Oracle® Financial Services Profitability Management Cloud Service

User Guide

Release 25A
G33787-03
June 2025

Oracle Financial Services Profitability Management Cloud Service User Guide, Release 25A

G33787-03

Copyright © 2022, 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 About This Content

2 Getting Started

2.1 Getting Started with Oracle Cloud 2-1
2.1.1 Welcome to Oracle Cloud 2-1
2.1.1.1 About Oracle Cloud 2-2
2.1.1.2 Supported Web Browsers 2-2
2.1.1.3 Order Oracle Cloud Applications 2-2
2.1.2 Getting Started with your Cloud Service 2-2
2.1.2.1 Create and Activate New Cloud Account 2-3
2.1.2.2 Add to an Existing Oracle Cloud Account 2-4
2.1.2.3 Accessing the Cloud Account 2-4
2.1.2.4 Create an Environment 2-4
2.1.2.5 Access Oracle Identity and Access Management 2-6
2.1.2.6 Activate Application User Account 2-7
2.1.3 Managing Application Users 2-7
2.1.3.1 User Summary- Application Users 2-7
2.1.3.2 Creating New Application Users 2-8
2.1.3.3 Creating a New User Group 2-9
2.1.3.4 Assign Groups to Users 2-9
2.1.3.5 Bulk Import Application Users 2-10
2.1.4 Managing User Groups 2-10
2.1.4.1 Map Application with the User Groups 2-10
2.1.4.2 Map Application with the Groups 2-11
2.1.4.3 Map Users to Groups 2-11
2.1.4.4 Unmap User from Groups 2-12
2.1.4.5 Creating a New User Group 2-12
2.1.5 User Management 2-13
2.1.5.1 Application Users 2-13
2.1.5.2 User Roles and Privileges 2-13
2.1.6 Configuring Session Timeout 2-17
2.1.6.1 How to configure Session Lifetime Timeout? 2-18
2.1.7 Authenticating for Token Generation 2-19

2.1.7.1 Download the Application Certificate 2-19
2.1.7.2 Get the OAuth Client ID and Client Secret 2-19
2.1.7.3 Generate the Access Token 2-20
2.1.7.4 Generate the Refresh Token 2-21
2.1.7.5 Invoke the API using the Access Token 2-22
2.2 Profitability Management Cloud Service 2-22
2.2.1 Key Features 2-22
2.2.2 User Groups 2-23
2.2.3 Guidelines for working with Profitability Management 2-24
2.2.4 Launching Profitability Management 2-24
2.2.4.1 Profitability Management Cloud Service Home Page 2-25
2.2.4.2 Common Icons 2-26
2.2.4.3 Common Feature Controls 2-27
2.3 Introduction to Admin Console 2-27
2.3.1 Accessing Admin Console 2-27
2.4 System Configuration 2-28
2.4.1 Metering 2-29
2.4.2 Component Details 2-30
2.4.3 Audit Trail Report 2-30
2.4.4 Configurations 2-31
2.4.5 Reports For Download 2-32
2.4.5.1 Prerequisites 2-32
2.4.5.2 Access Reports for Download 2-33
2.4.5.3 Data Reporting - Data View 2-33
2.4.5.4 View the Report Details 2-33
2.4.5.5 Apply a Custom Filter to the Data View 2-34
2.5 Identity Management 2-34
2.5.1 Users Summary Page 2-35
2.5.1.1 User Details 2-35
2.5.1.2 Mapped/Unmapped Groups 2-35
2.5.1.3 Available Groups 2-36
2.5.2 Groups Summary Page 2-36
2.5.2.1 Group Details 2-37
2.5.2.2 Mapped/Unmapped Roles 2-37
2.5.2.3 Available Roles 2-37
2.5.2.4 Create custom groups 2-38
2.5.3 Roles Summary Page 2-38
2.5.3.1 Roles Details 2-39
2.5.3.2 Mapped/Unmapped Functions 2-39
2.5.3.3 Available Functions 2-39
2.5.4 Functions Summary Page 2-40
2.5.4.1 Function Details 2-40

2.5.5 Folders Summary Page 2-40
2.5.5.1 Folder Details 2-41
2.5.5.2 Editing Folder Details 2-41

3 Data Administration

3.1 Data Model Extension 3-1
3.1.1 Registering Dimensions 3-2
3.1.1.1 Register a Simple Dimension 3-3
3.1.1.2 Register a Key Processing Dimension 3-5
3.1.2 Registering Columns 3-7
3.1.3 Registering a Management Ledger 3-9
3.1.3.1 Adding a Management Ledger 3-10
3.1.4 Approving or Rejecting the Registrations 3-11
3.2 Data File Administration 3-12
3.2.1 Data File Specification 3-13
3.2.1.1 Searching for a Data File Specification 3-14
3.2.1.2 Creating a Data File Specification 3-15
3.2.1.3 Creating the Data File 3-18
3.2.1.4 Data Loaders 3-19
3.2.2 File Upload and Download Utility 3-38
3.2.2.1 Upload or Download File from Object Store Using Console 3-38
3.2.2.2 Uploading/Downloading a File Using Utility 3-39
3.2.2.3 Uploading/Downloading a File Using PAR URL 3-40
3.2.3 File Upload Automation 3-41
3.2.3.1 Step 1: Generate Access Token 3-41
3.2.3.2 Step 2: Generate PAR URL 3-41
3.2.3.3 Step 3: Upload file to Object Store 3-42
3.2.3.4 Step 4: Scan the file to ensure Upload was Successful 3-42
3.2.3.5 Automating the File Upload Process Using File Upload Utility 3-43
3.2.4 Generating PAR URL for File Operations 3-44
3.2.4.1 Generating PAR URL for File Upload 3-44
3.2.4.2 Generating PAR URL For File Download 3-47
3.2.5 Deleting A File 3-49
3.2.5.1 End Point Details 3-49
3.2.5.2 Deleting a File Using the File ID 3-49
3.2.5.3 Deleting a File Using Filename 3-50
3.2.5.4 Deleting Multiple Files Using Filenames 3-51
3.2.5.5 Delete files using a prefix value 3-52
3.2.6 Data File History 3-53
3.3 Data Maintenance Interface 3-56
3.3.1 Access the Data Maintenance Interface 3-58

3.3.2 Form Builder 3-59
3.3.2.1 Creating New Forms in Form Builder 3-60
3.3.2.2 Approving and Rejecting New Form Definitions 3-67
3.3.2.3 Managing Form Definitions 3-68
3.3.2.4 Viewing Form Definitions 3-69
3.3.2.5 Editing/Amending Form Definitions 3-69
3.3.2.6 Copying Form Definitions 3-69
3.3.2.7 Re-Uploading Form Definitions 3-69
3.3.2.8 Deleting Form Definitions 3-70
3.3.3 Data Entry 3-70
3.3.3.1 Viewing Data Entry 3-70
3.3.3.2 Adding Data to Table – Forms Created Using Data Entry 3-71
3.3.3.3 Forms Created Using Excel Upload 3-73
3.3.3.4 Approving and Rejecting Records 3-73
3.3.3.5 Exporting Data Exporter Form Definitions 3-75
3.3.4 Adding DMI Tasks in Scheduler Service 3-76
3.4 Data Quality Framework 3-77
3.4.1 Introduction to Data Quality Framework 3-77
3.4.2 Roles and Functions for Managing DQ Framework 3-78
3.4.3 Data Quality Rules 3-78
3.4.3.1 Data Check Definitions 3-79
3.4.3.2 Creating Expressions 3-82
3.4.3.3 DQ Rules Summary 3-83
3.4.3.4 Creating DQ Rule 3-84
3.4.3.5 Editing DQ Rules 3-86
3.4.3.6 Approving/Rejecting a Data Quality Rule 3-86
3.4.3.7 Deleting a Data Quality Rule 3-88
3.4.3.8 Purging a Data Quality Rule 3-88
3.4.4 Data Quality Groups 3-88
3.4.4.1 DQ Groups Summary 3-88
3.4.4.2 Creating DQ Groups 3-89
3.4.4.3 Editing DQ Groups 3-90
3.4.4.4 Approving/Rejecting a Data Quality Group 3-91
3.4.4.5 Executing DQ Groups 3-92
3.4.4.6 Deleting a Data Quality Group 3-92
3.4.4.7 Purging a Data Quality Group 3-93
3.4.5 Adding a DQ Check Task 3-93
3.4.6 Execution Summary 3-93
3.4.6.1 Viewing Run Details 3-94
3.5 Data Verification 3-95
3.6 Data Housekeeping 3-99
3.6.1 Create Data Housekeeping Policy 3-101

3.6.1.1 Create Drop Partition Policy 3-101
3.6.1.2 Create Archive Policy 3-105
3.6.1.3 Create Delete Policy 3-108
3.6.1.4 Create Nullify Policy 3-111
3.6.2 Authorize a Policy 3-116
3.6.3 Withdraw a Policy 3-117
3.7 Balance Reconciliation 3-118
3.7.1 Reconciliation Definition 3-119
3.7.1.1 Adding a New Reconciliation Definition 3-120
3.7.1.2 Reconciliation Balance 3-122
3.7.1.3 Actions Performed on Reconciliation Definition 3-122
3.7.2 Duplicate Runs for Same As-of-Date 3-125
3.7.3 Historical Difference Report 3-126
3.7.4 Default Attributes 3-128
3.7.4.1 Creating a New Product-Currency Combination and Default Attributes 3-129
3.7.5 Reconciliation using Batch Process 3-131
3.8 Data Redaction 3-133
3.8.1 Redaction Functions 3-134
3.8.2 Redaction Policies 3-134
3.8.2.1 View redaction policies 3-135
3.8.2.2 Create redaction policies 3-135
3.8.2.3 Modify a redaction policy 3-136
3.8.2.4 Drop a redaction policy 3-136
3.8.2.5 Refresh a redaction policy 3-136
3.8.3 Redaction Approval 3-136

4 Administrative Tools

4.1 PLSQL Starter Kit 4-1
4.1.1 Support for PLSQL Extension Installation 4-1
4.1.1.1 Verify the System Requirements 4-1
4.1.1.2 Configure and Create a Database Schema 4-2
4.1.1.3 Configure Environment Variables 4-3
4.1.1.4 Install StarterKit 4-4
4.1.1.5 Create User Extensions 4-7
4.1.2 User Extension Support 4-8
4.1.2.1 Key Features 4-8
4.1.2.2 Steps to introduce Custom PLSQLs 4-8
4.1.2.3 PLSQL Starter Kit UI 4-11
4.1.2.4 Appendix 4-12
4.1.3 Setup Parameters 4-17

5 On-prem to SaaS Migration

5.1 Introduction 5-1
5.1.1 Supported Applications 5-1
5.1.2 Supported Data Tables 5-1
5.1.3 Supported Migration Object Types 5-3
5.2 Metadata Migration 5-4
5.2.1 On-Premise Tasks 5-4
5.2.1.1 Prerequisites 5-4
5.2.1.2 Accessing Map Dimensions and Map Tables 5-5
5.2.1.3 Export Definitions 5-7
5.2.2 SaaS Tasks 5-9
5.2.2.1 Prerequisites 5-9
5.2.2.2 Accessing Import Summary 5-9
5.2.2.3 Importing Archive File 5-10
5.2.2.4 Importing Metadata Objects 5-10
5.2.2.5 Import Status 5-11
5.3 Data Migration 5-11
5.3.1 Prerequisites 5-12
5.3.2 Properties Files 5-12
5.3.2.1 User-input.properties 5-13
5.3.2.2 pbsm_export_table.properties 5-13
5.3.2.3 pbsm_export_table_filter.properties 5-14
5.3.3 Migration Execution Scripts 5-14
5.3.3.1 Export-data.sh 5-14
5.3.3.2 Re-export-data.sh 5-15
5.3.3.3 Import-data.sh 5-15
5.3.3.4 finalize.sh 5-15
5.3.3.5 generate-report.sh 5-19
5.4 Pre-Mapped Dimensions for Migration 5-19
5.5 Deprecated Columns in Data Tables 5-22
5.5.1 FSI_D_ANNUITY_CONTRACTS 5-23
5.5.2 FSI_D_BORROWINGS 5-24
5.5.3 FSI_D_BREAK_FUNDING_CHARGES 5-25
5.5.4 FSI_D_CASA 5-26
5.5.5 FSI_D_CREDIT_CARDS 5-28
5.5.6 FSI_D_CREDIT_LINES 5-30
5.5.7 FSI_D_FUTURES 5-32
5.5.8 FSI_D_FX_CONTRACTS 5-33
5.5.9 FSI_D_GUARANTEES 5-34
5.5.10 FSI_D_INVESTMENTS 5-35
5.5.11 FSI_D_LEASES 5-36

5.5.12 FSI_D_LEDGER_STAT_INSTRUMENT 5-38
5.5.13 FSI_D_LOAN_COMMITMENTS 5-38
5.5.14 FSI_D_LOAN_CONTRACTS 5-39
5.5.15 FSI_D_MERCHANT_CARDS 5-41
5.5.16 FSI_D_MM_CONTRACTS 5-43
5.5.17 FSI_D_MORTGAGES 5-44
5.5.18 FSI_D_MUTUAL_FUNDS 5-46
5.5.19 FSI_D_OTHER_SERVICES 5-48
5.5.20 FSI_D_RETIREMENT_ACCOUNTS 5-49
5.5.21 FSI_D_SWAPS 5-50
5.5.22 FSI_D_TERM_DEPOSITS 5-51
5.5.23 FSI_D_TRUSTS 5-52

6 Business Rules Administration

6.1 Reference Data 6-1
6.1.1 Currencies Setup 6-1
6.1.1.1 Currency Setup 6-2
6.1.1.2 Currency Rates 6-5
6.1.2 Dimension Management 6-11
6.1.2.1 Object Security 6-11
6.1.2.2 Components of Dimension Management 6-11
6.1.2.3 Attributes 6-12
6.1.2.4 Members 6-16
6.1.2.5 Hierarchy 6-19
6.1.2.6 Viewing Data in a Summary Page 6-24
6.2 Common Rules 6-25
6.2.1 Preferences 6-25
6.2.1.1 Select Preferences 6-25
6.2.1.2 User Preferences 6-26
6.2.1.3 Application Preferences 6-28
6.2.1.4 Global Preferences 6-28
6.2.2 Management Ledger Configuration 6-29
6.2.3 Filters 6-30
6.2.3.1 Filter Definition Types 6-30
6.2.3.2 Filter Summary 6-30
6.2.3.3 Creating Filter Definitions 6-32
6.2.3.4 Managing Filter Definitions 6-37
6.2.4 About Expressions 6-38
6.2.4.1 Roles and Functions 6-39
6.2.4.2 Expressions Summary Page 6-39
6.2.4.3 Adding Expression Definition 6-39

6.2.4.4 Managing Expressions 6-40
6.3 Application Specific Rules 6-41
6.3.1 Allocation Specification 6-41
6.3.1.1 Detail Screen 6-44
6.3.1.2 Enhancements added to Allocation Specifiation 6-77
6.3.1.3 Allocation Examples 6-78
6.3.2 Allocation Models 6-91
6.3.2.1 Detail Screen 6-93
6.3.3 Execution History 6-98
6.3.3.1 Navigation in Allocation Execution History 6-100
6.3.4 Ledger Load History 6-111
6.3.4.1 Search Section 6-111
6.3.4.2 Inline Section 6-112
6.3.4.3 Table Section 6-113
6.3.4.4 Ledger Load UNDO Functionality 6-113
6.3.5 Static Table Driver 6-114
6.3.5.1 Navigating in the Detail Screen 6-115
6.3.5.2 Working with Exported Static Table Driver Data 6-123
6.3.5.3 Large Cross Product Static Table Drivers 6-125
6.3.5.4 Using Static Table Drivers 6-126
6.3.6 Lookup Table 6-128
6.3.6.1 Navigation in the Detail Screen 6-130
6.3.7 Lookup Table Driver 6-134
6.3.7.1 Summary and Detail Screens 6-135

7 Operations and Processes

7.1 Scheduler Services 7-1
7.1.1 Accessing Scheduler Services 7-1
7.1.2 User Roles and Functions 7-2
7.1.3 Scheduler Service Dashboard 7-2
7.1.4 Define Batch 7-3
7.1.4.1 Creating a Batch/Batch Group 7-3
7.1.4.2 Editing a Batch/Batch Group 7-5
7.1.4.3 Copying a Batch/Batch Group 7-5
7.1.4.4 Deleting a Batch/Batch Group 7-6
7.1.5 Define Tasks 7-6
7.1.5.1 Adding a Task 7-7
7.1.5.2 Modifying a Task 7-7
7.1.5.3 Define Task Precedence 7-8
7.1.5.4 Deleting a Task 7-8
7.1.6 Schedule Batch 7-9

7.1.6.1 Execute Batch/Batch Group 7-9
7.1.6.2 Adding Pre-Conditions For Batch Group Execution 7-9
7.1.6.3 Edit Dynamic Parameters 7-10
7.1.6.4 Scheduling and Automating Batch/Batch Group Execution 7-10
7.1.6.5 Re-run Batch/Batch Group 7-12
7.1.6.6 Re-start Batch/Batch Group 7-13
7.1.7 Monitor Batch/Batch Group 7-13
7.2 Object Migration 7-14
7.2.1 Migration Object Types 7-15
7.2.2 Accessing Object Export and Object Import Features 7-18
7.2.3 Export Object 7-19
7.2.3.1 Creating Export Definitions 7-19
7.2.3.2 Editing Export Object Definitions 7-20
7.2.3.3 Exporting Object Definition 7-20
7.2.3.4 Viewing Export Object Details 7-20
7.2.3.5 View Object Definition Export Log Details 7-21
7.2.3.6 Downloading Dump File 7-21
7.2.3.7 Deleting Export Object Definition 7-22
7.2.4 Import Object 7-22
7.2.4.1 Creating Object Import Definitions 7-23
7.2.4.2 Editing Import Definitions 7-24
7.2.4.3 Importing Object Definitions 7-25
7.2.4.4 Viewing Import Object Details 7-25
7.2.4.5 Viewing Object Import Log Details 7-26
7.2.4.6 Deleting Import Definition 7-26
7.3 Changing Object Ownership 7-26

8 Reports & Analytics

8.1 Profitability Management Cloud Service Reports & Analytics 8-1
8.1.1 Access Business Intelligence (BI) Reports 8-1
8.1.2 SQL Query Browser 8-2
8.1.3 Creating Adhoc Reports and Analysis 8-7
8.1.3.1 Amend Out-of-the-Box Reports 8-7
8.1.3.2 Ad-hoc Analysis Folder 8-9
8.1.3.3 Working with Out-of-the-Box Subject Area 8-10
8.1.4 Raw Data Analysis 8-11
8.1.4.1 Staging Instrument Data 8-14
8.1.4.2 Staging Instrument Supplementary Data 8-21
8.1.4.3 Staging Ledger Data 8-25
8.1.4.4 Staging Transaction Summary Data 8-32
8.1.4.5 Processing Instrument Data 8-36

8.1.4.6 Processing Instrument Supplementary Data 8-43
8.1.4.7 Processing Ledger Data 8-47
8.1.4.8 Processing Transaction Summary Data 8-53
8.1.5 Operational Analysis 8-57
8.1.5.1 Dimensions Registry 8-57
8.1.5.2 Currency Rates 8-67
8.1.5.3 Data Quality Checks 8-70
8.1.5.4 File Uploads 8-76
8.1.5.5 Groups and Roles 8-78
8.1.6 Data Insights 8-82
8.1.6.1 PFT Data Insights 8-82
8.1.7 Processing Analytics 8-99
8.1.7.1 Multi-Period Analysis 8-99
8.1.7.2 Single Period Analysis 8-103
8.1.8 Processed Data Insights 8-107
8.1.8.1 Ad-hoc Data Analysis 8-107
8.1.8.2 Financial Statements Analysis 8-116
8.2 Dashboard 8-130
8.2.1 Top 10 Allocation Run Times 8-130
8.2.2 Top 10 Allocation Run Times – Current period Analysis 8-132
8.2.3 Pinned Allocation Models and Pinned Allocation Rules 8-133

9 Technical Documents

1

About This Content

This guide provides information on the Oracle Financial Services Profitability Management Cloud Service (OFS PFT CS).

Audience

This guide is intended for the users of Oracle Financial Services Profitability Management Cloud Service (OFS PFT CS).

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.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Resources

See these Oracle resources:

- Oracle Financial Services Profitability and Balance Sheet Management Cloud Service
- Oracle Financial Services Profitability Management Cloud Service
- Licensing Information User Manual

Conventions

The following text conventions are used in this document.

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	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.

2

Getting Started

This chapter covers the Oracle Cloud, followed by Profitability Management Cloud Service and the instructions to get started with the cloud service, and instructions to use the Admin Console.

Topics:

- Getting Started with Oracle Cloud: Oracle Cloud is the industry's broadest and most integrated cloud provider, with deployment options ranging from the public cloud to your data center. Oracle Cloud offers best-in-class services across Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS).
- Profitability Management Cloud Service: Profitability Management Cloud Service (PFTCS) under Profitability and Balance Sheet Management Cloud Service (PBSMCS) helps Institutions measure and manage profitability at the lowest level of detail, the account level, and allows for a rollup of profitability results across any dimension. The application provides robust Allocation functionality supporting both top-down and bottom-up Allocation methodologies and generates multidimensional Profitability Views.
- Admin Console: Use the Admin Console to perform System Configuration and Identity Management. It is a single point of access to manage identity functions and view administrative features such as Metering, Audit Trail Report and other miscellaneous configuration details in the Profitability and Balance Sheet Management Cloud Service (PBSMCS).

