	EIM Interest Adjustment Income

To recall, at the product level, you maintain preferences pertaining to status change processing through the Status screen (which you invoke by clicking 'Status' button in the Product Definition screen of Money Market or Security Repo). During the contract status change processing, the following are supported by the system based on the preferences maintained:

- All discount accrual accounting roles are made available for transfer
- The balances transferred are
 - Premium TBA to Premium Accrued
 - Discount TBA to Discount Accrued
- Setting of the 'Stop Accrual' flag stops the discount accrual also. This indicates that the YACR event will not be pass any accounting entries.
- Setting of 'Reverse Accrual' flag reverses the following balances:
 - Premium Accrued
 - Discount Accrued

:

For more information, refer to the section 'Aging Analysis for a Product' in the chapter titled 'Product Definition' in the Products User Manual.

1.1.3.3 Batch Processing for Discount Accrual

This topic describes the batch processing for Discount Accrual.

The system provides a batch process (DAATRDLY) as a part of EOD for discount accrual processing. You can trigger the batch process through the Setting up Mandatory Programs screen. The YACR event is initiated, and the net discount accrual amount for the day is computed.

1.2 Computation of Net Discount Accrual Amount for a Processing Day

This topic describes the details on computation of net discount accrual amount, IRR calculation and IRR re-calculation.

Computing Net Discount Accrual Amount

The following details are stored in the system during discount accrual:

- Outstanding contract amount
- Outstanding arrears interest accrued
- Discounted interest to be accrued
- Premium to be accrued
- Discount to be accrued
- Interest adjustment accrued already
- Premium accrued till date
- Discount accrued till date

Catch-Up of discount accrual is done during a contract rollover also. The net discount accrual amount for a processing day is computed as follows:

- All future cash flows are discounted to the processing day using the IRR effective as of the processing day, and the net present value (NPV) of the contract as of the processing day is obtained. The NPV is calculated based on the acquisition type as follows:
 - If the acquisition type is 'Discount', NPV is given by: $\text{NPV} = \text{outstanding Money Market contract amount} + \text{outstanding arrears interest accrued} + \text{outstanding acquired interest} - (\text{discounted interest to be accrued} - \text{discounted interest accrued}) - (\text{discount to be accrued} - \text{discount accrued})$. If the acquisition type is 'Premium', the NPV is given by: $\text{NPV} = \text{outstanding Money Market contract amount} + \text{outstanding arrears interest accrued} + \text{outstanding acquired interest} - (\text{discounted interest to be accrued} - \text{discounted interest accrued}) + (\text{discount to be accrued} - \text{discount accrued})$.
 - If the acquisition type is 'Par', the NPV is given by: $\text{NPV} = \text{outstanding Money Market contract amount} + \text{outstanding arrears interest accrued} + \text{outstanding acquired interest} - (\text{discounted interest to be accrued} - \text{discounted interest accrued}) + (\text{interest adjustment accrued already} + \text{interest adjustment accrued})$.

- Outstanding arrears accrued interest is only for arrears (bearing) type contracts.
- The till date discount accrual amount is computed using the following expression: Where
 - TDAn represents the Till Date Discount Accrual for nth Accrual Date
 - NPVn , the Net Present Value of the contract as of nth Accrual Date
 - Pn, the Outstanding Principal of the contract as of nth Accrual Date
 - DTAs, the Discount to be accrued as of current IRR Effective Date
 - AIn, the Current Period Accrued Interest as of nth Accrual Date, and
 - DAs, the Discount Accrued as of current IRR Effective Date
- The difference between the 'Till date discount accrual' amount as of the previous processing day and the 'Till date discount accrual' amount as of the current processing day is the 'Net Discount accrual' amount that is realized as income as of the processing day. The expression used would be, Where \:
 - NDA_n represents the Accrual for nth Accrual Date,
 - TDAn, the Till Date Discount Accrual for nth Accrual Date and
 - TDAn-1, the Till Date Discount Accrual for n-1th Accrual Date.

IRR calculation and IRR Re-calculation

Internal Rate of Return (IRR) calculation does not happen in the below mentioned cases:

- Initial stage of a contract
- Payment
- Contract closure

IRR recalculation happens during the following events with new effective date:

- Value dated amendment of a contract maturity date
- Floating interest rate revision
- Partial prepayment to a principal amount for a contract
- New charge on a contract, payable by customer
- Amendment of the Interest to Date
- Amendment of the interest rate
- Partial prepayment to an interest amount



Note:

The above events pertain to bearing/arrears type of contracts.

For discounted/true discounted type of contracts where the interest is collected in advance, IRR recalculation is done with a new effective date during the following events:

- A partial prepayment to a principal amount
- New charge on a contract, payable by your Customer



Note:

IRR recalculation is undone during reversal of a partial prepayment.

IRR recalculation is not done during the following events:

- When a payment is overdue
- For a regular payment
- For a full prepayment
- Amendment of a contract amount

Refer to the https://docs.oracle.com/cd/F72699_01/PDF/OTHERS/Calc_sheets/YACR_calculation.xls sheet for sample Yield Accrual calculation.

Index

D

DADTRACL- Treasury Discount Accrual Class
Maintenance, [1-2](#)