



Discount Accrual User Guide

Oracle Banking Treasury Management

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1. Preface

1.1 Introduction

This manual is designed to help you quickly get acquainted with the Discount Accrual Module of Oracle Banking Treasury Management. It provides how to apply a discount accrual for the contracts processed in Oracle Banking Treasury Management.

You can further obtain information specific to a particular field by placing the cursor on the relevant field and striking <F1> on the keyboard.

1.2 Audience

This manual is intended for the following User/User Roles:

Table 1.1: Function and Role

Role	Function
Bank Office Clerk	Input functions for contracts
Back office managers/officers	Authorization functions
Product Managers	Product definition and authorization
End of day operators	Processing during end of day/ beginning of day

1.3 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

1.4 List of Topics

The manual is organized as follows:

Table 1.2: Topics

Topics	Description
Discount Accrual Classes	Explains the processing and maintenance of the discount accruals
Function ID - Glossary	This topic provides the alphabetical list of Functional /Screen ID used in this module.

1.5 Related Documents

- Money Market

- Securities Repo

2. Defining Discount Accrual Classes

2.1 Introduction

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.

This topic contains the following sections:

- 1) [Discount Accrual](#)
- 2) [Computation of Net Discount Accrual Amount for a Processing Day](#)

2.2 Discount Accrual

This section contains the following sub-topics:

- 1) [Processing Discount Accrual](#)
- 2) [Defining a Discount Accrual Class](#)
- 3) [Associating Discount Accrual Components to Products](#)

2.2.1 Processing Discount Accrual

The following steps are involved in processing discount accrual:

- 1) Defining discount accrual classes
- 2) Associating discount accrual classes with a product

2.2.2 Defining a Discount Accrual Class

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

CONTEXT:

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, type **DADTRACL** in the text box, and click the next arrow.

STEP RESULT: **Treasury Discount Accrual Class Maintenance** screen is displayed.

Figure 2.1: Treasury Discount Accrual Class Maintenance

The screenshot displays the 'Treasury Discount Accrual Class Maintenance' window. It features a 'New' button and an 'Enter Query' field. The main form area contains several sections: 'Class Code' (with a red asterisk indicating it's required), 'Description', 'Module' (set to 'DA'), and 'Module Description' (set to 'Discount Accrual'). The 'Accrual Preference' section includes a 'Discount Accrual Required' checkbox, 'Accrual Frequency' (set to 'Daily'), 'Handling of Foreclosure' (set to 'Refund'), and 'Acquisition Type' (set to 'Par'). The 'Class Currency Preference' section shows a table with columns for 'Currency', 'Currency Name', 'Numerator Method', and 'Denominator Method'. At the bottom, there are fields for 'Maker', 'Checker', 'Date Time', 'Mod No', 'Record Status', and 'Authorization Status', along with an 'Exit' button.

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

Table 2.1: 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

Field	Description
Acquisition Type	<p>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.</p> <p>The 'Acquisition Type' is determined by the cash flows of interest, charges and fees for which 'Consider as Discount' option is checked.</p> <p>The drop down list comprises of the following values:</p> <ul style="list-style-type: none"> • Par • Par/Discount • Par/Premium • Par/Discount/Premium <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
Handling of Foreclosure	<p>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.</p> <p>In case the 'Acquisition Type' is 'Par', there are no refunds. Only the pending accruals are completed.</p>
Class Currency Preferences and Day Count Method Details	<p>You can specify the day count methods for each currency using the class.</p> <p>You can define the day count methods for both the Numerator and the Denominator.</p>

2.2.3 Associating Discount Accrual Components to Products

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

CONTEXT:

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**).

STEP RESULT: **Discount Accrual Preference Association** screen is displayed.

Figure 2.2: 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 2.2: Discount Accrual Class Maintenance- Acquisition types

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.

2.2.3.1 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:

Accounting Role	Acquisition Type	Product Type	Description
EIMDISCR1A	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

The 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
EIMINTAD-J_ACCR	Interest adjustment amount
EIMPREM_ADJ	Premium accrual refund amount

The following entries should be maintained for the YACR event:

Accounting Role	Amount Tag	Dr/Cr Indicator
EIMDISCRJA	EIMDISC_ACCR	Debit
EIMDISCINC	EIMDISC_ACCR	Credit
EIMDISCRJA	EIMDISC_ADJ	Debit
CUSTOMER	EIMDISC_ADJ	Credit
CUSTOMER	EIMPREM_ADJ	Debit
EIMPREMPIA	EIMPREM_ADJ	Credit
EIMINTADJREC	EIMINTAD-J_ACCR	Debit
EIMINTADJINC	EIMINTAD-J_ACCR	Credit
EIMPREMEXP	EIMPREM_ACCR	Debit
EIMPREMPIA	EIMPREM_ACCR	Credit

The account head mapped to the accounting role EIMDISCRJA 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. This is in addition to the normal accounting set-up that you would define for the LIQD event:

Accounting Role	Description
component_RIA*	Charge amount Received in Advance

* The component will be replaced by the appropriate Charge Rule

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

* The component is replaced by the appropriate Charge Rule. The following entries should be maintained for the charge liquidation 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

Along with the normal accounting entry setup for the LIQD event, you must also maintain the following accounting entries:

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

2.2.3.2 Specifying Status Change Details for Discount Accrual

You need to define the manner in which 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

You can specify the following roles as part of the transfer GLs:

Accounting Role	Description
EIMDISCR1A	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.

2.2.3.3 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.

2.3 Computation of Net Discount Accrual Amount for a Processing Day

This chapter contains the following sections:

- 1) [Computing Net Discount Accrual Amount](#)
- 2) [IRR calculation and IRR Re-calculation](#)

2.3.1 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: $NPV = \text{outstanding Money Market contract amount} + \text{outstanding arrears interest accrued} + \text{outstanding acquired interest} - (\text{discounted interest to be accrued} - \text{discounted interest accrued}) - (\text{discount to be accrued} - \text{discount accrued})$.
 - If the acquisition type is 'Premium', the NPV is given by: $NPV = \text{outstanding Money Market contract amount} + \text{outstanding arrears interest accrued} + \text{outstanding acquired interest} - (\text{discounted interest to be accrued} - \text{discounted interest accrued}) + (\text{discount to be accrued} - \text{discount accrued})$.
 - If the acquisition type is 'Par', the NPV is given by: $NPV = \text{outstanding Money Market contract amount} + \text{outstanding arrears interest accrued} + \text{outstanding acquired interest} - (\text{discounted interest to be accrued} - \text{discounted interest accrued}) + (\text{interest adjustment accrued already} + \text{interest adjustment accrued})$.
 - Outstanding arrears accrued interest is only for arrears (bearing) type contracts. The discounted interest is only for discounted 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,
 - TDA_n , the Till Date Discount Accrual for nth Accrual Date and
 - TDA_{n-1} , the Till Date Discount Accrual for n-1th Accrual Date.

2.3.2 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 attached YACR calculation sheet for sample Yield Accrual calculation.

3. Function ID - Glossary

DADTRACL

Treasury Discount Accrual Class Maintenance, [Defining a Discount Accrual Class](#) (p. 3)

DAATRDLY

EOD Batch details for Discount Accrual, [Processing for Discount Accrual](#) (p. 10)