2.1 Getting Started with Oracle Cloud

This chapter introduces to the Oracle Cloud, Users and Roles, User Groups, User Management, and Session Time Out configuration.

Topics:

- Welcome to Oracle Cloud
- Managing Application Users
- Managing User Groups
- User Management
- Configuring Session Timeout
- Authenticating for Token Generation

2.1.1 Welcome to Oracle Cloud

Oracle Cloud is the industry's broadest and most integrated cloud provider, with deployment options ranging from the public cloud to your data center.

Oracle Cloud offers best-in-class services across Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS).

2.1.1.1 About Oracle Cloud

Oracle Cloud is one of the few cloud providers that can offer a complete set of cloud services to meet all your enterprise computing needs.

Use the Oracle Infrastructure as a Service (IaaS) offering to quickly set up the virtual machines, storage, and networking capabilities you need to run just about any kind of workload. Your infrastructure is managed, hosted, and supported by Oracle.

Use the Oracle Platform as a Service (PaaS) offering to provision ready-to-use environments for your enterprise IT and development teams, so they can build and deploy applications, based on proven Oracle databases and application servers.

Use the Oracle Software as a Service (SaaS) offering to run your business from the Cloud. Oracle offers cloud-based solutions for Human Capital Management, Enterprise Resource Planning, Supply Chain Management, and many other applications, all managed, hosted, and supported by Oracle.

2.1.1.2 Supported Web Browsers

Oracle Financial Services Cloud Services support the latest version of Google Chrome, Microsoft Edge and Mozilla Firefox.

For more details, see Oracle Software Web Browser Support Policy.

2.1.1.3 Order Oracle Cloud Applications

You can order Oracle Cloud Applications (Software as a Service) offerings by contacting Oracle Sales. After your order is processed, you can then activate your services.

To order a subscription to Oracle Cloud Applications:

1. Go to - Oracle Financial Services Risk and Finance Solutions .
2. Scroll down and select the Cloud Service that you are subscribed to.
3. Review the features and capabilities of the service and read the Datasheet.
4. When you are ready to order, scroll up and click **Request a Demo**.
5. You can either write an email or click **Request Now** to receive a call from Sales.
6. Enter your **Business email**, select the confirmation check box, and click **Continue**.
7. Provide a description and click **Request Now**.

After your interaction with the Oracle Sales team to order the Oracle Cloud Application best suited to your requirements, you will receive an email with a link to activate the service you have ordered.

2.1.2 Getting Started with your Cloud Service

To get started, you must activate the subscribed Cloud Service.

After activating the cloud service, you can log in as an administrator and perform the following tasks.

- Create and Activate New Cloud Account
- Access the Cloud Account

- Access Oracle Identity and Access Management (IAM) Console
- Onboard new application users for the subscribed cloud services.

After the administrator successfully adds an application user, they can log in and activate their cloud account and use the subscribed cloud services provisioned by the administrator.

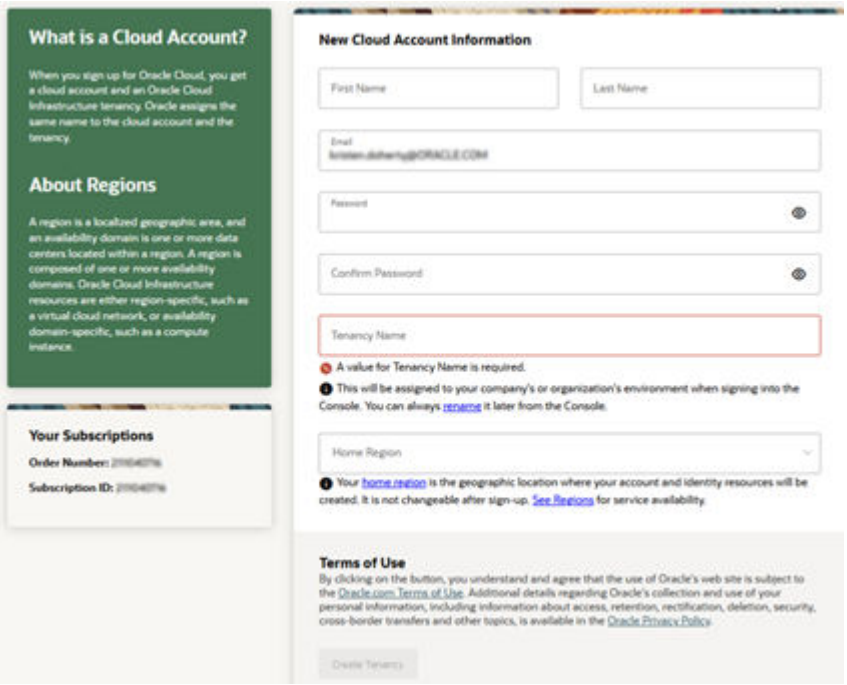
2.1.2.1 Create and Activate New Cloud Account

After you subscribe to the cloud service, you will receive a **Welcome to Oracle Cloud** email with details to create and activate your cloud account.

To create and activate a new cloud account:

1. Click **Create New Cloud Account** in the email.
2. Complete the **New Cloud Account Information** to sign up.

Figure 2-1 New Cloud Account Information page



3. Enter the following details:
   - **First Name** and the **Last Name** of the person who will be the cloud administrator.
   - **Email** address of the person who will be the cloud administrator. Instructions to log into the new Oracle Cloud Account will be sent to this email address.
   - **Password** to access the new cloud account.
   - **Tenancy Name**: New **Tenancy Name** to be associated with the cloud account.

> **Note:**
>
> You cannot modify the tenancy name after it is created. Hence, ensure to provide a valid tenancy name, based on your organization's requirements and naming conventions.

- **Home Region**: Select the **Home Region**, where the account is located. Check the service availability before selecting the home region.
  For assistance regarding home region selection, contact Oracle support. Existing customers have to ensure that the identity resources are located in the home region.

> **Note:**
>
> You can subscribe to additional regions but you cannot modify the home region, after provisioning your tenancy.

4. Click **Create Tenancy** to access the **New Cloud Creation Confirmation** page.

   After successful activation, the cloud account administrator will receive a **Get Started Now with Oracle Cloud** email.

2.1.2.2 Add to an Existing Oracle Cloud Account

If you already have a cloud account associated with your administrator user name, you can add the newly subscribed cloud service to that account.

To add an existing Cloud account:

1. In the welcome email, click **Add** to add an existing cloud account.
2. Perform the steps as mentioned in the Access the Oracle Cloud Infrastructure Identity and Access Management (IAM) console.

2.1.2.3 Accessing the Cloud Account

An Administrator can access the Cloud Account activated and associated with their email address.

After your new cloud account is created and activated, you will receive a **Get Started Now with Oracle Cloud** email, to the email address provided while creating the account.

To access your Cloud account:

1. In the **Get Started Now with Oracle Cloud** email, click **Sign In**.
2. Enter the **Tenancy** name and click **Continue**.
3. Enter the **Username** and **Password** to log in to the **OCI Console** .

   Use the same **Username** and the **Password** that you provided during activation setup.
4. After successful login, proceed with the multi-factor authentication. Select the configured authentication mode and enter the OTP generated using the Oracle Mobile Authenticator application.

   Once the MFA is successfully completed, you can access the **Environment Page**.

2.1.2.4 Create an Environment

After logging into the Oracle Cloud Infrastructure Console, an Administrator can create one or multiple environments/instances for different user groups.

To create an environment/instance:

1. Log in to **Oracle Cloud Infrastructure Console** (OCI).

You can view the list of all the environments (instances) provisioned for the one or multiple cloud applications, with the following details:

- **Name**: The cloud application's instance name.
- **Type**: The instance type.
- **Life cycle status**: The instance status.
- **Region**: The region from where the specific instance is active.
- **Application URL**: The URL to access the instance.

2. From **My Applications**, click the application in which you want to create an environment. Example: Oracle Financial Services Crime and Compliance Management Anti Money Laundering.
3. On the **Overview** page, click **Environments**.
4. From the **Compartments** drop-down list, select the compartment in which you want to create an environment.
5. Click **Create**, to access the list of cloud services to which the customer has subscribed and the region from where these services are operated.
6. (Optional). Select the **Region** to host the OCI environment/instance, from the drop-down list.

   If you are not sure about the region, contact My Oracle Support (MoS).

   > **Note:**
   >
   > You can select the region only for the first environment/subscription and for the additionally added instances, the region cannot be modified.

7. Enter the following **Environment Details**, and click **Create**.
   - **Name**: The name of the new environment or instance.

     > **Note:**
     >
     > You cannot modify the environment name after the environment is created. Hence, ensure to provide a valid environment name, based on your organization's requirements and naming conventions.

   - **Instance type**: Select one of the following instances:
     - **Production**: If the environment is used for Production activities.
     - **Non-production**: If the environment is used for testing and development purposes. For example, a sandbox environment.
   - **Admin email**: The administrator email ID used to log in to the Cloud Console. You can also enter a different email ID that needs to be part of the cloud tenancy. For more details, see Managing Users.
   - **Admin first name** and **Admin last name**: The first and last names of the Administrator.

   The environment details are added to the Oracle Cloud Infrastructure Classic Console under the **Environments** tab (LHS menu). It may take a few hours for the status to change

to Active. If there are any issues, you can raise a service ticket with My Oracle Support (MoS).

After the environment is set to **Active**, click the environment name to view the **Environment details**. Click the Service console URL under **Environment Information** to create users and groups.

2.1.2.5 Access Oracle Identity and Access Management

Oracle Cloud Infrastructure Identity and Access Management (IAM) provides identity and access management features such as authentication, single sign-on (SSO), and identity life cycle management for Oracle Cloud as well as Oracle and non-Oracle applications, whether SaaS, cloud-hosted, or on-premises. Employees, business partners, and customers can access applications at any time, from anywhere, and on any device in a secure manner.

IAM integrates with existing identity stores, external identity providers, and applications across cloud and on-premises to facilitate easy access for end users. It provides the security platform for Oracle Cloud, which allows users to securely and easily access, develop, and deploy business applications such as Oracle Human Capital Management (HCM) and Oracle Sales Cloud, and platform services such as Oracle Java Cloud Service, Oracle Business Intelligence (BI) Cloud Service, and others.
Administrators and users can use IAM to help them effectively and securely create, manage, and use a cloud-based identity management environment without worrying about setting up any infrastructure or platform details.

To add users to your Cloud Services, navigate to the **Oracle Identity and Access Management (IAM)** Console.

To access the **IAM** Console:

1. Log in to Cloud.Oracle.com, to view all the details pertaining to your cloud order.

   Access the service link from the console to start using your subscriber cloud service.
2. Enter the **Cloud Account Name** and click **Next** to access the **IAM Console**.
3. Click **Change tenancy** option if you want to use a different tenancy.
4. Ensure that the displayed identity domain matches the expected value.

> **Note:**
>
> Cloud environments are created under the **Default** identity domain. If you need to assign your environment to a different identity domain, raise a Service Request.

5. Log in with your **Username** and **Password**.

As an Administrator, you can create and manage users with different access rights to the Cloud Service.
For example, the IAM Administrator has superuser privileges for an Oracle Identity and Access Management Domain. This administrator can create users, groups, group memberships, and so on.

2.1.2.6 Activate Application User Account

A user provisioned by their administrator can use the specific cloud services they have subscribed to.

When an administrator completes provisioning an application user, the user receives an account activation email from Oracle.

To log in and activate your application user account:

1. Open the email received from Oracle and review the information about your service in the email.
2. Click **Activate Your Account**. You will be prompted to change your password on the initial log in.
3. Enter your new credentials in the **Reset Password** window to activate your account. After the password is successfully reset, a **Congratulations** message is displayed.
4. Access the Application URL shared by the administrator.
5. Enter your credentials to sign in to your account and access the **Welcome Page**.

2.1.3 Managing Application Users

An application user can access the subscribed cloud services, based on the roles and groups assigned to them

An administrator can create application users using IAM. They can also batch import several users using a `.CSV` file.

After users are created, they are synced from IAM to the Cloud Service.

You can map the application users to existing groups based on the roles that they require and their access levels. The access level provided to an application user is based on the following:

- **Groups**: Groups are seeded (available out-of-the-box) by your cloud service. Administrators can also create new groups in IAM. After groups are created, they are synced from IAM to the cloud service. You can map the groups to roles using the subscribed cloud service.
- **Roles**: Roles are seeded by the cloud service. Administrators can also create new roles using the cloud service and assign existing functions to these new roles.
- **Functions**: Functions are seeded by the cloud Service. Administrators cannot create new functions; however, they can use the existing functions.

2.1.3.1 User Summary- Application Users

View the list of existing application users in the User Summary.

You can view the details of a user and map the user to one or more user groups.

- To view the **User ID** and **Username** of the selected User - Select the **Username** in the **User Summary** page and select **Details**.
- To search for a specific User, type the first few letters of the required **Username** in the **Search** box and click **Search**.

- Using the navigation buttons at the bottom of the summary page, you can browse to the different pages. Also, you can enter the number of entries to be listed on a single page in the **Records** box or use the buttons to increase or decrease the number of entries.
- Enter the page number in the **View Bar Control** and jump to the required page.

2.1.3.2 Creating New Application Users

After you log in to the IAM console, the first task is to create additional user accounts.

You should assign specific user groups to the user accounts that you are creating. There are seeded user groups available with the respective services, users must be mapped to one or more of the user groups, depending on the role that they perform.

For example, you can create a user for each member of your team. Each member can then sign into the account with their credentials. You can also assign each user to specific user groups and apply specific security policies or roles to each group.
You can create the users and map the users to groups for your service. After creating the users, the users will receive a Welcome email. The users must activate their accounts and enter a new password to access the services.

To create users in the IAM Console:

1. In the IAM Console, select **Domains** (Identity domain) to view the list existing domains.
2. Click the required **Domain Name**, to access the **Domain Details** page.
3. In the left pane, click **Users** and select **Create user**, to proceed with the user creation.
4. Enter the following details:
   - **First Name**, **Last Name** and a valid **Username** and the **Email ID**.

   > **Note:**
   >
   > – The username should be alphanumeric and cannot exceed 20 characters. You can enter only hyphen (-) and underscore (_) as special characters.
   >
   > – Uncheck the **Use the email address as the username** check box, as you can only set the username as the login ID and currently setting the email address as the login ID is not supported.

5. Select the user groups according to your user-specific groups or access, in the **Groups (Optional)**.

   > **Note:**
   >
   > After a user logs in to a specific cloud service, the user to user-group mapping created in the **IAM Console** will onboard into the master and mapping tables. Later, if you deselect (remove) a user from a group in **Assign User to Groups** after provisioning, ensure that you also unmap the user from the corresponding user-group in the **Admin Console**. This is a mandatory step to complete the unmapping process.

6. After entering the required information, click **Create** to create and add the new user to the User Summary.

You can also batch import several users using a `.CSV` file.

2.1.3.3 Creating a New User Group

Create groups to manage user access to applications and resources.

To create a user group :

1. In the IAM Console, click **Profile** and select **Identity Domain**.
2. In the Identity Domain left pane, click **Groups** and select **Create group**.
3. Enter the **Group Name** and the **Group Description**.
4. Select **User can request access**, to allow users to request access to this group.
5. Check the check box adjacent to each user to add that user to the group.
6. Click **Create** to create the new user group with the selected users.

After creating the user group, you must assign various permissions to the group, using one of the following methods:

- Write at least one policy to give group permission to either the tenancy or a compartment. While writing the policy, specify the group using the unique group name or the group's OCID.
- Assign the group to an application.

2.1.3.4 Assign Groups to Users

Assign a specific group to a user, based on the roles required for the user.

Ensure to create a group, before assigning users to the group.

To map a user to a group using the IAM Console :

1. In the IAM Console, select **Domains** (Identity domain) to view the list existing domains.
2. Click the required **Domain Name**, to access the **Domain Details** page.
3. Click a specific **User name** to view the user details and assign a group to that particular user.
4. In the left pane, click **Groups** to access the list of groups associated with a user.
5. In the **Groups** pane, click **Assign User to Groups** to view the list of available groups.
6. Check the check box adjacent to each group, to assign the user to that group.
7. After selecting all the required Groups, click **Assign user**.

   The user is assigned to the selected groups. You can access the list of groups associated with a user, in the respective **User Details** page.

   To dissociate an user from a group, select the group and click **Remove User from the Group**.

2.1.3.5 Bulk Import Application Users

As an administrator, you can batch import user accounts using a `.CSV` file.

> **Note:**
>
> Before importing the user accounts, create a `.CSV` file that is properly formatted for the import.

To import user accounts :

1. In the IAM Console left pane, click **Users** and select **More Actions** and select **Import Users**.
2. Click **Browse** to locate and select the `.CSV` file containing the user accounts to import.

   > **Note:**
   >
   > Click **Download sample file** in the dialog box to download a sample file and perform the accounts upload.

3. Verify that the path and name of the selected `.CSV` is updated in the **Select a file to import**, and click **Import**.

   > **Note:**
   >
   > Oracle IAM cannot import a user account if a mandatory value such as user's first name, last name, or username, is missing. In such cases, Oracle IAM will skip the incomplete account and proceed to the next account in the `.CSV` file.

When Oracle IAM evaluates and imports the user accounts, the imported accounts are updated in the **Jobs**. You can also get information related to the successful/incomplete imports if the import was not completed due to system errors.

2.1.4 Managing User Groups

User groups are seeded (available out-of-the-box) by the cloud service. Groups are mapped to roles using the cloud service by the same user that was created using IAM.

Administrators can also create new groups in IAM. After groups are created, they are synced from IAM to the cloud service. You can map the groups to roles using the subscribed cloud service.

2.1.4.1 Map Application with the User Groups

After creating a group, you can map the required applications with the group.

To map the application to a user group, log in to IAM and follow these steps:

1. Go to the Navigation menu in the enter the **Domains** in the Search bar to view the **Domains** list.

2. Select the **Default Domain** and then from the LHS menu, select **Oracle Cloud Services**, to view the list of Cloud Services.
3. Select the Cloud Services you are subscribed to (Syntax: **<Cloud_service_name>xxxx-prd** and **<Cloud_service_name>xxxx-nprd**, where **Description** is mentioned as your registered cloud service).
4. From the LHS menu, select **Users** and click **Assign Users**.
5. Select the user and click **Assign**.

2.1.4.2 Map Application with the Groups

After creating a group, you can map the required applications with the group.

To map the application to a User Group, log in to IAM and follow these steps:

1. Search for **Domain**.
2. Select the **Default Domain** and then from the LHS menu, select **Oracle Cloud Services**.

   The screen displays the various Oracle Cloud Services.
3. Select the Cloud Services you are subscribed to like, **<Cloud_service_Name> xxxx-prd** and **<Cloud_Service_Name> xxxx-nprd**

   Where **Description** is mentioned as your registered Cloud Service.
4. From the LHS menu, select **Groups**.
5. Click **Assign Groups**, and then select the relevant **Group**.
6. Click **Assign**.

2.1.4.3 Map Users to Groups

Log in to IAM as an administrator, and map users to user groups.

To map a user to a user group:

1. Select the **User Name** in the **Users Summary**.
2. Select **Mapped Groups**.
3. Select the **User Group Name**.

> **Note:**
>
> To select a user group, select the check-box corresponding to the user group. To select all user groups displayed on the page, select the check-box marked **Select All**.

4. Click **New Mapping** to map the user to the selected user group.

   Or

   Click **Unmap** to remove the user group-role mapping.

   If you need to authorize an unmap request, refer to Unmap User from Group.

> **Note:**
>
> User-group mapping changes from IAM will take some time to sync with your Cloud Service. If these changes are made during the active user session, then it will be reflected on the next login.
> After a user signs into the cloud service, the user to user-group mapping created in the IAM Console will onboard into the master and mapping tables. If you unmap a user from a group in the Admin Console, navigate to the associated console and open **Assign User to Groups**. Deselect the user corresponding to the user group and click **Finish**. This is a mandatory step to complete the unmapping process.
>
> For more information, refer to Unmap User from Group.

After you click **New Mapping**, the list of user groups you can map the user to appears in the **Available Groups Summary**.

5. Select a **User Group**.

> **Note:**
>
> If the logged-in user has both administration and authorization entitlements, an authorization view toggle button is available. Enable this button to complete the authorization.

6. Click **Map**.

> **Note:**
>
> If the logged-in user has both administration and authorization entitlements, an authorization view toggle button is available. Enable this button to complete the authorization.

2.1.4.4 Unmap User from Groups

Unmap a user from a specific group to revoke the associated functions.

Log in to IAM as an administrator to authorize and unmap a user from a specific user group.

To authorize the unmapping of a user from a user group:

1. Click **Unmapped Groups**.
2. Click the **User Group Name** to select the User Group.
3. Click **Authorize** or **Reject** to approve or reject an unmapping request.

2.1.4.5 Creating a New User Group

Create groups to manage user access to applications and resources.

To create a user group :

1. In the IAM Console, click **Profile** and select **Identity Domain**.

2. In the Identity Domain left pane, click **Groups** and select **Create group**.
3. Enter the **Group Name** and the **Group Description**.
4. Select **User can request access**, to allow users to request access to this group.
5. Check the check box adjacent to each user to add that user to the group.
6. Click **Create** to create the new user group with the selected users.

After creating the user group, you must assign various permissions to the group, using one of the following methods:

- Write at least one policy to give group permission to either the tenancy or a compartment. While writing the policy, specify the group using the unique group name or the group's OCID.
- Assign the group to an application.

2.1.5 User Management

During implementation, you prepare your Oracle Application's Cloud Service for the Service Users. The decisions made during this phase determine how you manage users by default. Most of these decisions can be overridden. However, for efficient User Management, Oracle recommends that you configure your environment to reflect both enterprise policy and support most or all users.

For more information, see the View List of Application Users and User Roles and Privileges.

2.1.5.1 Application Users

During implementation, you can use the Create User task to create Test Service Users. By default, this task creates a minimal person record and a user account. After implementation, you should use the Hire an Employee Task to create Service Users. The Create User Task is not recommended after the implementation is complete.

For more information, see Create Application Users.

2.1.5.2 User Roles and Privileges

Oracle Financial Services Profitability Management Cloud Service (PFTCS) Users are assigned roles through which they gain access to functions and data. Users can have any number of roles.

The following table shows User Personas and the tasks they can perform:

Table 2-1 User Roles and Privileges

IDCS Administrator	PFTCS Application Administrator	PFTCS Business User
Create Users	Map Users to OOB User Groups	Manage PFTCS
Map Users to OOB User Groups	Create User Groups and Roles	Configure Pipelines
Create User Groups	Map Users to User Groups	
	Map Roles to User Group	
	Map Functions to Roles	

2.1.5.2.1 Role Based Access Control

The users are assigned various tasks based on the Role-based access control set for each role.

The following table provides examples of role-based access.

Table 2-2 Examples of Role Based Access

Role Assigned to a User	Functions which Users with this Role can Perform	Set of Data which Users with the Role can Access when performing the Function
Application Administrators	Perform Application Administrator activities	User Group with Administration Roles across all Service Features
Business Users	Access to the Application to perform tasks	User Group with Business Tasks' Roles across all Service Features

2.1.5.2.2 User Roles and Activities

The User Roles are seeded in the respective Cloud Service to facilitate the activities expected from the users mapped to the seeded User Groups:

Profitability and Balance Sheet Management

- Profitability Application Administrator
- Profitability Application Analyst
- Profitability Application Auditor
- PFT BI Data Steward
- PFT BI Data Steward
- PFT BI Analyst
- PFT BI Analyst
- PFT BI Auditor
- PFT BI Auditor
- PFT BI LOB Head

In addition to this, Custom User Roles can be created and managed as per requirement.

The user roles Profitability Application Administrator, Profitability Application Analyst, and Profitability Application Auditor are required to access the main application for view, edit and other purposes, based on the User Persona accessing the same. An Analyst User Persona can view all PFT Screens and Edit-specific Screens. Similarly, an Admin Persona can view and edit all PFT Screens. These different Persona tasks are facilitated by the User Roles. Thus, these three User Roles facilitate the accesses and activities for the corresponding User Groups that are mentioned in the below table.

The User Roles of - PFT BI Data Steward, PFT BI Analyst, PFT BI Auditor and PFT BI LOB Head - are seeded BI Roles to be used for the users to access the Analytics Menu in the PFT Application. These four roles are created to facilitate Analytics access for four different types of User Persona. These roles can be mapped to any User Group to provide the Analytics access to users under the User Group.

2.1.5.2.3 User Persona and Analytics Menu Access Details

The following table provides the information on the User Persona and access within Analytics menu.

Table 2-3 User Persona and Analytics Menu Access Details

IDCS User Group Code	Mapped Role Code	User Access Type	Persona	Analytics Application Role
UGPFTBIADMIN	PFTBIADMIN	R/W	Data Steward	DV Content Author
UGPFTBIANALYST	PFTBIANALYST	R/W	Application Analyst	DV Content Author
UGPFTBIAUDIT	PFTBIAUDIT	R	Application Auditor	DV Consumer

Table 2-4 Analytics Menu Access Privileges

Level 1 Menu	Level 2 Menu	Level 3 Menu	Level 4 Menu	Persona
Profitability Management	Analytics	Home Page		Data Steward, Application Analyst, Application Auditor
		SQL Query Browser		Data Steward, Application Analyst
		Raw Data Analysis		Data Steward, Application Analyst, Application Auditor
		Operational Analysis	Dimensions Registry	Data Steward, Application Analyst, Application Auditor
			Currency Rates	Data Steward, Application Analyst, Application Auditor
			Data Quality Checks	Data Steward, Application Analyst, Application Auditor
			File Uploads	Data Steward, Application Analyst, Application Auditor
			Groups and Roles	Data Steward, Application Analyst, Application Auditor
		Data Insights		Data Steward, Application Analyst, Application Auditor
		Processed Data Insights	Ad-hoc Data Analysis	Data Steward, Application Analyst, Application Auditor
			Financial Statements Analysis	Data Steward, Application Analyst, Application Auditor
		ProcessingAnalytics	Allocation Performance Analysis	Data Steward, Application Analyst, Application Auditor

2.1.5.2.4 Persona, User Group, Access Type and Role Code Mapping

This table lists the reports that the Data Steward, Application Analyst, and Application Auditor personas can access.

Table 2-5 User Persona and Analytics Menu Access Details

Home Page	
SQL Query Browser	
Raw Data Analysis	• Staging Instrument Data • Staging Instrument Supplementary Data • Staging Ledger Data • Staging Transaction Summary Data • Processing Instrument Data • Processing Instrument Supplementary Data • Processing Ledger Data • Processing Transaction Summary Data
Operational Analysis	• Dimensions Registry • Currency Rates • Data Quality Checks • File Uploads • Groups and Roles
Data Insights	
Processing Analytics	Allocation Performance Analysis
Processed Data Insights	• Ad-hoc Data Analysis • Financial Statement Analysis
Balance Reconcilication	

2.1.5.2.5 User Groups and Activities

The following table provides the information on the User Groups and related activities.

Table 2-6 User Groups and Activities

User Groups	Activities
Identity Administrator Group	• View Object Storage • View OAuth Credentials • Perform Identity and Access Management Operations
IDCS Administrator	• Create Users • Map Users to the Instance

Table 2-6 (Cont.) User Groups and Activities

User Groups	Activities
Profitability Application Analyst	• Set User and Application Preferences • Set Setup Parameters • Currency and Rate Management • Dimension Management • Data Management: Metadata and Data Loaders • Data Model Extension • Create Filters and Expressions • Create Table Drivers • Create and Execute Allocation Rules • Create and Execute Allocation Models • Schedule Batch Processes • View Allocation Executions • View Profitability Reports
Profitability Application Auditor	• View privileges for all application-specific modules: • Review/Analyze Results • Review Process Logs • View Reports

In addition to this, Custom User Groups can be created and managed as per requirement.

2.1.5.2.6 User Group and User Role Mapping

The following table lists the seeded mapping of User Groups to the User Roles.

Table 2-7 User Group and User Role Mapping

User Group	Mapped User Role
Profitability Application Administrator	Profitability Application Administrator
Profitability Application Analyst	Profitability Application Analyst
Profitability Application Auditor	Profitability Application Auditor

The BI User Roles of PFT BI Data Steward, PFT BI Analyst, PFT BI Auditor, PFT BI LOB Head are not mapped OOTB to any seeded User Group but can be mapped to any User Group to provide the Analytics access to users under than User Group. Customers can custom User Groups and map the seeded or Custom User Roles as it suites the requirement.

2.1.6 Configuring Session Timeout

Session timeout automatically signs you out of a logged in session after a set time period, for various reasons such as inactive session for a specific time frame.

After you complete your tasks, you can sign out of your application. However, sometimes you might get automatically signed out due to session timeouts.

When you sign in using your credentials, you are authenticated to use the application, and a session is established. But, for security purposes, your session is configured to be active for a predefined duration, which is called the session timeout period. Your sessions can expire due to various reasons, such as an inactive session for a specific time period. In such cases, you

are automatically signed out of the application. Your timeout periods may vary on certain pages. For example, you may observe a longer timeout period on pages that automatically refresh or user portal/tabs that open in separate windows or tabs.

The various session timeouts and the configuration details are as follows:

Timeout Type	Description	Configurable	Timeout Duration
Session Lifetime Timeout	After authenticating to the application, your current session remains active for a predefined duration, referred to as the session lifetime timeout period. Your session ends after this period, even if you're using the application.	Yes	8 Hours (Default value)
Inactive Session Timeout	After authenticating to the application, if your session is idle or inactive for a specific time, the System automatically terminates the session, and you are signed out of the session.	No	60 Minutes
Browser Inactivity Timeout	After authenticating to the application, if your browser session is idle or inactive for a specific time, the System automatically terminates the session, and you are signed out of the session.	No	60 Minutes

2.1.6.1 How to configure Session Lifetime Timeout?

You can configure the Session Lifetime Timeout using your Identity Domain Settings in OCI Console.

Ensure that you have the Security Administrator Role mapped to access and modify the settings.

To configure the session timeout:

1. Log in with your **Security Administrator Account**.
2. Navigate to the Domain page. Click **Settings** and select **Session Settings**.
3. Specify the **Session Duration** under **Session Limits**. Enter the required value. By default, this is set to 480 Minutes.

Figure 2-2 Session Settings

2.1.7 Authenticating for Token Generation

An Authentication token is required to invoke an API to generate the File Upload/Download PAR URL. The Authentication Process for token generation, utilizes cURL Commands in a CLI Tool to generate the access token and invoke REST APIs.

The Authentication Token is generated through the OAuth Client ID and Secret Credentials created in IAM during Provisioning. The Authentication Token does not require that you log in to the required Cloud Service to invoke the REST APIs from external applications.

Ensure that you have the appropriate log-in credentials to access the required Cloud Service and the appropriate roles to perform specific operations using the API Resources. Below is a list of authentication steps, with subsequent sections offering detailed information:

1. Download application certificate
2. Get the OAuth Client ID and Client Secret
3. Generate the access token
4. Generate refresh token
5. Invoke API using the access token

2.1.7.1 Download the Application Certificate

The Application Certificate is required for verification purposes when you use cURL commands.

You may choose not to download the certificate if you plan to turn off the cURL Certificate Verification and use an insecure connection (if you add the `--insecure` Flag to the cURL command).

To download the Application Certificate:

1. Log in to your Cloud service.
2. Click **View site information/Verified by** in the Browser URL Address Bar.
3. Select **More information**, to view the certificate.
4. Click **View Certificate** and then click **PEM(cert)** to download the certificate.

2.1.7.2 Get the OAuth Client ID and Client Secret

An OAuth Cliend ID and Client secret are required to generate an access token.

To get the OAuth Client ID and Client Secret:

1. Enter the **Oracle Identity and Access Management (IAM)** URL in the browser's Address bar to access the **Oracle Cloud Account Sign In** page.
2. Log in to **IAM** portal.
3. Click **Navigation** to view a list of available functions.
4. Select **Oracle Cloud Services**.

   For more information, see Access Service Consoles from **Administering Oracle Identity Cloud Service**.
5. From the Oracle Cloud Services, select the required Cloud Service (in **<Cloud_service_name> <tenant-id>** format) from the list. For example, the cloud service name - **AMLCS tenant-prd**
6. Click the **Configuration** tab.

   The Client ID and Client Secret Details are displayed in the General Information section.
7. Copy the `Client ID` and `Client Secret`.
8. Open a CLI Tool.
9. Proceed to generate the access token.

You can also get the OAuth client ID and client secret using Admin Console.

2.1.7.3 Generate the Access Token

Access token is required to invoke API and you can generate an access token using cURL commands.

To generate the Access Token, add the Client ID, Client Secret, User Name, and Password using cURL Commands in the CLI Tool. You can use an insecure connection (if you add the `--insecure` / `-k Flag` to the cURL command). The following is an example:

```
curl -k -i -H "Authorization: Basic  < Base64 Encoded
      Outh Cred >" -H "Content-Type: application/x-www-form-
urlencoded;charset=UTF-8"
      --request POST https://<iam_tenant>:443/oauth2/v1/token -d

"grant_type=password&scope=urn:opc:idm:__myscopes__+offline_access&username=<u
serid>&password=<Password>"
```

Sample Code

```
curl -k -i -H "Authorization: Basic
YWFpdGVzdGRldjEwMDEtcHJkX0FQUElEOjQyYjJlYWVlLTY1OGEtNDgzYi1hMWI2LTBlYzU0MzBmYW
QwNQ==" -H "Content-Type: application/x-www-form-urlencoded;charset=UTF-8" --
request POST https://
iam-0cb0c2b3ba624afca67467fd5eb9db49.identity.c9dev2.oc9qadev.com:443/
oauth2/v1/token -d
"grant_type=password&scope=urn:opc:idm:__myscopes__+offline_access&username=cn
eadmin&password=Password@12345"
```

After generating the Access Token, invoke the API as shown in the following section.

> **Note:**
>
> The Access token expiry (in seconds) is configurable and can be set at the time of generating the access token. In the preceding example, it is set to 3600 seconds ~ 1 hour. By default, the expiry is set to 3600 seconds ~ 1 hour. You can configure this to a value of your choice up to a maximum value of 31536000 seconds ~ 1 year.

The token is sent as a response. Store the token in a secure location.

Sample Access Token (Truncated example)

```
{"access_token":"eyJ4NXQjUzI1NiI6IlF5azRtb3pIakhuQjJoQnVWdmZXZUpVeVZrNHhUdWd6a
WpHSC1pV21xb1EiLCJ4NXQiOiJDRFhHYVlWZXI3STVhQ1l
...
...
DB_be0Rtw1aMxFYg8Ft0VaK14wOVFGhgg1Cr6GiNvbgeYRG5uwgJGqw","token_type":"Bearer"
,"expires_in":3600,"refresh_token":"AgAgYjA1OGVlMjJiMWY2NGU3YWFkM2NjZWNlOTc2Mj
NiNDgIABBmZRHXpaHil2VBXkevFX-
iAAAAMMq9uQDo86eVVVisw3kYn80iX8qRJ2m7hMLmMAh1dY9Wgy-ESu8WYzdTBXOsnwHr7A==}
```

2.1.7.4 Generate the Refresh Token

Refresh tokens are used to generate access tokens for invoking APIs.

To generate a Access token using Refresh token, use the following Curl command. You can use an insecure connection (if you add the `--insecure` / `-k` flag to the cURL command). The following is an example:

```
curl -k -i -H "Authorization: Basic <base64Encoded clientid:secret>" -H
"Content-Type:
        application/x-www-form-urlencoded;charset=UTF-8" --request POST
        https://<IdentityDomainURL>/oauth2/v1/token -d

"scope=urn:opc:idm:__myscopes__&grant_type=refresh_token&refresh_token=<refres
h_token>"
```

Sample Code

```
curl -k -i -H "Authorization: Basic

cWppMHBkLXByZF9BUFBJRDplZjFjMTVmZi1lZDBiLTQxNmItYTFmYy0wNjhlYzM5NmUxM2Y=" -H
        "Content-Type: application/x-www-form-urlencoded;charset=UTF-8" --
request POST
        https://<IdentityDomainURL>/oauth2/v1/token -d

"scope=urn:opc:idm:__myscopes__&grant_type=refresh_token&refresh_token=AgAgYjA
1OGVlMjJiMWY2NGU3YWFkM2NjZWNlOTc2MjNiNDgIABBmZRHXpaHil2VBXkevFX-
iAAAAMMq9uQDo86eVVVisw3kYn80iX8qRJ2m7hMLmMAh1dY9Wgy-ESu8WYzdTBXOsnwHr7A=="
```

Sample Refresh Token (Truncated example)

```
{"access_token":"eyJ4NXQjUzI1NiI6IlF5azRtb3pIakhuQjJoQnVWdmZXZUpVeVZrNHhUdWd6a
WpHSC1pV21xb1EiLCJ4NXQiOiJDRFhHYVlWZXI3STVhQ1l...
...
...
token_type":"Bearer","expires_in":3600,"refresh_token":"AgAgYjA1OGVlMjJiMWY2NG
U3YWFkM2NjZWNlOTc2MjNiNDgIABA4t8V_dYVyc5lOuKezofTUAAAAMJrpmKRhDWf3-
ejCreU8_Po5Bb95srwUDDs5cV1gT-x26twbAfp_ffMCiEgjqGeDNw==",}
```

2.1.7.5 Invoke the API using the Access Token

After creating an access token using OAUth Client ID and Client secret, you can invoke the Specific API.

To invoke the API using the generated Access Token, refer to the following example executed using cURL Commands in the CLI Tool:

```
curl -iL -H "Authorization: Bearer <access token>" -H "Content-Type:
<content_type>" -d "<request_body>" --cacert <certificate(.pem)> -X
<http_verb> <api_url>

curl -iL -H "Authorization: Bearer <AUTH_TOKEN>"

-H "Content-Type: application/json" -d "{\"type\":\"files\",\"data\":
[{\"fileName\":\"testtoken\",\"mimeType\":\"text/plain\",\"fileSize\":

123}]}" --cacert outcert.pem -X POST https://<OCI-URL>/<TENANT><APP_ID>/dsa/
utils/getObjStoreParUrl
```

2.2 Profitability Management Cloud Service

Profitability Management Cloud Service (PFTCS) under Profitability and Balance Sheet Management Cloud Service (PBSMCS) helps Institutions measure and manage profitability at the lowest level of detail, the account level, and allows a rollup of profitability results across any dimension. The application provides robust allocation functionality supporting both top-down and bottom-up Allocation Methodologies and generates multidimensional Profitability Views.

2.2.1 Key Features

The Key Features in the Profitability Management Cloud Service are as follows:

- **Support for both top-down and bottom-up Allocation Methodologies**
  PFTCS supports top-down Allocations from Management Ledger to Customer Accounts to Transaction Summary levels, and also supports bottom-up Allocations from Transaction Summary to Customer Accounts to the Management Ledger Level.
- **Source aligned Data Structure with Instruments, Accounts, Transactions, Ledger, and so on.**
  The Data Structure is designed to support ingestion of Data each different Financial Instrument wise, be it Customer Accounts Data or Customer Transaction Data.
- **New Registration UI is provided OOTB to configure your Working Data Model over the Physical Placeholders**

The PBSMCS Data Model comes with additional Placeholders for Columns, Dimensions, and Ledger Tables. We are providing domain Based Placeholder Columns, Placeholders for OFSAA Key Processing Dimensions and Simple Dimensions, and five Placeholder Management Ledger Tables in addition to the regular Management Ledger Table.

- **New modes of Member Selection for your Allocation Rule Definitions**
  We offer you four modes of Dimension Member selection in your Source/Driver/Outputs Tabs in Allocation Specification Detail UI namely – Leaf mode, Node mode, Hierarchy Filter mode and Macro mode. This allows typing ahead Member Names while applying constraints on the Source/Driver/Output Dimensions, in addition to selection of Members from the Hierarchy Browser.
- **Enhanced Hierarchy Browser flavors catering to differing needs across the Service**
  The current offering of the enhanced Hierarchy Browser is designed according to the mode it is called. The Browser is simpler, intuitive, comes with a user friendly built in Search Criteria, and provides selection of Member from the Search Tab directly without the need of further operations.
- **Improved performance for Profitability Table Drivers**
  The application comes with improved generation of the Coefficient Matrix and user-friendly search option.
- **In-App Analytics that enables to do analysis on your Business Data and Execution Performances**
  The Analytics module comes with a host of analytical capabilities - Raw Data Analysis, SQL Querying and Allocation Performance Analysis, PFT Data Insights, Ad-hoc Data Analysis, and Financial Statements Analysis.

  The PFT Data Insights Report provides you with the Trend Analysis on the Direct and Indirect Incomes and Expenses components of your Income Statement. The Ad-hoc Data Analysis Report lets you perform ad-hoc analysis on Management Ledger data, while the Financial Statements Analysis Report enables you to perform analysis on the Financial Statement Reporting Lines derived out of the Management Ledger data.
- **Standard Allocation Model**
  Standard Allocation Models are capable of logically grouping allocation rules into a single executable unit. More than one allocation rule can be executed at one go as a single unit of work.
- **Enhanced feature for Allocation Rule creation**
  The Allocation Specification UI is enhanced with Active/Passive dimension containers to help users navigate easily while in Edit mode and apply the required dimensional constraints. The UI also has additional embedded objects of the Attribute Filter and the Group Filter, and the combination filters of 'Data and Attribute Filter' and 'Group and Attribute Filter'.
- **Enriched Execution History UI**
  The enhanced Execution History UI has two new tabs of Allocation Execution History and Ledger Load History. The Allocation Execution History enables users to undo a previously executed allocation rule or to view the inline reports generated by the rule, while the Ledger Load History enables users to undo the results of a Management Ledger table data load.

2.2.2 User Groups

The following table provides the information on the User Groups and the related activities:

Table 2-8 User Groups and Activities

User Groups	Activities
Profitability Application Administrator	• Admin Privileges for all Modules (CRUD Operations) • Create Folders • Set Global Preferences • Set Management Ledger Configuration
Profitability Application Analyst	• Set User and Application Preferences • Set Setup Parameters • Currency and Rate Management • Dimension Management • Data Management: Metadata and Data Loaders • Data Model Extension • Create Filters and Expressions • Create Table Drivers • Create and Execute Allocation Rules • Create and Execute Allocation Models • Schedule Batch Processes • View Allocation Executions • View Profitability Reports
Profitability Application Auditor	View privileges for all Application specific modules: • Review/Analyze Results • Review Process Logs • View Reports

In addition to this, custom user groups can be created and managed as per requirement. For more information, see the User Roles and Privileges Section.

2.2.3 Guidelines for working with Profitability Management

This topic describes an approach to designing and building applications based on your Security Role and the tasks it enables you to perform.

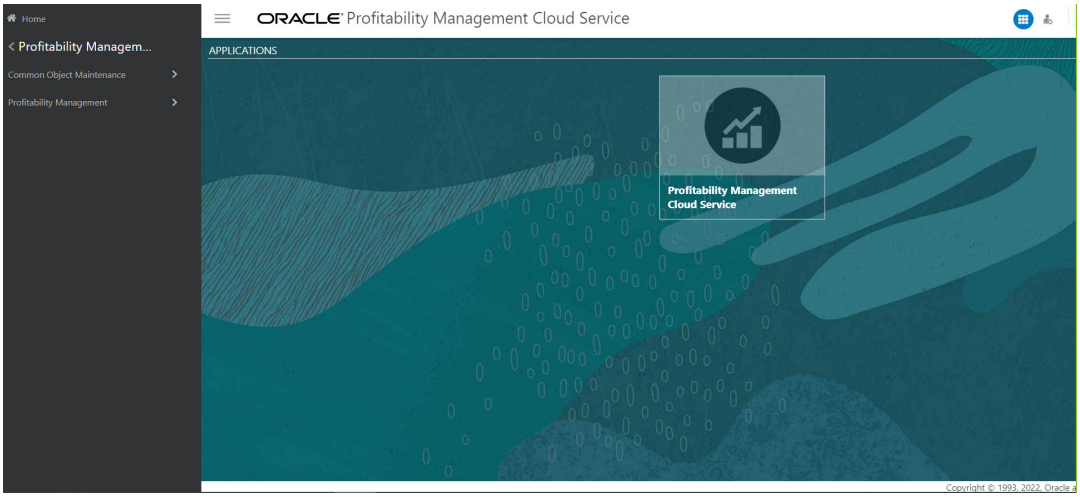
2.2.4 Launching Profitability Management

1. In the Web browser, click the link provided by Oracle.
2. Enter your user name and password.

   If requested, select an application. The password is case-sensitive.
3. Click Sign In.

   The Profitability Management Cloud Service Home Page is displayed.

Figure 2-3 Profitability Management Cloud Service Home Page



2.2.4.1 Profitability Management Cloud Service Home Page

When you log in, you see the Profitability Management Cloud Service Home page.

Figure 2-4 Home Page Icons

The Home page contains these main areas:

- Navigator Screen to access the Menu Items.
- to navigate to Admin Console
- US-English Display the Language of the service.
- PFT QAUSER The User Name menu with your user name in the header.
- Click it to view setup information.
- Shows the details of Last Login Date and Time.

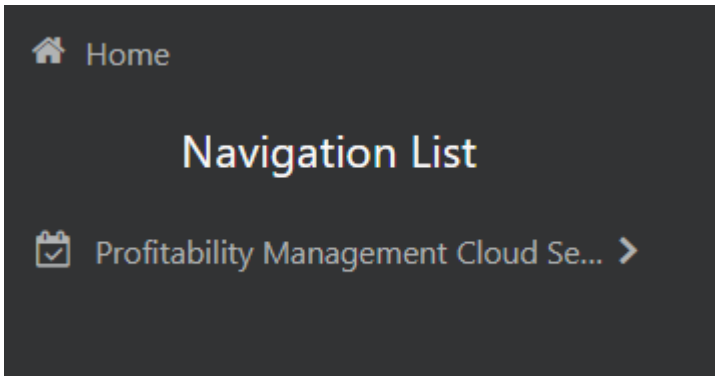
For more information about help and learning assistance, see Profitability Management Document.

Click the Navigator Screen icon

Figure 2-5 Navigator Screen Icon

to display the Navigator Screen. This screen serves as a sitemap of the application features and displays links to all of the pages you can access. Use the Navigator Screen to navigate among the rules and processes required to define, review, and analyze the application, and to report results.

Figure 2-6 Navigation Path



PBSM Profitability Management Cloud Service Navigation Paths are displayed in the List of Navigation Paths. Access all these pages through the PFT Administrator, PFT Auditor, or PFT Analyst Responsibility.

2.2.4.2 Common Icons

Use the icons to view and analyze data and related information for each features.

Figure 2-7 Common Icons

Icon Name	Icon	Uses
Add		Click Add icon to build a new rule.
Refresh		Click to refresh the Summary Page.
Help		Click to view the Help.
Multiple Delete		Select one or more rules in the table and then click the (-) icon at the top right of the Summary Page to delete more than one rule at the same time.
Search		To Search the rule(s).
List View		To view the Rule Summary Page items in List View.
Table View		To view the Rule Summary Page items in Table View.
Ascending and Descending	↑ and ↓	To sort the rules on Rule Summary Page.

Figure 2-8 Common Icons

Icon Name	Icon	Uses
Action	•••	Click to perform view various action options.
View/Edit		Click in the Action column and select View/Edit to view or edit the contents of a rule in Read/Write format. Depending on User Privileges, the rule will open in either View or Edit mode.
Copy or Save As		Click in the Action column and select Save As to create a copy of an existing rule.
Delete		Click in the Action column and select Delete to delete an existing rule.
Execute		To execute a process.
Execution Details		To view the execution details of the process.
Add New		Click Add icon to add new items on Rule screen.

2.2.4.3 Common Feature Controls

Many feature screens in Profitability Management Cloud Service include the controls discussed in this topic.

2.2.4.3.1 Audit Trail

The Audit Trail container is a standard footer container for every PBSM rule type. It displays Created By, Creation Date, Last Modified By, and Modification Date on the Audit Trail tab.

2.2.4.3.2 User Comments

The User Comments tab may be used to add comments to any rule, subject to a maximum of 4000 characters.

2.3 Introduction to Admin Console

Use the Admin Console to perform System Configuration and Identity Management.

Admin Console is the single point of access to manage identity functions and view administrative features such as Metering, Audit Trail Report and other miscellaneous configuration details in the Cloud Service.

2.3.1 Accessing Admin Console

Access Admin Console from the home page of Financial Services Analytical Applications.

To access the Admin Console, ensure that the cloud administrator grants you administrative privileges by mapping your user account to the Identity Administrator and Identity Authorizer user groups. These user groups are seeded in Oracle Identity and Access Managment (IAM).

Before logging into the Admin Console, ensure that:

> **Note:**
>
> - If the Cloud Administrator has granted only Identity Management privileges and no other cloud application privilege, you will be automatically redirected to the Admin Console specific to subscribed cloud service, after a successful login.
> - After a user signs in to the Cloud Service, the user to user-group Mapping created in the IAM Console will onboard into the Master and Mapping Tables. If you unmap a user from a group in the Admin Console, go to the IAM Console and open the **Assign User to Groups**. Unselect the user corresponding to the user group and click **Finish**. This step is mandatory to unmap the user.

To access the Admin Console:

1. Enter the application URL in the browser's address bar to access the Oracle Cloud Account Sign In page.
2. Enter the username and password on the Login page to log in to the **Financial Services Analytical Applications**.

   After successfully logging in, you can view the **Financial Services Analytical Applications** homepage and the list of subscribed cloud applications. Click **Navigation** to hide the Applications Navigation List.
3. Click **Admin Console** at the top of the Financial Services Analytical Applications home page.

   In the Admin Console, you can view the **System Configuration** and **Identity Management** tabs. Use these tabs to perform the following tasks:

   - **Administrator Tasks**:
     - View the **Metering Report**, **Audit Trial Report**, **Object Storage**, and **Object Authentication (OAUTH)** credential details in the **System Configuration** tab.
     - Perform the Identity and Access Management operations in the **Identity Management** tab.
   - **Authorizer Tasks**:
     - Authorize the Identity and Access Management Operations in the **Identity Management** tab.

2.4 System Configuration

Administrators can monitor the usage of service units and user activities through the System Configuration.

With System Configuration, administrators can view the consumption of service units. You can also view the following:

- The Audit Report to see what actions the users have performed in the application and when they have performed them
- The provisioned object storage details and the OAuth authentication details
- The production instance URL and the email ID of the login user

The components are as follows:

- **Metering**: Click **Metering** to view the usage of services using the Metering Report.

- **Audit Trail Report**: Click **Audit Trail Report** to view details such as the user's login and logout information, the action they performed, the status of the actions, and the date and time of each action.
- **Component Details**: Click **Component Details** to view details such as the Object Storage, Pre-Authenticated Request (PAR) URL, and OAuth authentication details.
- **Configurations**: Click **Configurations** to specify the instance name and the user(s) who receive emails related to operations tasks.

2.4.1 Metering

View annual usage of transactions and report types.

Use the **Metering** page to view the annual unit usage of the number of transactions and the number of report types within your cloud service.

The following table shows the methodology employed to measure the usage of each of the products.

Table 2-9 Metering Methodology

Product	Metering Methodology
Transaction Monitoring Cloud Service	Number of transactions per month.
Regulatory Reporting Cloud Service	Number of templates configured of a country or jurisdiction for filing to a regulator.
Know Your Customer (KYC) Cloud Service	Count of Risk Assessments created for both KYC Onboarding and KYC Continuous Monitoring in the production environment. Metering excludes the deployment initiation batch (first time risk assessment of all existing customers for a client).
Customer Screening Cloud Service	Sum of customers screened via batch per day and via real time for a duration of one month.
Transaction Filtering Cloud Service	Sum of transaction messages screened via real time for a duration of one month.
Compliance Agent Cloud Service	Number of experiments run.
Investigation Hub Cloud Service	Pooled Named User (Defined as an individual authorized by you to access the hosted service, regardless of whether the individual is actively accessing the hosted service at any given time during one calendar month).
iHub Real-time Customer Screening	Pooled Named User (Defined as an individual authorized by you to access the hosted service, regardless of whether the individual is actively accessing the hosted service at any given time during one calendar month).
Studio Cloud Service	Number of Transactions
Monitor Cloud Service	Pooled Named User (Defined as an individual authorized by you to access the hosted service, regardless of whether the individual is actively accessing the hosted service at any given time during one calendar month).
Automated Scenario Calibration Cloud Service	Number of transactions per month

2.4.2 Component Details

Use Component Details to view the object storage standard and archive details, and OAUTH authentication details.

Object storage is used for data to which you require fast, immediate, and frequent access. Archive storage is used for data which you do not access regularly but must be retained and preserved for long periods of time.

With every instance of the application provisioned, two buckets are provisioned: a standard storage bucket and an archive storage bucket. The data files that you want to load into the application for processing must be uploaded to the standard storage bucket. The files are automatically moved to the archive storage bucket after a period of 7 days.

To access Component Details:

1. Login to the Admin Console.
2. Go to the **System Configuration** tab and click **Component Details**.

   You can access the following tabs from the Component Details tab:

   - **OCI Console** : Access the **OCI Console URL** from the **OCI Console** tab.
   - **Object Storage Standard** : When you provision an instance of the application, two buckets, a standard storage bucket and an archive storage bucket are automatically provisioned. The objects data that you want to load into the application for processing must be uploaded to the standard storage bucket.
     Access and copy the following details related to the objects which are currently in use and require fast, immediate, and frequent access.
     - **Object Store Bucket Name**: The logical container in which objects are stored
     - **Pre-Authenticated URL (PAR URL)**: Request that enables you to access a bucket without providing any credentials
   - **Object Storage Archive** : Archive storage is used for storing objects that are not actively in use but need to be retained and preserved for extended periods. Objects are automatically moved from standard to archive storage after 7 days.
     Access and copy the following details related to the archived objects.
     - **Object Store Bucket Name**: The logical container in which objects are stored
     - **Pre-Authenticated URL (PAR URL)**: Request that enables you to access a bucket without providing any credentials
   - **OAUTH Creds** : Use OAUTH credentials (Client ID and Client secret) are used for implementing authentication in cloud services.
     Access and copy the following OAUTH credentials:
     - **OAUTH Client ID**: ID of the OAuth client used for OAuth authentication performed by IAM during any API calls.
     - **OAUTH Client Secret**: Password of the OAuth client secret used for OAuth authentication performed by IAM during any API calls

2.4.3 Audit Trail Report

Use the Audit Trail Report to check user activities, including logins, added actions, their status, and associated machine names.

To generate an Audit Trail Report:

1. Log in to the **Admin Console**.
2. Go to **System Configuration** and click **Audit Trail Report** to access the **Audit Trail Report** page.
3. Enter the following values and click **Search** to generate the **Audit Trail Report** for all users or a specific user, to view a specific audit trail report.

Table 2-10 Audit Trail Report Filters

Field	Description
User Name	Enter or Search for a user name to view the report for the selected user.
Action	Select the Action from the list of actions to generate a report for a specific action.
From Date	Select the start date for the report.
To Date	Select the end date for the report.
Action Detail	Enter the string to search and filter the audit trail report for a specific action.

You can get the following details from an **Audit Trail Report**.

Table 2-11 Audit Trail Report Details

Field	Description
User Name	The user name selected in the **User Name** filter field.
Action Details	The action selected in the **Action Detail** filter field.
Action Code	The type of action performed by the user.
Status	The status of the action performed. The values are **Successful** or **Failure**.
Action Subtype	The sub type of the action.
Operation Time	The date and time of the action performed.

4. Click **Reset** to clear all values from the filter fields and enter new search criteria.

2.4.4 Configurations

Use the Configurations page to update user preferences, master encryption key, notification preferences, and allowed email domains.

You can set the user preferences such as time zone and locale, master encryption key, notification configuration details, and update allowed email domains using the **Configurations** page.

To update the configuration details from the **System Configuration** tab:

1. Click the **Configurations** tile, to view and edit the user preferences, master encryption key and the notification details.
2. Click the required tab and modify the details.

- Preferences
- Master Encryption Key
- Notification Configuration
- Email Domains

Preferences

Select the following details in the **Preferences** tab and click **Save** to update the details.

- **Time Zone** - The time zone displayed in the application.
- **Locale** - The language to access the application. The default value is **en - US English**.
- **Date Format** - The format in which the date is displayed.

Master Encryption Key

Enter the **Master Encryption key** and click **Save** to update the key value.

Notification Configuration

Enter the number of days after which the notification will be deleted automatically, and click **Save**.

Email Domains

Enter the allowed email domains, and click **Save**. Separate domains with commas, omitting the '@' symbol. Example: oracle.com, gmail.com.

> **Note:**
>
> Only users with the domains specified here will receive email notifications. To allow all domains, leave the field blank.

2.4.5 Reports For Download

The Reports for Download tile in the Admin Console consists of a set of pre-defined and pre-configured reports that are available for download. You can use the functions in the interface such as filter and sort to segregate the data and drill down to the details of the reports. You can then investigate the information, analyze, and export the data in CSV format.

In the Admin Console, you can download reports from Reports for Download in the System Configuration tab.

2.4.5.1 Prerequisites

To use Reports for Download from the Admin Console, your user profile must be mapped to the Data Maintenance Admin group to access the Reports for Download menu.

2.4.5.2 Access Reports for Download

To access the Data View window, click **Reports for Download** in the **System Configuration** tab. The **Data Reporting - Data View Page** is displayed.

2.4.5.3 Data Reporting - Data View

You can view the list of reports available for download, from the Data Entry window. Use one of the following criteria to view various reports.

- To search reports, click the Search field to display the search criteria pop-up. Enter search terms in the Name, Description, or Created By fields, or use a combination of the fields, and click Search.
  The search result displays reports that match the criteria.
- To sort reports, click the Sort By drop-down and select from the options: Name, Description, or Created By.
  The reports are displayed in ascending order for the selected option.
- To view the report creation and modification details, click the More Options (three dots) icon of a report to display the pop-up with the details for the following:
  - **Created By** - Displays the User ID of the user who created the report.
  - **Created Date** - Displays the date and time of the creation of the report.
  - **Last Modified By** - Displays the User ID of the user who last modified the report.
  - **Last Modified Date** - Displays the date and time of the last modification of the report.
  - **Authorizer** - Displays the User ID of the authorizer who approved the report to be displayed in the window.
  - **Authorizer Comments** - Displays the comments entered by the authorizer when approving the report to be displayed in the window.
- To view a report, mouse over the record, and the hidden menu appears. Click View from the menu.
  The details for the selected report are displayed in the Data Entry window.

2.4.5.4 View the Report Details

The Data Entry window is the interface where you can apply filter conditions (optional) on the reports and export the details.

You can apply the filter conditions (optional) to the reports in the Attributes Selection tab, and the results are displayed in the Data Preview tab from where you can export the report in the CSV format.

The procedure to view report details is described as follows:

1. In the **Data View** window, click **Attributes Selection**.
   The Attributes Selection tab displays the details for the database table name in View Name and the table columns in Attribute Name. Expand View Name to display the columns in Attribute Name.
2. Click **Apply**.
   The Data Preview tab displays the report details. The number of records displayed in the Data Preview tab is pre-configured in the system. However, you can export the details in the CSV format by clicking Download CSV.

2.4.5.5 Apply a Custom Filter to the Data View

In addition to the reports that you can view, you can also use the filter provided in the Data View window to custom filter the data in the reports for analysis purposes.

To apply a custom filter to the data view, follow these steps:

1. Click **Launch Filter** Condition to display the Filter Condition window.
2. Select **AND** or **OR** from the drop-down.
3. Select the required report column from **Select a Column**.
4. Select the required condition from **Select a Condition**.
5. Click **+ Condition** to add more conditions and click **+ Group** to add more groups.

   Repeat the selection procedure to add details. To remove a condition or group, click Remove.
6. Click **Apply** in the **Filter Condition** window to save the custom filter condition.
7. Click **Apply** in the **Attributes Selection** tab.

   The Data Preview tab displays the results of the Attributes filtered in the Attributes Selection tab. The number of records displayed in the preview is pre-configured in the system. However, you can export the details in the CSV format by clicking Download CSV.

2.5 Identity Management

Using Identity Management, administrators can manage fine-grained and coarse-grained entitlements. Coarse-grained entitlements consist of fewer functions than fine-grained entitlements. Authorizers can authorize the entitlement mappings.

The various **components** of Identity Management are:

- **Users**: A user is a person who has access to **Admin Console** and can perform specific actions based on the user group or groups they are mapped to. Before you can map a user to a user group, your Administrator must have created and authorized the user. After the user is authorized, they are added in the Users Summary. Click **Users** to access the **Users Summary** page.
- **Groups**: Groups are a set of users who can perform specific activities. For example, the administrator role performs administrative activities. Any user who belongs to a specific user group can access the roles mapped to that user group.
  To add a user group, click **Add** in the **Groups** tile. Click **Groups** to view the list of user groups in Groups Summary.
- **Roles**: Roles are a set of functions grouped together and having specific privileges. Any user who belongs to a specific role can access functions mapped to that role. Click **Add** to add a role or click **Roles** to view the list of roles in **Roles Summary**.
  To add a user role, click **Add** in the **Roles** tile. Click **Roles** to view the list of user groups in Roles Summary.
- **Folders**: Folders are used to control access rights on defined list of objects. They are mapped to a specific Information Domain. Click **Folders** to view the list of folders and edit the access rights in Folders Summary.
- **Functions**: Functions enable users to perform a specific activity. Any user who belongs to a specific function can access the folders mapped to the function. Click **Functions** to view the list of functions in Functions Summary.

> **Note:**
>
> Only those user groups and roles which are authorized are displayed in the **Groups Summary** page and **Roles Summary** page, respectively.

2.5.1 Users Summary Page

The Users Summary page shows the list of available users. You can view the details of a user and map the user to one or more user groups.

To access the Users Summary page:

1. Click **Identity Management** tab in the **Admin Console** page.
2. Click the **Users** tile to access the **Users Summary** page.
3. Select a specific user name in the **Users Summary** page and then click **Details** to view the associated **User ID** and **User Name**.
4. Select a user name and click **Mapped Groups** to view the list of groups that are mapped to the particular user.

   To map/unmap a user group, refer to Mapped and Unmapped Groups.

   To search for a specific user, type the first few letters of the user name that you want to search in the Search box and click **Search**. The results will show users matching your input.

   At the bottom of the page, adjust the number of entries displayed per page using the up and down arrows in the Records box. To navigate between pages in the View bar, use these buttons:

   - **First page** to go to the first page.
   - **Previous page** to go back.
   - **Next page** to move to the next page.
   - **Last page** to go to the last page.

   You can directly navigate to a specific page by entering its number in the View bar and pressing **Enter**.

2.5.1.1 User Details

In the User Details, you'll find the User ID and User Name of the selected user from the User Summary page.

- Click a specific user listed in the **User Summary** page and then click **Details** to view the **User ID** and the **User Name** of that user.

2.5.1.2 Mapped/Unmapped Groups

As an Administrator, you can map/unmap a user to/from a user group from the **Users Summary** page.

To map/unmap a user to a user group:

1. Select the user name in the **Users Summary** page.
2. Select **Mapped Groups** to access the list of groups mapped to the selected user.

3. To map a user group:
   a. Click **New Mapping**.

      The list of user groups you can map the user to appears in the **Available Groups** page.

   b. Click **Map**.

      A confirmation message is displayed after successful mapping. The mapping will be completed after authorization.
4. To unmap a user group:
   a. Select the check box corresponding to a user group or click **Select All** to choose all available user groups.
   b. Click **Unmap**.

      A confirmation message will be displayed after successful unmapping. The unmapping will be completed after authorization.
5. After mapping/unmapping a user group, ensure to authorize it accordingly. To authorize a mapping/unmapping:
   a. In **Mapped Groups**, select the user-user group mapping or unmapping that requires authorization.
   b. Click **Authorize/Reject** to approve or cancel the mapping/unmapping request.
6. Click on **New Mapping** and then switch to **Authorization View** to retrieve the pending authorization.

> **Note:**
>
> Any other user from the requestor is required to authorize any new mapping requests.

2.5.1.3 Available Groups

Click New Mapping to view the list of user groups you can map to the user.

To select a user group, select the check box corresponding to the user group. To select all user groups, click **Select All**.

2.5.2 Groups Summary Page

The Groups Summary page shows the list of available groups. You can view the details of a group and map the group to one or more user roles.

To access the Groups Summary page:

1. Click the **Identity Management** tab in the **Admin Console** page.
2. Click the **Groups** tile, to access the **Groups Summary** page.
3. Select a specific group name in the **Groups Summary** page and then click **Details** to view the associated **Group ID**, **Group Name** and Group Description.
4. Select a group name and click **Mapped Roles** to view the list of roles that are mapped to the particular group.

   To map/unmap roles, refer to mapped/unmapped roles.

To search for a specific user group, type the first few letters of the user group name that you want to search in the Search box and click **Search**. The results will show users matching your input.

At the bottom of the page, adjust the number of entries displayed per page using the up and down arrows in the Records box. Use the navigation buttons, to go to the first page, last page, previous page and next page. You can also directly navigate to a specific page by entering its number in the View bar and pressing **Enter**

2.5.2.1 Group Details

In the Group Details, you'll find the Group ID, Group Name, and Group Description of the selected user group.

- Click a specific group name listed in the **Group Summary** page and then click **Details** to view the **Group ID**, **Group Name**, and **Group Description** of that user group.

2.5.2.2 Mapped/Unmapped Roles

As an Administrator, you can map/unmap a role to/from a user group from the **Groups Summary** page.

To map/unmap roles to user groups:

1. Select the user group in the **Groups Summary** page.
2. Select **Mapped Roles** to access the list of roles mapped to the user group.
3. To map roles to user groups:
   a. Click **New Mapping**.

      The list of user roles you can map the group to is displayed in the **Available Roles** page.

   b. Select the check box corresponding to a user role or click **Select All** to select all the available user roles.

   c. Click **Map**.

      A confirmation message is displayed after successful mapping. The mapping will be completed after authorization.
4. To unmap roles from user groups:
   a. Select the check box corresponding to a user role or click **Select All** to select all the available user roles.

   b. Click **Unmap**.

      A confirmation message is displayed after successful unmapping. The unmapping will be completed after authorization.
5. After mapping/unmapping a role, ensure to authorize it accordingly. To authorize a mapping/unmapping:
   a. In **Mapped Roles**, select the role-user group mapping or unmapping that requires approval.

   b. Click **Authorize/Reject** to approve or cancel the mapping/unmapping request.

2.5.2.3 Available Roles

Click New Mapping to view the list of roles you can map to the user group.

To select a role, select the check box corresponding to the role. To select all roles, select the check box marked **Select All**.

2.5.2.4 Create custom groups

You can create custom groups to cater to specific tasks within the application.

While seeded groups support a broader range of application and scenarios, custom groups enable the precise grouping of users for targeted and specialized application usage.

Example: You can create a user group which assigns the role of uploading files. This way you have a dedicated user or a standalone user that is not accessing the application but is just ingesting data.

You can create new groups using the following:

1. PBSM Admin Console
2. IDCS

   When you create new groups in PBSM Admin Console, you can have them sync with IDCS automatically or create groups separately in PBSM Admin Console and IDCS. To automatically sync with IDCS, select the **Enable Group Sync** option on the **Configurations** page of PBSM Admin Console.

   After creating the group, assign the required permissions to it and add the roles. For information, see Creating a New User Group.

2.5.3 Roles Summary Page

The Roles Summary page shows the list of available user roles. You can view the details of a role and map the role to one or more user functions.

To access the **Roles Summary** page:

1. Click the **Identity Management** tab in the **Admin Console** page.
2. Click the **Roles** tile, to view the **Roles Summary** page.
3. Select a specific role name in the **Roles Summary** page and then click **Details** to view the associated **Role Code**, **Role Name**, and Role Details.
4. Select a role name and click **Mapped Functions** to view the list of functions that are mapped to the particular role.

   You can also unmap a role from a specific function. To map/unmap functions, refer to mapped/unmapped functions.

   To search for a specific role, type the first few letters of the role name that you want to search in the Search box and click **Search**.

   At the bottom of the page, adjust the number of entries displayed per page using the up and down arrows in the Records box. To navigate between pages in the View bar, use these buttons:

   - **First page** to go to the first page.
   - **Previous page** to go back.
   - **Next page** to move to the next page.
   - **Last page** to go to the last page.

   You can directly navigate to a specific page by entering its number in the View bar and pressing **Enter**.

2.5.3.1 Roles Details

Access Roles Details, to view the Role Code, Role Name, and Role Description of the selected role.

- Click a specific role listed in the **Roles Summary** page and then click **Details** to view the **Role Code**, **Role Name**, and **Role Description** of that role.

2.5.3.2 Mapped/Unmapped Functions

As an Administrator, you can map/unmap a role to/from a function user group from the **Roles Summary** page.

To map/unmap roles to functions:

1. Select the role name in the **Roles Summary** page.
2. Select **Mapped Functions** to access the list of functions mapped to the specific role.
3. To map roles to functions:
   a. Click **New Mapping**.

      The list of user functions you can map the role to appears in the **Available Functions** page.

   b. Select the check box corresponding to a function or click **Select All** to select all the available functions.

   c. Click **Map**.

      A confirmation message is displayed after successful mapping. The mapping will be completed after authorization.
4. To unmap roles from functions
   a. Select the check box corresponding to a function or click **Select All** to select all the available functions.

   b. Click **Unmap**.

      A confirmation message is displayed after successful unmapping. The unmapping will be completed after authorization.
5. After mapping/unmapping a function, ensure to authorize it accordingly. To authorize a mapping/unmapping:
   a. In **Mapped Functions**, select the role-function mapping or unmapping that requires approval.

   b. Click **Authorize/Reject** to approve or cancel the mapping/unmapping request.

2.5.3.3 Available Functions

Click New Mapping to view the list of functions that you can map to a role.

To select a function, select the check box corresponding to the function. To select all functions, click **Select All**.

2.5.4 Functions Summary Page

The **Functions Summary** page shows the list of available functions. You can view the function details.

To access the **Functions Summary** page:

1. Click the **Identity Management** tab in the **Admin Console** page.
2. Click the **Functions** tile to access the **Functions Summary** page.
3. Select a specific function name in the **Functions Summary** page and then click **Details** to view the associated **Function ID**, **Function Name**, and **Function Description**.

   To search for a specific function, type the first few letters of the function name that you want to search in the search box and click **Search**.

   At the bottom of the page, adjust the number of entries displayed per page using the up and down arrows in the Records box. Use the navigation buttons, to go to the first page, last page, previous page and next page. You can also directly navigate to a specific page by entering its number in the View bar and pressing **Enter**.

2.5.4.1 Function Details

Using the Function Details options, you can view the Function ID, Function Name, and Function Description from the Functions Summary page.

- Click a specific function listed in the **Functions Summary** page and then click **Details** to view the **Function ID**, **Function Name**, and the **Function Description** of that function.

2.5.5 Folders Summary Page

Create multiple folders, store objects and assign access rights based on the security level of the user.

The **Folders Summary** page shows the list of available groups. You can view the details of a group and map the group to one or more user roles.

To access the **Folders Summary** page:

1. Click **Identity Management** tab in the **Admin Console** page.
2. Click the **Folders** tile to access the **Folders Summary** page.

   The **Folders Summary** page is displayed.

   Select a specific folder name in the **Folders Summary** page and then click **Details** to view the associated **Folder ID**, **Folder Name** and **Folder Type**. For more information refer to Folder Details

   To search for a specific folder, type the first few letters of the folder name that you want to search in the search box and click **Search**.

   At the bottom of the page, adjust the number of entries displayed per page using the up and down arrows in the Records box. Use the navigation buttons, to go to the first page, last page, previous page and next page. You can also directly navigate to a specific page by entering its number in the View bar and pressing **Enter**.

2.5.5.1 Folder Details

In the Folder Details, you'll find the Folder ID, Folder Name, and Folder Type of the selected folder from the Folders Summary page.

- Click a specific folder name listed in the **Folders Summary** page and then click **Details** to view the **Folder ID**, **Folder Name**, and **Folder Type** of that user.

2.5.5.2 Editing Folder Details

You can edit the Folder Type from the folder details page.

1. Click **Edit** on the **Folder Details** page.
2. Set the Folder Type to one of the following options:
   - **Public** - These folders are accessible to all users.
   - **Private** - These folders can be viewed only by the users associated with that folder.
   - **Shared** - These folders can be accessed by users mapped to specific user groups. These user groups are mapped to specific roles that are associated with the folder.

3
Data Administration

This chapter introduces the Data Model Extension, Data File Specification, File Upload and Download, Data Maintenance Interface, and Data Quality Framework topics.

Data Administration Topics:

- Data Model Extension: The PBSM Cloud Service provides OOTB placeholder Columns and Tables that can be configured to use as custom Columns, Custom Dimensions, and Custom Management Ledger Tables as suitable to the business requirements. However, these Columns and Table are placeholder items and must be registered before use. The Data Model Extension module enables you to register these Columns and Tables.
- Data File Administration: This topic covers the Data File Specification, Data File History, and File Upload and Download functionalities.
- Data Maintenance Interface: Data Maintenance Interface (DMI) helps to design a Data Form in a user-specified format. Further, it allows to perform maintenance activities using the Designed Form.
- Data Quality Framework: Data Quality Framework consists of a scalable rule-based engine which uses a single-pass integration process to standardize, match, and duplicate information across global data.
- Data Verification: Data Verification UI allows you to carry out small edits on the imported data. You can also add few entries manually using this UI.
- Data Housekeeping: The Data Housekeeping UI helps you to delete data, drop partitions and truncate sub-partitions, and archive the data from selected tables.
- Balance Reconciliation: Balance Reconciliation module helps you to Reconcile the selected processing/instrument/account balances against the Management Ledger. If any differences are found, you will have the flexibility to choose significant differences and create plug entries for those in the Ledger_Instruments table.
- Redaction Framework: Oracle Data Redaction provides selective, on-the-fly redaction of sensitive data in database query results prior to display by applications.

3.1 Data Model Extension

Customization of Physical Data Model is restricted in the Cloud Service. However, there may be a need to extend the Data Model to meet multiple business requirements. For this purpose, the Cloud Service provides OOTB placeholder Columns and Tables that can be configured to use as custom Columns, Custom Dimensions, and Custom Management Ledger Tables as suitable to the business requirements.

> **Note:**
>
> The Management Ledger tables are applicable only to Profitability and Balance Sheet Management Cloud Services.

These placeholder Columns and Tables must be registered before use. The Data Model Extension Module allows you to do the following types of registrations:

- Dimensions Registration
- Columns Registration
- Management Ledger Registration
- Pending Registration

After registration, you can start loading the data in the selected placeholder Columns and Tables and use them to define the Rules and Assumptions for further processing and reporting.

Appropriate user roles must be created and maintained for the users to perform the registration and registration approval processes.

To register the placeholder Columns and Tables, from the LHS Menu, select **Data Management Tools**, and then select **Data Model Extension** to display the DataModel Extension summary screen.

The Data Model Extension summary screen displays the following tiles:

- Dimensions
- Columns
- Management Ledger
- Pending Registration

Using this UI, you do the registration of Dimensions, Columns, and Management Ledger Tables. After the registration is done, the detail will be sent to the Supervisor or Approver User who either approves or rejects the registration.

> **Note:**
>
> Configuration of custom columns, dimension and tables must be same across all your environments. For example: If 'Key Placeholder Dimension 01' is registered as 'Custom Dimension One' in development environment then it must be same in all other environments to avoid logical mismatches. Hence, it is recommended to always use Object Migration for Data Model Extensions to keep environments synchronized.

3.1.1 Registering Dimensions

Through the Dimension Registration UI, you register two types of Dimensions; Simple Dimensions and Key Processing Dimensions that are explained in the following topics.

Dimensions are the Placeholder Columns and Tables. The column names appear in the Instrument Tables as Physical Column Names. The Data Model Extension UI allows you to define the Logical Layer with details Name, Description, and the purpose of the column. After these columns are defined, they appear in the drop-down lists in the application screens as UDPs (User Defined Properties) that you can use. This process of defining the Dimensions is called Registering.

3.1.1.1 Register a Simple Dimension

Simple Dimensions are list of values that support neither attributes nor hierarchies.

Simple Dimensions are list of values that support neither attributes nor hierarchies. Their three key uses are:

- Reserved for use within the Analytical Application Engines
- Stratifying your data for process or report filtering purposes
- Serving as list of values when used as attributes

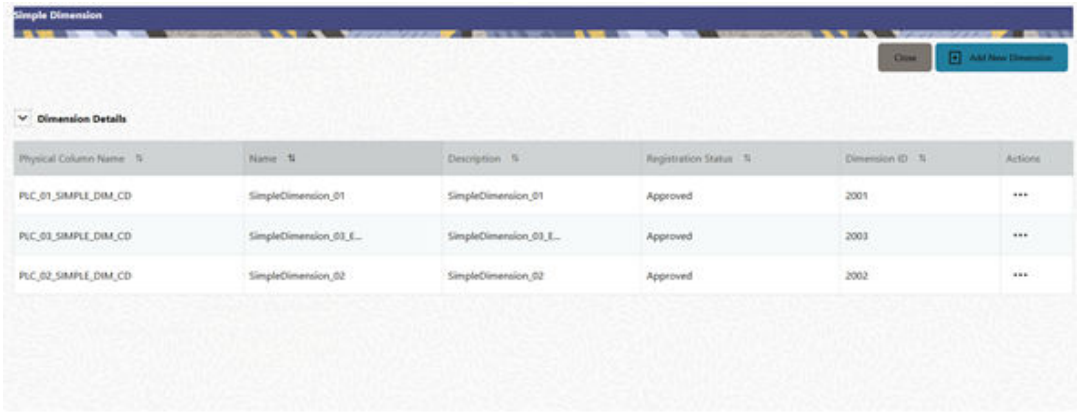
The Cloud Service Data Model comes with a set of placeholder Simple Dimensions for configuration and use. The member details of simple dimensions are stored in two tables:

- A code table (For example, FSI_SIMPLE_DIM_01_CD)
- A Multi-Language Support table (for example, FSI_SIMPLE_DIM_01_MLS)

To register a Simple Dimension:

1. Navigate to the summary screen, and click the **Simple Dimensions** tile to display the **Simple Dimension** summary screen.

Figure 3-1 Simple Dimension summary screen



The Simple Dimension summary screen displays the summary of existing Simple Dimensions with the Physical Column Names, Name, Description, Registration Status, Dimension ID details, and Actions icon.

2. Click **Add New Dimension** to collapse the Dimension Details summary and to display the dimension details.

   When you click **Add New Dimension**, the UI displays **Save** and **Submit for Approval** buttons.

3. Enter the following details:
   - **Name** (mandatory): Specify the required logical name of the dimension.
   - **Description** (mandatory): Specify the required description of the dimension.
   - **Comment**: Specify the required maker/checker comment. Note that special characters *, newline, and double quotes are not allowed.
     The **Details** section displays the Physical Column and Data Type information that the dimension uses for user reference. As and when a registration takes place

successfully and the physical column is utilized, the next registration process proceeds to take the next-in-numerical-order physical column available for registration.

4. Click **Save**. The details are saved as a Draft and displayed on the summary screen. You can change the Name, Description, and Comments later by double clicking the details.
5. Click **Submit for Approval** to send the Dimension Details for approval. Or select a Name from the list and click the Actions icon to View, View, Edit, Submit for Approval or Delete the simple dimension.

   Or

   Select a Name from the list and click the Actions icon to View, View, Edit, Submit for Approval or Delete the simple dimension.

> **Note:**
>
> - You can delete a registration when it is in Draft state.
> - If the selected Dimension is in Approved state, then the Actions menu displays only View, Edit, and Submit for Approval actions.

3.1.1.1.1 View a Simple Dimension

To view a Simple Dimension, perform the following steps.

To view a Simple Dimension, perform the following steps:

1. Click the **Actions** Icon against the selected Simple Dimension to expand the Actions Menu.
2. Click **View** to see the details of the selected Simple Dimension.

3.1.1.1.2 Edit a Simple Dimension

To edit a Simple Dimension, perform the following steps:

1. Click the **Actions** Icon against the selected Simple Dimension to expand the Actions Menu.
2. Click **Edit** to display the selected Dimension details in edit mode.
3. Edit the following details:
   a. **Name**: This is mandatory.
   b. **Description**: This is mandatory.
   c. **Comment**: Specify the required maker/checker comment. Note that special characters *, newline, and double quotes are not allowed.
4. Click **Save** to save the details as a draft.
5. Click **Submit for Approval** to send the Dimension Details for approval.

> **Note:**
>
> - When you edit an already approved Dimension, the Dimension must be submitted for approval again. You cannot delete or edit the Dimension again.
> - Additionally, if you edit an approved Dimension, then the Actions Icon displays only the View option for the Dimension.

3.1.1.1.3 Delete a Simple Dimension

To delete a Simple Dimension, perform the following steps:

1. Click the **Actions** Icon against the selected Simple Dimension to expand the Actions Menu.
2. Click **Delete** to delete the Dimension.

> **Note:**
>
> You can only delete a Dimension that is in Draft stage. The Actions Menu does not display the Delete action for an approved dimension.

3.1.1.2 Register a Key Processing Dimension

Key Processing Dimensions have the following features:

- Accessible as modeling dimensions for all of the Cloud Service Analytical Engines.
- Expressed as columns in nearly all of your Business Fact Tables.
- Support both attributes and hierarchies.

Metadata for Key Processing Dimensions is stored in four tables:

- A base table (For example, **DIM_<Dimension Name>_B**)
- A translation table (For example, **DIM_<Dimension Name>_TL**)
- An attribute table (For example, **DIM_<Dimension Name>_ATTR**)
- A hierarchy table (For example, **DIM_<Dimension Name>_HIER**)

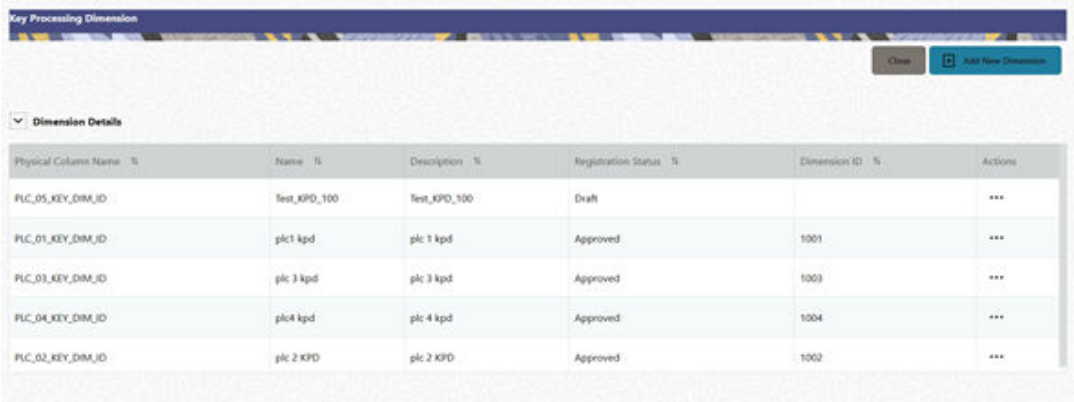
Base tables store basic information about each Dimension Member and Translation Tables store names and descriptions for each Dimension Member in multiple languages.

Attribute Tables store one or many attribute values for each Dimension Member. Hierarchy Tables store one or more hierarchies for each dimension (you may define as many hierarchies as you wish for any dimension that supports hierarchies).

The DM Extension Module enables you to create Custom Dimensions as required by the business. To register a Key Processing Dimension:

1. Navigate to the summary screen, and click the **Key Processing Dimension** tile to display the Key Processing Dimension summary screen.

Figure 3-2 Key Processing Dimensions summary screen



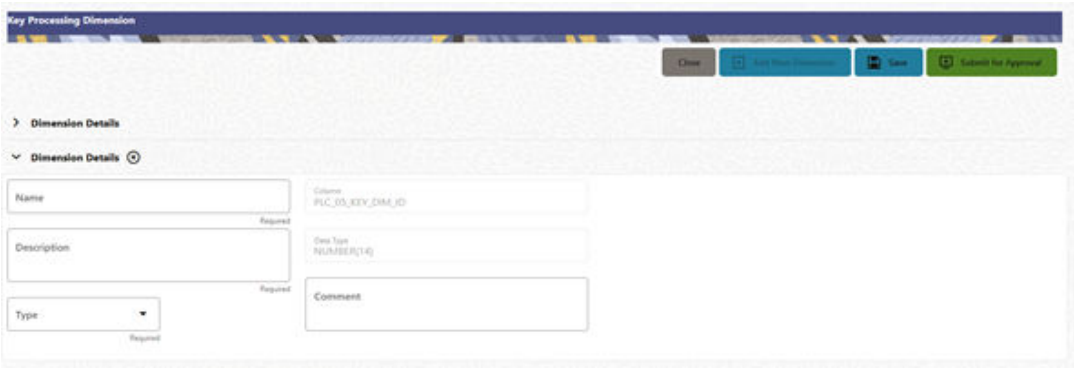
The summary screen displays the summary of existing Key Processing Dimensions with the details Physical Column Names, Name, Description, Registration Status, Dimension ID, and Actions icon.

The Actions icon displays the **View** button. You can click the **View** button and see the Dimension Details in View Only mode.

The registration of a dimension happens after the dimension is approved. The Dimension ID is displayed only for the approved dimensions.

2. Click **Add New Dimension** to collapse the Dimension Details summary and to display the dimension details.
When you click **Add New Dimension**, the UI displays the **Save** and **Submit for Approval** buttons.

Figure 3-3 Key Processing Dimension screen



3. Enter the following details:
   - **Name**: This is a mandatory field. Specify the required logical name of the dimension.
   - **Description**: This is a mandatory field. Specify the required description of the dimension.
   - **Type**: This is a mandatory field. Select a relevant Dimension Type.
     - **Product** (Prod): Select this option if you want to use the placeholder Dimension to define Business Rules and Assumptions.
     - **Organization** (Org): Select this option if you want to use the Placeholder Dimension to define a new Organization structure.

  - **Other**: Select this option if you want to use the placeholder Dimension for any other purpose.

- **Comment** Specify the required maker/checker comment. Note that special characters *, newline, and double quotes are not allowed.

The **Details** section displays the Physical Column and Data Type information that the dimension uses for user reference. As and when a registration is successful and the physical column is utilized, the next registration process proceeds to take the next-in-numerical-order physical column available for registration.

4. Click **Save** to save the details. The details are saved as a Draft and displayed on the summary screen. You can change the Name, Description, and Comments later by double clicking the details.
5. Click **Submit for Approval** to send the Dimension Details for approval.
Or

Select a **Name** from the list and click the **Actions** Icon to View, Edit, Submit for Approval or Delete the key processing dimension.

> **Note:**
>
> - You can delete a registration when it is in Draft state.
> - If the selected Dimension is in Approved state, then the Actions Menu displays only View, Edit, and Submit for Approval actions.

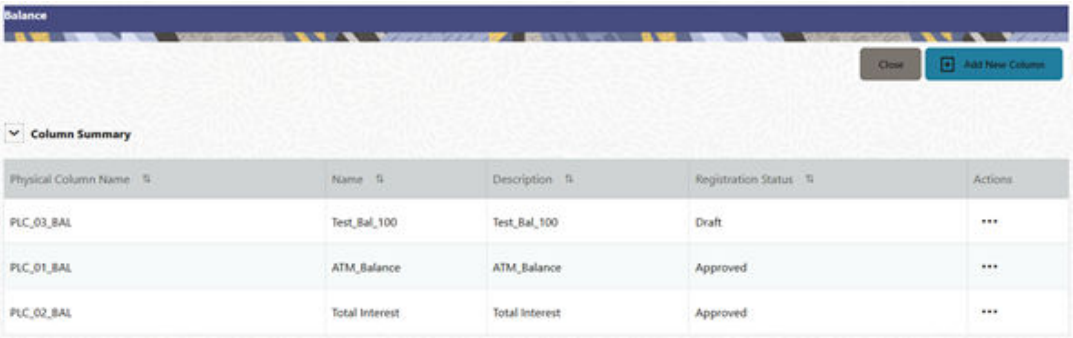
3.1.2 Registering Columns

The Placeholder Columns are categorized under the different domains to be used for different purposes.

The procedures to register the listed Columns are similar. To register a column:

1. Navigate to the Summary screen, and click a **Column** tile to display the Column Summary screen.

Figure 3-4 Column Summary screen

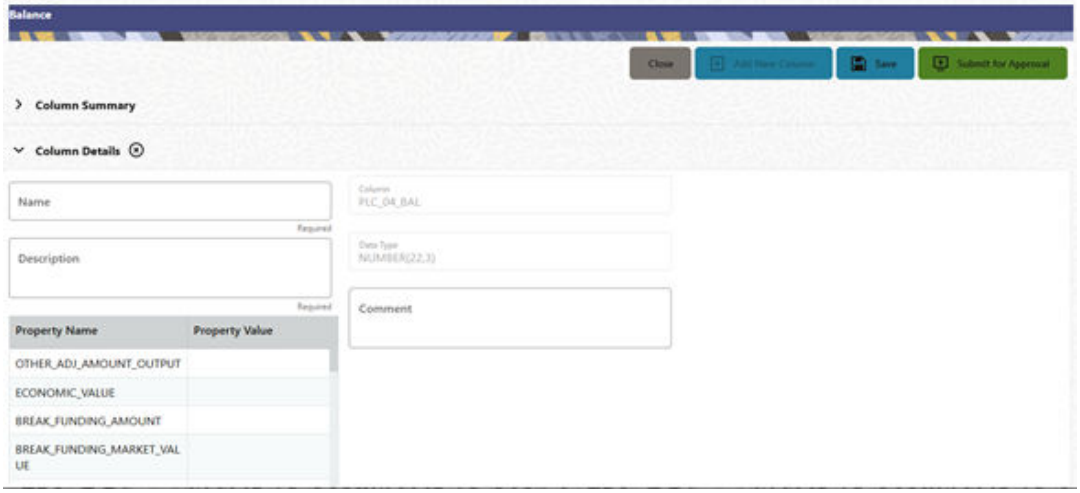


The summary screen displays the summary of existing Columns with the details Physical Column Names, Name, Description, Registration Status, and Actions icon.

The registration of a Column happens after the Column is approved.

2. Click **Add New Column** to collapse the Column Summary and to display the Column Details.
When you click **Add New Column**, the UI displays the **Save** and **Submit for Approval** buttons.

Figure 3-5 Column Screen



3. Enter the following details:
   - **Name**: This is mandatory. Specify the required logical name of the column.
   - **Description**: This is a mandatory field. Specify the required description of the column.
   - **Property Name**: This is an optional field used to select a relevant Property from the drop-down list, as applicable to the Column.
   - **Property Value**: Double click to display a drop-down where you can select Yes if it is applicable to the Column.
   - **Comment**:Specify any maker/approver comment. Note that special characters *, newline, and double quotes are not allowed.
     The **Details** section displays the Physical Column and Data Type Information that the column uses for user reference. As and when a registration takes place successfully and the Physical Column is utilized, the next registration process proceeds to take the next-in-numerical-order physical column available for registration.
4. Click **Save**. The details are saved as a Draft and are displayed on the Summary screen. You can change the Name, Description, and Comments later by double clicking the details.
5. Click **Submit for Approval** to send the column details for approval.
OR

   Select a **Name** from the list and click the **Actions** icon to View, Edit, Submit for Approval, or Delete the Column. Editing, Submitting for Approval, or Deleting procedures are similar to Dimension Edit, Submit for Approval, or Delete procedures.

> **Note:**
>
> - You can delete a registration when it is in Draft state.
> - If the selected Column is in *Approved* state, then the Actions menu displays only View, Edit, and Submit for Approval actions.

Domain Types

The below domain types are available for each of the Cloud Service:

Table 3-1 Domain Types

Profitability and Balance Sheet Management Cloud Service Domain Types	Accounting Standards Cloud Service Domain Types	Climate Change Analytics Cloud Service Domain Types
• DATE • RATE • VOLUME • CHAR • LONG_DESCRIPTION • FLAG • BALANCE	• DATE • RATE • VOLUME • CHAR • LONG_DESCRIPTION • FLAG • BALANCE • SHORT_NAME • SHORT_NUMBER • SHORT_DESCRIPTION • CODE_CURRENCY • PERCENT • LOCALE_CD • TIMESTAMP • NAME • LEAF • OBJECT_ID • SYSTEM_IDENTIFIER	• BALANCE • CHAR • CODE • DATE • FLAG • LEAF • NUMBER • RATE • PERCENT • LONG_DESCRIPTION • SHORT_DESCRIPTION • COUNTERPARTY_BALANCE • COUNTERPARTY_RATE • COUNTERPARTY_PERCENT • COUNTERPARTY_CHAR

3.1.3 Registering a Management Ledger

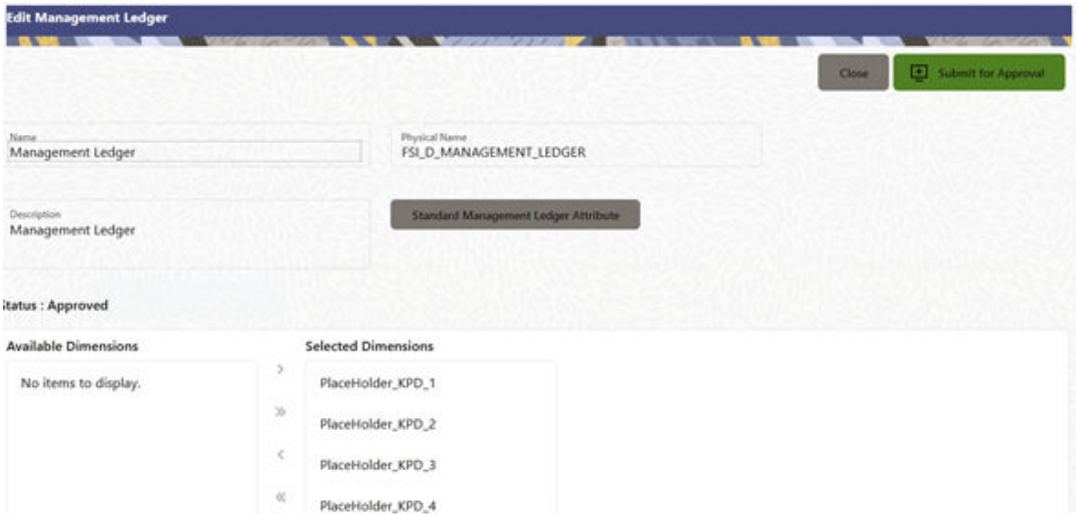
This is applicable only to Profitability and Balance Sheet Management Cloud Services.

PBSM Cloud Service is contains the default Management Ledger (FSI_D_MANAGEMENT_LEDGER). However, you can add up to five other Management Ledgers to the Service.

To view and edit the Management Ledger:

1. Navigate to the Summary screen, and click the **Management Ledger** tile to display the **Edit Management Ledger** screen.

Figure 3-6 Edit Management Ledger Screen



This screen displays the following details of the Management Ledger as follows:

- **Name** (non-editable)
- **Physical Name** (non-editable)
- **Description** (non-editable)

> **Note:**
>
> When you create the custom Key Processing Dimensions, these dimensions are available for mapping to Management Ledger table and available in the **Available Dimensions** box. You must select them and move to **Selected Dimension** box, then send for approval. After approval, you can see the custom Key Processing Dimensions in the Data File Specification UI while loading the data.

2. Click **Standard Management Ledger Attribute** to collapse and see the available Standard Dimensions, Standard Columns, and Approved Dimensions.

   The Standard Dimensions section shows the Key Processing Dimensions that are available OOTB for the Management Ledger. In addition to this, the screen enables the selection of custom Key Processing Dimensions for the Management Ledger through a shuttle box component that displays the registered custom dimensions in the Available Dimensions and the Selected Dimensions boxes. You can select from the **Available Dimensions** box and move them to the **Selected Dimension** box using the **Move** button. Additionally, you can remove the Selected Dimensions by clicking the **Move Back** button.

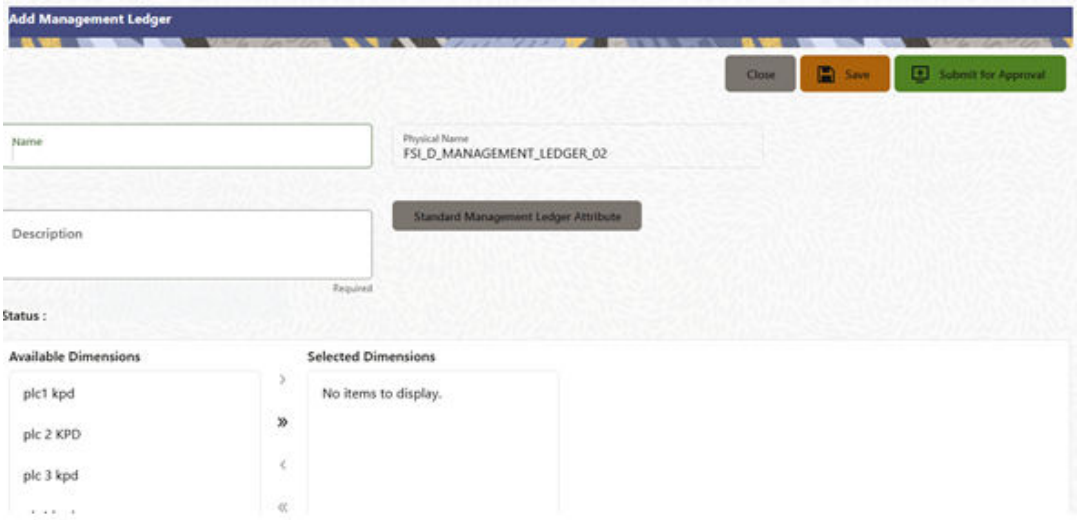
   The Standard Columns comprises of the OOTB Ledger-level Simple Dimensions and Admin Columns. The Approved Dimensions shows the list of Custom Dimensions approved for the Management Ledger.

3.1.3.1 Adding a Management Ledger

To add a new Management Ledger, perform the following steps:

1. Navigate to the Summary screen, and click the **Add Management Ledger** tile to display the Add Management Ledger screen.

Figure 3-7 Add Management Ledger Screen



2. Enter the following details:
   - **Name**: This is a mandatory field. Specify the logical name of the Management Ledger.
   - **Description**: This is a mandatory field. Specify the description of the Management Ledger.
3. Select the applicable Dimensions from the **Available Dimensions** box and click the **Move** button to move them to Selected Dimensions box. The selected Dimensions are included as the additional activated Key Processing Dimensions for the Management Ledger.
4. Click **Submit for Approval** to send the column details for approval.

   The details are sent to the Supervisor or Approver for approval. The newly added Management Ledger is displayed on the summary screen in a new tile.

> **Note:**
>
> - You can delete a registration when it is in Draft state.
> - If the selected Management Ledger table is in *Approved* state, then the Actions Menu displays only View, Edit, and Submit for Approval actions.

3.1.4 Approving or Rejecting the Registrations

The Supervisor or Approver can see the Dimensions or Columns or Management Ledgers that are ready for approval on the Data Model Extension summary screen.

To approve the Dimensions, Columns, and Management Ledgers, perform the following steps:

1. Navigate to the **Data Model Extension** summary screen.

Figure 3-8 Data Model Extension Summary Screen

The Dimensions and Columns that are ready for approval are displayed in one tile and the Management Ledgers that are ready for approval are displayed in another tile against the **Pending Approval** Table.

2. Click on any Tile to open to the **Pending Dimension** and **Column Registration** screen or **Approve Management Ledger Registration** screen.
3. Enter a comment and click the **Approve** or **Reject** buttons.
4. Select **OK**.
   a. The approved Dimension or Column or Management Ledger is displayed in the summary screen with *Approved* status.
   b. Select **Cancel** to keep the Dimension or Column or Management Ledger in a Pending for Approval Status.
5. Click **Reject** to reject the registration. Complete the approval process. The Registration will be marked with status Rejected in the summary screen.
6. After it is approved or rejected, the registration is available for further modification by the Maker and can be submitted again.

   A registration cannot be deleted after it has passed the Draft State and is currently in Pending, *Approved* or *Rejected* state.

> **Note:**
>
> After approval, you can use them in the Data File Specifications and start loading the data in the selected placeholder Columns and Tables. The physical columns and tables pre-exist in the Data Model and mapped in loaders, registration just enables them for your use. Hence, apart from registering and approving them no other change is expected to be be performed.

3.2 Data File Administration

This topic covers the following sub-topics:

- #unique_115: The Data File Specification module helps you to load the data from your systems to the PBSM Cloud Services.
- Data File History: The Data File History UI allows you to see the data files that are uploaded to the staging tables and their status.
- File Upload and Download Utility: The File Upload and Download Utility enables you to upload or download files to the Object Store.

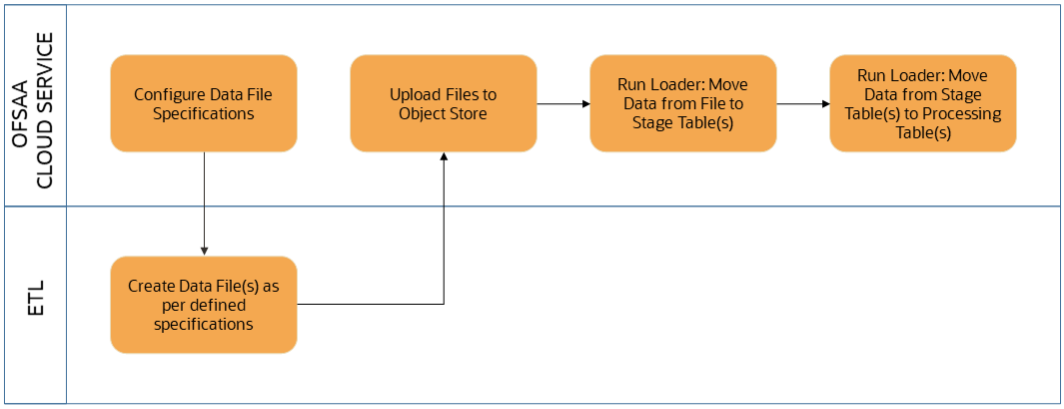
3.2.1 Data File Specification

The (OFSAA or Oracle) Cloud Services use following categories of data:

- Account or Instrument
- Management Ledger
- Transaction Summary
- Dimensions and Hierarchies
- Market data like Interest Rate, Currency Exchange Rate

The following illustration depicts the process of loading data from your systems into the Cloud Services:

Figure 3-9 Loading External Data



Oracle Cloud Services uses Oracle's Object Store Service to transfer data between your machine/laptop and its databases. Object Storage Service allows storing the files as objects in a highly secure, scalable, and durable way. Files can be uploaded through a Web Console; however, it is possible to do so only with files up to 1 GB.

Uploaded Data Files are temporarily stored in the Object Storage for Data Loaders to read and move them to the corresponding Database Tables for further use by the individual services.

Before the files can be created and uploaded, format, column order and other properties must be defined using Data File Specifications User Interface. This chapter discusses the supported formats and contents of the data file that is being imported into the Object Storage.

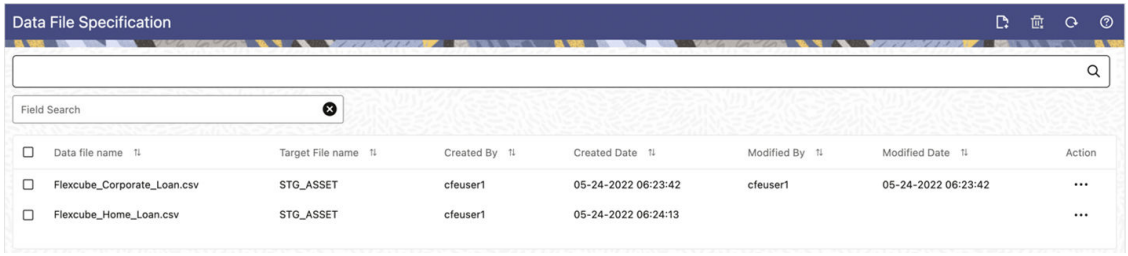
For information on uploading files, see the File Upload and Download section. For information on running the Data Loaders, see the Data Loaders section.

The three supported formats for the Data Files are TXT, DAT, and CSV. These files contain the name of the table for which the specifications are being created.

Ensure that there are no duplicate records in a single Data File. If there are duplicate records, then the Data File Upload results in a failure.

To open the Data File Specification Window, navigate to the **Data Management Tools**, select **Data File Administration**, and then select **Data File Specification** to display the Data File Specification Summary Page.

Figure 3-10 Data File Specification Summary Screen



The Summary Page of Data File Specification displays the Search Criteria Pane, Specific Search Pane, and the already created Data Files and their details.

3.2.1.1 Searching for a Data File Specification

There are two Search Panes provided to search the Data Files on the Summary Page.

To search the Data File:

1. Click the **Search** icon on the Search pane to collapse (display) the Criteria Window.
2. Data File Name and/or Target File Name and click **Search** to display the Data File Names that match the criteria.
3. Click **Cancel/Reset** 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 Data Files that meet the search criteria with the following details:
   - **Data File Name**: The name of the Data File.
   - **Target File Name**: The Target File Name.
   - **Created By**: Displays the Name of the user who created the Data File.
   - **Created Date**: Displays the Date and Time at which the Data File was created.
   - **Modified By**: Displays the Name of the user who last modified the Data File.
   - **Modified Date**: Displays the Date and Time at which a Data File was last modified.
5. Click on the **Action** icon against the Data File Name to do further actions as follows:
   - **View**: Click View to view the contents of a Data File in read-only format.
   - **Edit**: Click the Edit icon to modify a previously saved Data File. Note that you cannot change the File Name.
   - **Save As**: Click Save As to create a copy of the selected Data File.
   - **Delete**: Click Delete to delete the selected Data File.

6. Click on the **Action** icon against the Data File to do further actions **View**, **Edit**, **Save As**, and **Delete** on the selected Data File.

The other method to search a Data File is using the **Field Search** pane. You can enter any one of the details of a Data File and press the **Enter** key to display the details of the Data File.

3.2.1.2 Creating a Data File Specification

The Data File usually contains the Name of the Physical Table on which the specifications are being created and the columns included in the file.

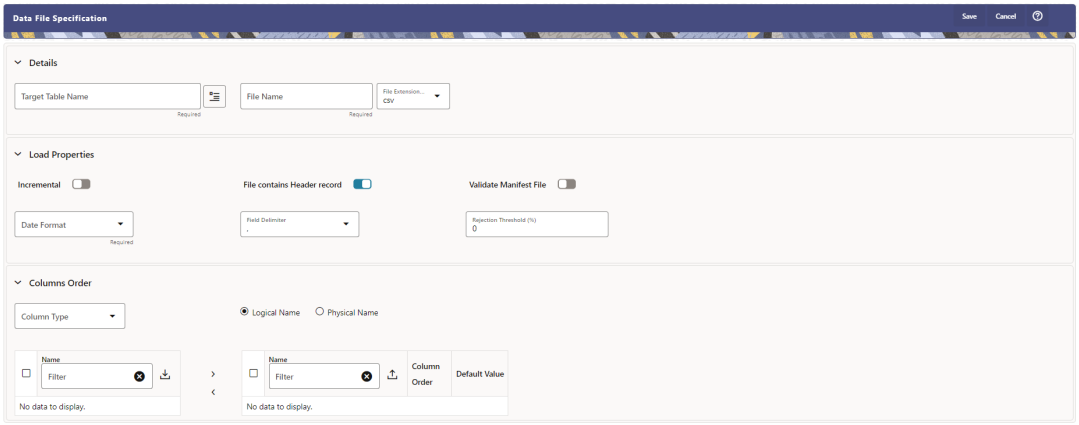
For the complete list of available columns, see the Data Requirements as follows:

- Profitability and Balance Sheet Management Cloud Service: Doc ID: 28694909.1
- IFRS 9 Cloud Service: Doc ID: 2959143.1

To create a new Data File Specification:

1. Navigate to the Data File Specification summary page and click the **Add** icon to open the Data File Specification window.

Figure 3-11 Data File Specification



2. Under the Details section of the screen, enter the following details:
   a. Click on **Target Table Name** to open a list **Category – Table Names**. The tables are categorized into different groups and are as follows:
      - Transaction Summary
      - Ledger
      - Others
      - Schedule o Instruments

      Each of the above **Categories** lists the **Tables** available for data loading. The list of categories is dependent on the Metadata from the Seeded Tables that come with the various Cloud Services and may differ from that shown above based on the services you have subscribed.
   b. Select a **Table** from the list for which you want to create the Data File Specification.
   c. Enter a unique **Name** for Data File Specification with an extension of the file format. The formats supported are TXT, CSV, and DAT types.
3. Under the **Load Properties** Section of the screen, enter the following details:

a. Select the **Incremental** toggle switch if the data in the file is incremental. If the data is a complete load, then do not select this switch.
This flag identifies if the Data File is incremental or fresh accounts. In the case of incremental accounts, if account 1 is loaded as part of the Data File 1 and needs a correction. In that case, the account is corrected and will be uploaded as part of Data File 2. In this case, Data File 2 is the incremental file.

b. Select **File contains Header record** toggle switch if the file contains a Header Record.

c. Select **Validate Manifest File** toggle switch if you want to validate the data in the Data File. This validation checks the Checksum of the file, the number of records that are being loaded from the file and other additional details such as Date Format and so on. To use this toggle switch, a prerequisite is to generate a manifest file for the Data File that is being created and it must be uploaded using the File Upload process. For more details, see the File Upload and Download section.
This validation checks the Checksum of the file using **MD5Sum** algorithm, the number of records that are being loaded from the file and other additional details such as Date Format and so on.

   This is an optional step. However, if you want to generate a manifest file in JSON format, then enter the following details and save it as a .manifest file. A sample JSON file format is as follows:

```
{"file_name":"test.dat","as_of_date":"2022-03-24","checksum":"2587cdb6a2b8
7835c6adfce627671486","record_count":"10","rejection_threshold":"0"}
```

> **Note:**
>
> Ensure that the name of the manifest file is same as the Data File with .manifest extension. For example, if the Data File Name is input_20241210_asset.csv, then the manifest file must be named input_20241210_asset.csv.manifest.

Table 3-2 MANIFEST File Details

Property Name	Notes
file_name	Full name of the file, without the leading path. Not validated; Only for information purposes.
as_of_date	Date for which file contains the data; Not validated; Only for information purposes.
checksum	Mandatory. The checksum of the file will be validated before loading commences.
record_count	Mandatory. The number of records in the file (ignoring header-record); will be validated after SQL*Loader completes.
rejection_threshold	Limit for % of records rejected, for calling the loading as “failed”. This can also be set from the UI.

d. Select the **Date Format** from the drop-down list to indicate the Date Format used in the Data File.

e. Select the **Delimiter** used in the Data File.

f. Select the **Rejection Threshold**. You should enter a number that is greater than or equal to zero.

The Rejection Threshold is used to check the allowed percentage of rows that can be rejected in a Data File. As an example, if you define a 10% Rejection Threshold for a Data File that has 1000 rows, then the Data File Upload fails if more than 100 rows are rejected. If the number of rows rejected is less than 100, then Data File Upload succeeds.

4. Under the **Columns Order** section of the screen, enter the following details. If you enter zero, then none of the records from the Data File should fail.

   a. Select the relevant option for Column Type from the following options:

      - **Key Columns**: The Key Columns are the primary keys of the record. A table displays the Key Columns available for the selected Target Table Name. By default, the primary keys will be selected.
      - **Other Columns**: If you select the Other Columns, all remaining columns (key dimensions, simple dimensions, dates, measures, and so on) for the selected Target Table are displayed. Select the applicable columns from the list and click the Move button to display them in the table on the right-hand side.

   b. There are two option to add other columns to the definition as follows:

      i. Within the selected Column Type, Column Names can be re-ordered by dragging and dropping. The columns are always ordered by their type, that is, Key Columns will appear before the Dimension Columns and Dimension Columns will always appear before the Other Columns.

      ii. You can download the template available in the left pane, arrange the columns as required in the downloaded file and upload to the right pane.

   After saving a definition, if you add a new Dimension Column then it will appear in the order before the remaining Other Columns.

   For example, assume that the initial definition is saved with the below columns:

Figure 3-12 Column Preview

After this, if a new Dimension Column (say Product Id) is selected, it will push the Other Columns down in order.

Figure 3-13 Columns Preview

Column Preview

Logical Name Physical Name

Name	Default Value	Column Order
Account Number		1
As Of Date		2
General Ledger Account Code		3
Ifrs9 Stage Code		4
Product Code		5
Account Close Date		6
Accrual Basis Code		7
Accumulated Basis Risk Charge Credit		8

The same order must be followed while preparing the Data File.

The default value for each Column can also be given in the table. If the Column Value is null in the Data File, then the default value is used.

c. Select Logical Name or Physical Name to display the logical or physical names for the columns in the table.

5. Click **Save**. The newly created file will be listed on the Data File Specification summary screen.
6. On the summary screen, click on the **Action** icon against the File Name to perform further actions **View**, **Edit**, **Save as**, and **Delete**.

After you create the Data File, you must upload the file into the Object Store using the File Upload and Download option. If you have created a MANIFEST file for the Data File, you must upload the MANIFEST file too. For more information and procedure to upload or download the file, see the File Upload and Download section.

3.2.1.3 Creating the Data File

After the Data File Specification is defined, follow the below mentioned guidelines to prepare the Data Files:

- Columns to be included in the Data File must be as per the Data File Specification.
- Name of the Data File can be user defined. The following example gives an idea of what the Data File Name can be:
  - Data File Specification Name is “Asset.dat”
  - The As of Date is 06-July-2022
  - Name of file uploaded to object store can be like “input_20220706_loanasset.dat” or “input_20220706_asset.dat”

  The prefix (input_yyyymmdd) is mandatory in actual file name when uploaded to Object Store but is not required while you enter the name in the Task Parameters UI against the Data File Name.
- Unique Data Validations:
  - Instrument Data Files: Account Numbers must be unique across the data files for a single As of Date.
  - Management Ledger Data Files: The combination of KPDs and Simple Dimensions must be unique across the data files for a single As of Date.

  - Transaction Summary Data Files: The combination of Account Numbers and KPDs must be unique across the data files for a single As of Date.
- Permitted Delimiters are comma (,) and pipeline (|).
- Data Validations:
  - Number fields: only numbers and dot (.) are allowed.
  - Description fields: comma (,) pipeline (|), single quotes (‘’), and double quotes (“ “) are not supported.
  - Any nullable fields which are mapped in the Data File Specification definitions should not skipped in the Data File.
  - The column order in the Data File should be in sync with the order defined in the Data File Specification definition.
  - Field Enclosures: Only double quotes (“”) are considered as Field Enclosures.

See the following sample files for your reference:

- input_20151009_asset.dat
- input_20150330_ASSETTXN.dat
- input_20220110_STGML.dat

For more information about the data required by the Profitability and Balance Sheet Management Cloud Services, see the Data Requirements available at the Doc ID: 2869409.1.

3.2.1.4 Data Loaders

Oracle Financial Services Cloud Service’s Data Loaders are used to move the data from one stage to another stage and in turn update the underlying Database Tables.

Oracle Financial Services Cloud Services support the following types of Data Loaders:

- **Dimension Data Loaders**: The Dimension Data Loaders are used to populate the Dimension Members, Attributes, and Hierarchies from the Staging Dimension Tables to the Dimension Tables registered with the Cloud Services.
- **Instrument Data Loaders**: The Instrument Data Loaders are used to move the data from the files to the staging instrument tables.
- **Management Ledger Data Loaders**: The Management Ledger Data Loaders are used to move the data from the files to the staging Ledger tables and then to the processing Ledger tables.
- **Transaction Summary Data Loaders**: The Transaction Summary Data Loaders are used to move the data from the files to the staging Ledger tables and then to the processing Transaction Summary tables.
- **Exchange Rate Data Loader**: The Exchange Rate Data Loader allows the user to load the Exchange Rate Data required by the Cloud Services to enrich the data.

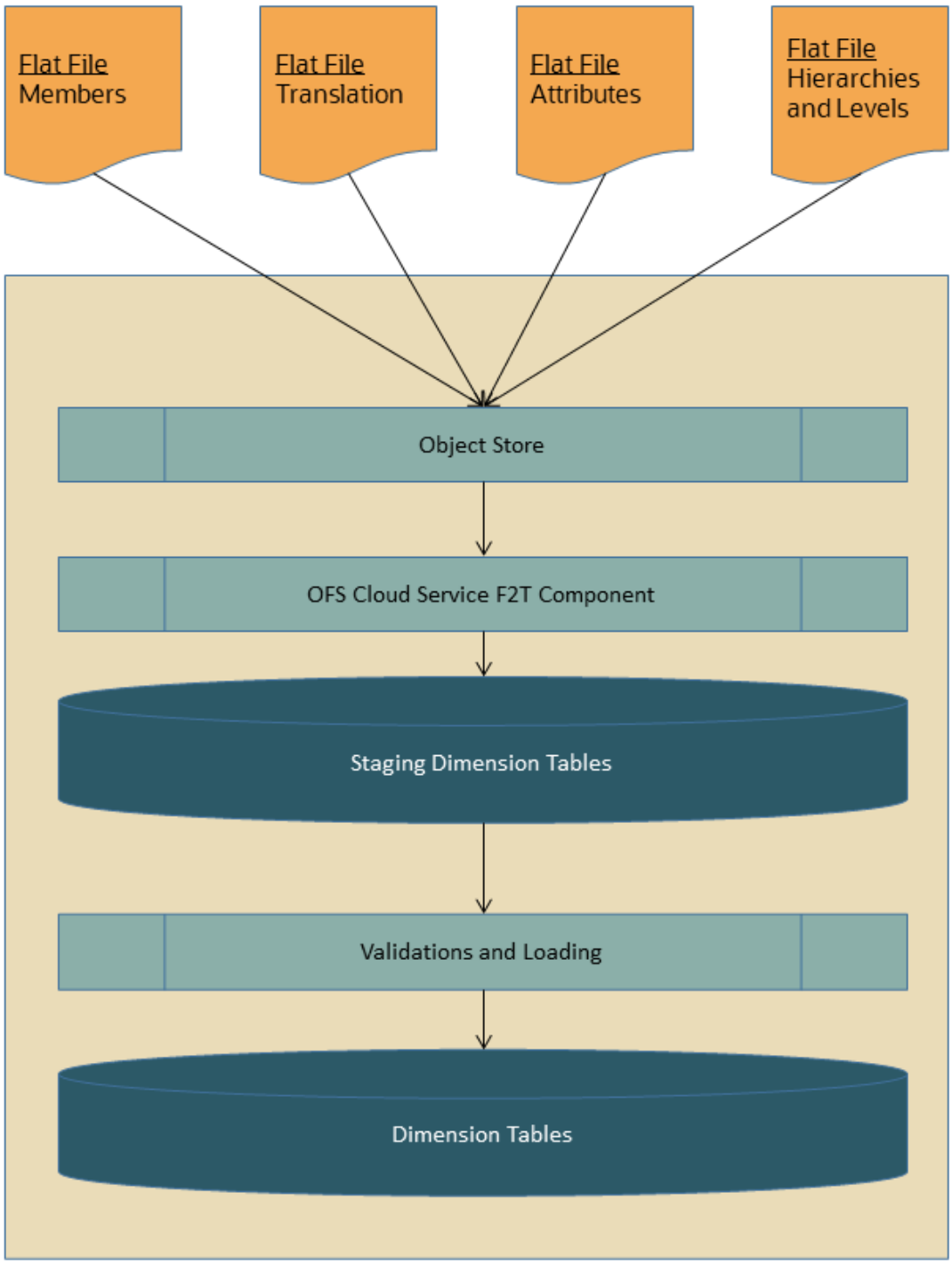
3.2.1.4.1 Dimension Data Loader

The Dimension Loader procedure populates Dimension Members, Attributes, and Hierarchies from Staging Dimension Tables into the Dimension Tables registered with the Cloud Services. You can view the Members and Hierarchies loaded by the Dimension Loader though the Cloud Service screens.

The Data File Specification is not applicable to Dimension Data Loaders. The file format and the file names are static in nature.

The following illustration depicts the process of Dimension Loading.

Figure 3-14 Dimension Loading Process



The Dimension Loader is used to:

- Load the Dimension Members and their Attributes from the Staging area into the Dimension Tables that are registered with OFS Cloud Service framework.

- Create Hierarchies for Key Dimensions in the Cloud Service.
- Load Hierarchical relationships between Key Dimension Members within the Hierarchies from the Staging area into the Cloud Service.

The following are the features of Dimension Loader:

- Loading Simple Dimensions from Staging Tables.
- Multiple Hierarchies can be loaded from Staging Tables.
- Validations of Members and Hierarchies are similar to that of being performed within the Cloud Service Screens.

Before you start the Dimension Loader, you must upload the Data Files that have the Dimension details.

As part of the File Definition, it is required Dimension Identifier for both Key and Simple Dimensions.

To get the correct DIMENSION ID to be used for the data file definition, you should use the SQL Query Browser and following query under OFSAAMETA schema the REV_DIMENSIONS_B table:

```
SELECT
dimension_id,
member_b_table_name,
member_tl_table_name,
dimension_active_flag,
simple_dimension_flag,
user_defined_flag,
write_flag,
dimension_editable_flag,
key_dimension_flag
FROM
ofsaameta.rev_dimensions_b
WHERE
dimension_active_flag = 'Y';
```

Then for the dimension table desired, available in REV_DIMENSIONS_B.MEMBER_B_TABLE_NAME or REV_DIMENSIONS_B.MEMBER_TL_TABLE_NAME table columns, the End User should pick up the correct value displayed in REV_DIMENSIONS_B.DIMENSION_ID to be used for correct input file definition.

The following sections list the sample files that you can use to build the Dimension Data. The name of the Data Files must be same as mentioned below and the File Extension must be .DAT. Click on each Data File Name to open a Sample Data File.

3.2.1.4.1.1 For Key Dimensions

The following is a list of sample files that you can use to build the Dimension Data.

The name of the Data Files must be same as mentioned below and the file extension must be .DAT. The value of column HIERARCHY_CODE must not contain space in files STG_DIMENSIONS_HIER_INTF, STG_HIERARCHIES_INTF and STG_HIERARCHY_LEVELS_INTF. HIERARHY_CODE must be in capital letters. Click on each Data File Name to open a Sample Data File.

Stage Dimension Loaders (Task 1):

- input_stg_dimensions_attr_intf.dat
- input_stg_dimensions_b_intf.dat
- input_stg_dimensions_tl_intf.dat
- input_stg_dimensions_hier_intf.dat

Stage Hierarchy Loaders (Task 2):

- input_stg_hierarchies_intf.dat
- input_stg_hierarchy_levels_intf.dat

> **Note:**
>
> Any column description that contains a ",", then it should be enclosed within "" (double quotes). For example, Account, Type should be "Account, Type".

To load the Dimensions:

1. Define a new Batch and save it.
2. Add the following Tasks to the above Batch:

Table 3-3 Dimension Loading Process Tasks

Task Code	Task Name	Component	Parameters	Parent Task
1	Stage Dimension Loader	Stage Dimension Loader	All parameters are automatically generated.	
2	Stage Hierarchy Loader	Stage Hierarchy Loader	All parameters are automatically generated.	1

Table 3-3 (Cont.) Dimension Loading Process Tasks

Task Code	Task Name	Component	Parameters	Parent Task
3	Stage DRM Loader	Stage DRM Loader	• **Dimension Name**: Select the relevant one or more dimensions. • **Sync Stage and Dimension**: – **Yes**: The record(s) that is/are already present will be overwritten by the incoming dimension loader. – **No**: The new records will be merged to the existing records. • **Force Member Delete**: This is used only when the above flag is Yes. – **Yes**: This allows you to delete a members even if is referred in hierarchies. – **No**: No records will be deleted.	2

Note:

The above Tasks must be executed in the same order.
The **File to Stage** task must precede the **Stage to Processing** task in a batch.

The Stage DRM Loader allows you to select a Dimension.

3. Execute the Batch.

> **Note:**
>
> This method of loading dimensions will be deprecated in future releases. Recommended approach is in the following section.

Dimension Loader with ZIP File Support

To to upload the Dimension data using a zip file:

1. Create a Folder.
2. Follow the naming convention for the DAT files as follows and save them:
   - DIMENSIONS_ATTRIBUTES
   - DIMENSIONS_BASE
   - DIMENSIONS_HIERARCHIES
   - DIMENSIONS_TRANSLATION
   - HIERARCHIES
   - HIERARCHY_LEVELS
3. Place all the DAT files inside the folder.
4. Zip the folder.
5. Create a Batch.
6. Create a Task with the Component name as **Dimension and Hierarchy Loader**.
7. Enter the Zipped Folder Name along with the extension. For example, DIMENSIONS.ZIP.
8. Execute the Batch.

For detailed instructions on Creating a Batch, Defining a Task, Execute the Task, and Schedule a Batch, see Scheduler Services.

3.2.1.4.1.2 For Simple Dimensions

The following is a list of sample files that you can use to build the Dimension Data.

The name of the Data Files must be same as mentioned below and the File Extension must be .DAT. Click on each Data File Name to open a Sample Data File.

Stage Dimension Loaders (Task 1):

- input_stg_dimensions_b_intf.dat
- input_stg_dimensions_tl_intf.dat

> **Note:**
>
> Any column description that contains a ",", then it should be enclosed within "" (double quotes). For example, Account, Type should be "Account, Type".

To load the Dimensions, perform the following steps:

1. Define a new Batch and save it.
2. Add the following Tasks to the above Batch:

Table 3-4 Dimension Loading Process Tasks

Task Code	Task Name	Component	Parameters	Parent Task
1	Stage Dimension Loader	Stage Dimension Loader	All parameters are automatically generated.	
2	Stage DRM Loader	Stage DRM Loader	• **Dimension Name**: Select the relevant one or more dimensions. • **Sync Stage and Dimension**: – **Yes**: The record(s) that is/are already present will be overwritten by the incoming dimension loader. – **No**: The new records will be merged to the existing records. • **Force Member Delete**: This is used only when the above flag is Yes. – **Yes**: This allows you to delete a members even if is referred in hierarchies. – **No**: No records will be deleted.	1

> **Note:**
>
> The above Tasks must be executed in the same order.
> The **File to Stage** task must precede the **Stage to Processing** task in a batch.
>
> The Stage DRM Loader allows you to select a Dimension.

3. Execute the Batch.

> **Note:**
>
> This method of loading dimensions will be deprecated in future releases. Recommended approach is in the following section.

Dimension Loader with ZIP File Support

To to upload the Dimension data using a zip file:

1. Create a Folder.
2. Follow the naming convention for the DAT files as follows and save them:
   - DIMENSIONS_BASE
   - DIMENSIONS_TRANSLATION
3. Place all the DAT files inside the folder.
4. Zip the folder.
5. Create a Batch.
6. Create a Task with the Component name as **Dimension and Hierarchy Loader**.
7. Enter the Zipped Folder Name along with the extension. For example, DIMENSIONS.ZIP.
8. Execute the Batch.

For detailed instructions on Creating a Batch, Defining a Task, Execute the Task, and Schedule a Batch, see Scheduler Services.

3.2.1.4.1.3 Clear and Back up Dimension Data

This process helps you to clear or delete the existing Dimension Data from the relevant Dimension tables using the Scheduler Services.

Before clearing the data from the Dimension tables, the service creates a back up of the table.

To clear the Dimension Data:

1. Navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Batch**.
2. Create the Batch and save it.
3. Navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Task**.
4. Select the created Batch and create a Task with **Clear Dimension Members** as Component.
5. Select the Dimension Name that you want to delete. You can select one or more Dimension Names.

6. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.
   The service first creates a backup of the existing Dimension table and then deletes the Dimension Member entries for the selected Dimensions.

While deleting the data from the tables, there are no validations. The back up files are suffixed with As Of Date and Current Time Stamp.

The following table gives the sample actual and backed up table names:

Table 3-5 Sample Table Names

Dimension Type	Actual Table Name	Backup Table Name
Simple Dimension	FSI_ACCRUAL_BASIS_CD	FSI_ACCRUAL_BASIS_CD_<AS_OF_DATE>_<CURRENTTIMESTAMP>
	FSI_ACCRUAL_BASIS_MLS	FSI_ACCRUAL_BASIS_MLS_<AS_OF_DATE>_<CURRENTTIMESTAMP>
Key Dimension	DIM_COMMON_COA_ATTR	DIM_COMMON_COA_ATTR_<AS_OF_DATE>_<CURRENTTIMESTAMP>
	DIM_COMMON_COA_B	DIM_COMMON_COA_B_<AS_OF_DATE>_<CURRENTTIMESTAMP>
	DIM_COMMON_COA_HIER	DIM_COMMON_COA_HIER_<AS_OF_DATE>_<CURRENTTIMESTAMP>
	DIM_COMMON_COA_TL	DIM_COMMON_COA_TL_<AS_OF_DATE>_<CURRENTTIMESTAMP>

3.2.1.4.1.4 Data Preparation Guidelines

While creating the data files, ensure the following:

- Ensure the data files are in TXT, DAT, or CSV formats.
- Ensure that there are no duplicate records in a data file.
- Data file names are in the prescribed format.
- Use only comma (,) and/or pipeline (|) as delimiters.
- Only double quotes (“”) are used as Field Enclosures.
- The language code must be as per BCP 47 format. For example, **en-US**.
- In the file for hierarchies, there must be no empty space or special characters for HIERARCHY_CODE.

3.2.1.4.2 Instrument and Ledger Data Loaders

After the Data Files are uploaded to the Object Store, the Data Loaders are used to move the data from the files to the standing tables and then to processing tables.

File to Stage

To load the Data to Staging Tables:

1. Define a new Batch and save it.
2. Add the following Tasks to the above Batch:

Table 3-6 Data Loader – File to Stage Data

Task Code	Task Name	Component	Parameters
1 *	Custom Task Name *	Stage Data Loader	**Table Name**: select the stage table name from the available list. **Data File Specification**: select the data file specification definition from the available list. **Data File Name**: free text where file name uploaded to the object store to be provided. This is optional. • When the Data File Name is not provided, Stage Loader fetches the file from object store with the selected Data File Specification name. • If name of file is different from Data File Specification, then put exact file name including extension but excluding the prefix. **Note:** You can also zip the file and then upload. Ensure the file name in the zip file is inline with the Data File Name in the Task Parameters UI.

* Task Code and Task Name in the above table are for illustration purpose only. You can name them as per your requirements.

Table 3-7 Sample Data File Specification and File Name

Data File Specification	Data File Name in Task Parameters UI	File in Object Store
Asset_Loan.dat	Asset_Loan_1.dat	input_yyyymmdd_Asset_Loan_1.dat
Asset_Loan.dat	Not entered	input_yyyymmdd_Asset_Loan.dat

To upload multiple files using same Data File Specification, add separate tasks for each file within the batch.

3. Execute the Batch for the As-of-Date used in the Data File.
For detailed instructions on Creating a Batch, Defining a Task, Execute the Task, and Schedule a Batch, see Scheduler Services.

Profitability and Balance Sheet Management Cloud Service - Stage to Processing

To load the Data from Staging Tables to Processing:

1. Define a new Batch and save it.
2. Add the following Tasks to the above Batch:

Table 3-8 Data Loader – Stage to Processing Data

Task Code	Task Name	Component	Parameters
1 *	Custom Task Name *	Select the relevant Component depending on the Data that you want to process. The options are: • Instrument Data Loader • Ledger Data Loader • Transaction Summary Loader	**Stage Table**: select the stage table name from the available list. **Data File Specification**: select the Data File Specification name from the available list.

Climate Change Analytics Cloud Service - Stage to Processing

CCACS is delivered with out-of-the-box seeded batches to load the data from Staging tables to Processing tables. The user can define custom batches using the following components.

For the list of seeded batches, see the MOS page 2930308.1.

1. Add the following Tasks to the Batch:

Table 3-9 Data Loader – Stage to Processing Data

Task Code	Task Name	Component	Parameters
1 *	Custom Task Name *	Select the relevant Component depending on the Data that you want to process. The options are: • CCA Processing Loader	For CCA Processing Loader: select the stage table name and data file name.

3.2.1.4.3 Generic Data Loader

The Data Loader service allows the user to load the required data by the Cloud Service to enrich the data. In this service, first you upload the data, and then run a batch to propagate the data into the processing layer.

To load the data:

1. From the LHS menu, select **Data Management Tools**, select **Data File Administration**, and then select **File upload and download** to display the File Upload/Download screen. The File Upload/Download screen displays the list of files that are uploaded to the Object Store and displays the following details for each file:
   - **File ID**: The unique file id. This is auto generated during upload.
   - **Prefix**: The prefix added to the file name.
   - **File Name**: The name of the uploaded file.
   - **Stripe Name**: The unique identifier for storing the files.
   - **Uploaded Date**: The file upload date.
   - **Download File**: Click the Download icon to download a copy of the file.
   - **Delete**: Click Delete to delete the uploaded file.
2. Click **Drag and Drop** to browse and select a file for upload from the local directory. You can also browse to the local directory from the File Explorer and select file and drop it here.

   The File Upload/Download service supports upload of TXT, DAT, and CSV format files.

   Name of the data file must follow the format as given below:
   - A prefix as **input_yyyymmdd** where the date format is related to the As of Date (i.e., 02-May-2023 becomes 20230502).
   - As per the data that you want to upload, upload the relevant data file from the table:

Table 3-10 Data File

Data	Data File Name	Object Store File Name
Exchange Rates	stg_exchange_rates.dat	input_20230622_stg_exchange_rates.dat
Behavior Patterns	stg_behavior_pattern.dat	input_20230502_stg_behavior_pattern.dat
Payment Pattens	stg_payment_pattern.dat	input_20241024_stg_payment_pattern.dat

> **Note:**
>
> The file name is case-sensitive.

For more information about File Upload and Download, see #unique_131.

The following are the sample files for reference:

- stg_exchange_rates.dat
- input_20230701_bploaderdata.csv
- input_20241024_stg_payment_pattern.dat

3. After selecting the file to upload, click **Upload**.
   The UI displays a confirmation message *Upload successful*.
4. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Schedule Batch**.
5. Create a new Batch with a new Task with Generic Data Loader as Component.

Table 3-11 Loader Type

Seeded Batch Component	Loader Type Parameter
Generic Data Loader	Exchange Rates
Generic Data Loader	Behavior Patterns
Generic Data Loader	Payment Patterns

6. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.
7. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
8. Select the **Batch** and then select the **MISDATE** and the **Batch name**. There may be multiple executions of the Data Loader batch. Select the latest execution and click **Start Monitor**.
   The UI displays the status of the batch.

For more details about Scheduler processes, see the Scheduler Services.

3.2.1.4.4 Interest Rates Loader

The Interest Rates Data Loader allows the users to load the Interest Rate Curves that are consumed by the Oracle Financial Services Cloud Services.

Loading the Interest Rate Data consists of three tasks as follows:

- Stage Loader
- Stage Validator
- Processing Loader

To upload the Interest Rate Data file:

1. From the LHS menu, select **Data Management Tools**, select **Data File Administration**, and then select **File upload and download** to display the File Upload/Download screen.

2. Click **Drag and Drop** to browse and select a file for upload from a local directory. You can also browse to the local directory from the File Explorer, select the file, and drop it.
The File Upload/Download service supports uploading CSV format files.

   Name of the Data File must follow the format as given below:

   - A prefix as **INPUT_YYYYMMDD** where the date format is related to the As of Date (i.e., 02-October-2023 becomes 20231002).
   - A suffix as _**FILENAME.CSV**.
   - An example of Data File Name could be:
     INPUT_20231002_IRC_<DATAFILENAME>.csv.
     The order of the columns in the input file must be as follows:
     - INTEREST_RATE_NAME
     - EFFECTIVE_DATE (Date format: MM-DD-YYYY)
     - INTEREST_RATE_TERM
     - INTEREST_RATE_TERM_MULT
     - INTEREST_RATE
     - RATE_DATA_SOURCE_CODE
     - MATURITY_DATE (Date format: MM-DD-YYYY) (Mandatory for Data based Term Point enabled IRC)

   For more information about File Upload and Download, see File Upload and Download Utility section.

3. After selecting the file to upload, click **Upload**.
The UI displays a confirmation message: Upload successful and insert the data into the Stage tables.

   At this stage, the **Stage Validation** begins and performs the following checks:

   - **Records in the Stage table**: Stage Validation fails when no records are found in the uploaded file and no execution happens after this point.
   - **IRC definitions exist**: If there are single IRC definitions in the file, the validator passes and displays a warning message along with the Interest Rate Code for which definitions are missing.
   - **Invalid Terms check** (Term details not found): If there are extra terms available in incoming file: A warning message is displayed in the View Logs: Term details not found in the definition: Interest Rate Name: Standard25, Interest RateCd:25, Interest Rate Term: 270 D, 3 M.

   Warnings are displayed in the View Log.

   If there are multiple rows in the data file and one of the rows does not have the required information or wrong information, the validator leaves that record and proceeds with the remaining records. However, the log displays summary error messages with total number of records, records skipped, records rejected, records read, and records discarded. It does not display which particular records are failed or rejected.

> **Note:**
>
> The As of Date is used to load the file and the Effective Date in the file can be different. The data is loaded based on the Effective Date and if any value exists for corresponding Effective Date, then the loader will update. This also helps to push the IRC History data from on-prem to SaaS, and in the SaaS environments one tenant to other tenant.
> The Interest Rate Attribute must be created on the UI prior to loading the historical rates. Interest Rate loader is to load rates on pre-existing IRC.

If any new terms are found in the Data file, then loader will create the new terms and loads the data for those new terms also.

4. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Batch**. For more details, see Define Batch.
5. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Task**. For more details, see Define Tasks.
   a. Task Type: REST
   b. Component:
      - IRC Data Loader (this component is a combination of Stage Loader, Stage Validator, and Processing Loader.
        or
      - Select the following components.
        – Stage Loader: IRCLoader Stage Loader
        – Stage Validator: IRCLoader Stage Validator
        – Processing Loader: IRCLoader Processing Loader

        > **Note:**
        >
        > To simplify the flow, the above three components are merged into one task component 'IRC Data Loader'; you can configure your batches to use this integrated components as these three individual components will be deprecated Release 25B onwards.

   c. Loader Type: By default Interest Rate Loader is selected.

      > **Note:**
      >
      > For Funds Transfer Pricing Cloud Service, Rate Lock Option Volatility is also available.

   d. File Name: INPUT_20231002_IRC_<DATAFILENAME>.csv
6. Select the seeded batch and click **Edit Parameters**. In the Dynamic Parameters pop-up window, change the date to the relevant As-of-Date, and then save the batch.
7. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.

8. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**. For more information, see Monitor Batch.
9. Select the **Batch** and then select the **MISDATE** and the **Batch name**. There may be multiple executions of the Exchange Rate Data Loader batch. Select the latest execution and click **Start Monitor**.
   The UI displays the Status of the batch.

3.2.1.4.5 Interest Rates Definition Loader

The Interest Rates Definition Loader allows the users to load the Interest Rate Curves definition that are consumed by the Oracle Financial Services Cloud Services.

Loading the Interest Rate Data consists of three tasks as follows:

- Stage Loader
- Stage Validator
- Processing Loader

To upload the Interest Rate Definition file:

1. From the LHS menu, select **Data Management Tools**, select **Data File Administration**, and then select **File upload and download** to display the File Upload/Download screen.
2. Click **Drag and Drop** to browse and select a file for upload from a local directory. You can also browse to the local directory from the File Explorer, select the file, and drop it.
   The File Upload/Download service supports uploading CSV format files.

   Name of the Data File must follow the format as given below:

   - A prefix as **INPUT_YYYYMMDD** where the date format is related to the As of Date (i.e., 02-October-2023 becomes 20231002).
   - A suffix as _**FILENAME.CSV**.
   - An example of Data File Name could be:
     INPUT_20231002_IRCS_<DATAFILENAME>.csv.
     The order of the columns in the input file must be as follows:
     - INTEREST_RATE_CD
     - IRC_NAME
     - IRC_DESC
     - ISO_CURRENCY_CD
     - DATE_BASED_TERM_POINTS
     - DISPLAY_FOR_ALL_CCY_FLG
     - RISK_FREE_RATE_FLG
     - TERM o MULTIPLIER
     - RATE_FORMAT
     - COMPOUNDING_BASIS
     - ACCRUAL_BASIS

   For more information about File Upload and Download, see File Upload and Download Utility section.
3. After selecting the file to upload, click **Upload**.

The UI displays a confirmation message: Upload successful and insert the data into the Stage tables.

At this stage, the Stage Validation begins and performs the following checks:

- INTEREST_RATE_CD: Code does not exists. Allows only numbers, max 10 digits.
- IRC_NAME: name don't exist. Allows only Alphanumeric space _ , . - &.
- IRC_DESC: Description. Allow only - Alphanumeric space _ , . - & / ! # @ $ % ? ( ) [ ].
- ISO_CURRENCY_CD: Only accept active currency.
- DATE_BASED_TERM_POINTS: N or null for normal, Y for Date Base.
- DISPLAY_FOR_ALL_CCY_FLG: Y for Display for all currency, N or null for not.
- RISK_FREE_RATE_FLG: Y for Risk free rate, 0 or null for not.
- TERM: Allows 1 to 9999.
- MULTIPLIER: Allow D, M, Y.

Warnings are displayed in the View Log.

4. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Batch**. For more details, see Define Batch.
5. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Task**. For more details, see Define Tasks.
   a. Task Type: REST
   b. Component:
      - IRC Data Loader (this component is a combination of Stage Loader, Stage Validator, and Processing Loader.
      - Loader Type: By default **IRC Historical Data** is selected. You must select **IRC Definition** irc definition loader.
      - File Name: INPUT_20231002_IRCS_<DATAFILENAME>.csv
6. Select the seeded batch and click **Edit Parameters**. In the Dynamic Parameters pop-up window, change the date to the relevant As-of-Date, and then save the batch.
7. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.
8. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**. For more information, see Monitor Batch.
9. Select the **Batch** and then select the **MISDATE** and the **Batch name**. There may be multiple executions of the Exchange Rate Data Loader batch. Select the latest execution and click **Start Monitor**.
   The UI displays the Status of the batch.

3.2.1.4.6 Rate Lock Option Volatility Loader

This Loader is applicable only for Funds Transfer Pricing Cloud Service.

The Volatility Rates Data Loader allows the users to load the Volatility Rate Curves that are consumed by the Oracle Financial Services Funds Transfer Pricing Cloud Service.

To upload the Interest Rate Data file:

1. From the LHS menu, select **Data Management Tools**, select **Data File Administration**, and then select **File upload and download** to display the File Upload/Download screen.

2. Click **Drag and Drop** to browse and select a file for upload from a local directory. You can also browse to the local directory from the File Explorer, select the file, and drop it.
The File Upload/Download service supports uploading CSV format files.

   Name of the Data File must follow the format as given below:

   - A prefix as INPUT_YYYYMMDD where the date format is related to the As of Date (i.e., 02-October-2023 becomes 20231002).
   - A suffix as _FILENAME.CSV.
   - An example of Data File Name could be: INPUT_20231002_ FTP_VOLATILITY _<DATAFILENAME>.csv. The order of the columns in the input file must be as follows:
     - RATE_LOCK_VOLITILITY_NAME
     - EFFECTIVE_DATE (Date format: MM-DD-YYYY)
     - CONTRACT_RATE_TERM
     - CONTRACT_RATE_TERM_MULT
     - EXPIRY_RATE_TERM
     - EXPIRY_RATE_TERM_MULT
     - INTEREST_RATE
     - RATE_DATA_SOURCE_CODE

   The following illustration is a sample Rate Lock Option Volatility loader data file.

Figure 3-15 Rate Lock Volatility Loader Sample File

RATE_LOCK_VOLITILITY_NAME	EFFECTIVE_DATE	CONTRACT_RATE_TERM	CONTRACT_RATE_TERM_MULT	EXPIRY_RATE_TERM	EXPIRY_RATE_TERM_MULT	INTEREST_RATE	RATE_DATA_SOURCE_CODE
Rate102	08-14-2023	1	Y	1	M	11.1411	TEST_LOADER
Rate102	08-14-2023	1	Y	6	M	16.1422	TEST_LOADER
Rate102	08-14-2023	3	Y	1	M	31.1433	TEST_LOADER
Rate102	08-14-2023	3	Y	6	M	36.1444	TEST_LOADER
Rate102	08-15-2023	1	Y	1	M	11.1555	TEST_LOADER
Rate102	08-15-2023	1	Y	6	M	16.1566	TEST_LOADER
Rate102	08-15-2023	3	Y	1	M	31.1577	TEST_LOADER
Rate102	08-15-2023	3	Y	6	M	36.1588	TEST_LOADER
Rate102	08-16-2023	1	Y	1	M	11.1699	TEST_LOADER
Rate102	08-16-2023	1	Y	6	M	16.161	TEST_LOADER
Rate102	08-16-2023	3	Y	1	M	31.1611	TEST_LOADER
Rate102	08-16-2023	3	Y	6	M	36.1612	TEST_LOADER
Rate102	08-16-2023	2	Y	1	M	31.1611	TEST_LOADER
Rate102	08-16-2023	3	Y	9	M	36.1612	TEST_LOADER
Rate106	08-14-2023	3	Y	1	M	31.143	TEST_LOADER
Rate107	08-14-2023	3	Y	6	M	36.144	TEST_LOADER
Rate107	08-15-2023	1	Y	1	M	11.155	TEST_LOADER
Rate108	08-15-2023	1	Y	6	M	16.156	TEST_LOADER
Rate1001	08-14-2023	1	M	15	D	111.101	TEST_LOADER
Rate1001	08-11-2023	1	M	15	D	112.101	TEST_LOADER
Rate1001	08-14-2023	3	M	25	D	111.101	TEST_LOADER
Rate1001	08-11-2023	5	M	45	D	112.101	TEST_LOADER

   For more information about File Upload and Download, see File Upload and Download Utility section.

3. After selecting the file to upload, click **Upload**.
The UI displays a confirmation message: Upload successful and insert the data into the Stage tables.

   At this stage, the **Stage Validation** begins and performs the following checks:

   - **Records in the Stage table**: Stage Validation fails when no records are found in the uploaded file and no execution happens after this point.
   - **Rate Lock Volatility definitions exist**: If there are single Rate Lock Volatility definitions in the file, the validator passes and displays a warning message along with the Rate Lock Volatility Code for which definitions are missing.

- **Invalid Terms check** (Term details not found): If there are extra terms (Contract or Expiry terms) available in incoming file: A warning message is displayed in the View Logs: *Term details not found in the definition : Rate Lock Volatility : Rate101, Code : 101, Details : Effective Date :14-AUG-23, Contract Term :3 M, Expiry Term :25 D Effective Date :11-AUG-23, Contract Term :5 M, Expiry Term :45 D*

Warnings are displayed in the View Log.

If there are multiple rows in the data file and one of the rows does not have the required information or wrong information, the validator leaves that record and proceeds with the remaining records. However, the log displays summary error messages with total number of records, records skipped, records rejected, records read, and records discarded. It does not display which particular records are failed or rejected.

> **Note:**
>
> The As of Date is used to load the file and the Effective Date in the file can be different. The data is loaded based on the Effective Date and if any value exists for corresponding Effective Date, then the loader will update. This also helps to push the Rate Lock Volatility Historical data from on-prem to SaaS. Rate Lock Option Volatility loader is to load rates on pre-existing Rate Lock Option Volatility.

4. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Batch**. For more details, see Define Batch.
5. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Task**. For more details, see Define Tasks.
   - **Task Type**: REST
   - **Component**: IRC Data Loader (this component is a combination of Stage Loader, Stage Validator, and Processing Loader.
   - **Loader Type**: By default Interest Rate Loader is selected. Select Rate Lock Option Volatility option.
   - **File Name**: INPUT_20231002_ FTP_VOLATILITY_<DATAFILENAME>.csv
6. Select the seeded batch and click **Edit Parameters**. In the Dynamic Parameters pop-up window, change the date to the relevant **As-of-Date**, and then save the batch.
7. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**. For more information, see Execute Batch.
8. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**. For more information, see Monitor Batch.
9. Select the **Batch**, **MISDATE** and the **Batch name**. There may be multiple executions of the Exchange Rate Data Loader batch. Select the latest execution and click Start Monitor. The UI displays the Status of the batch.

3.2.1.4.7 Generating Holidays for Holiday Calendar using Scheduler

The **Generate Holidays** option on the **Holiday Calendar Definition** page allows you to generate Holiday for a definition at a time. Using the Scheduler Service, you can generate the Holidays for multiple Calendar definitions in bulk.

To execute the batch, navigate to **Operations and Processes** , select **Scheduler**, and then select **Schedule Batch**.

You can also define new batch to execute any Holiday Calendar Generation by the following these steps:

1. Navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Batch**.
2. Create a new Batch with a new Task with Holiday Generator as Component.

   For the selected From to To date parameters, you can generate Holidays for single or multiple calendar definitions.
3. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.
4. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
5. Select the **Batch** and then select the **MISDATE** and the **Batch name**. There may be multiple executions of the Data Loader batch. Select the latest execution and click **Start Monitor**.

   The UI displays the status of the batch.

   For more details about Scheduler processes, see the Scheduler Services.

3.2.2 File Upload and Download Utility

The File Upload and Download Utility enables you to upload or download files to the Object Store. Complete the following steps to Upload or Download a file.

- Upload or Download File from Object Store Using Console
- Uploading/Downloading a File Using Utility
- Uploading/Downloading a File Using PAR URL

3.2.2.1 Upload or Download File from Object Store Using Console

1. From the left menu, click **Common Object Maintenance**.
2. Click **Data Management** in the left navigation pane.

   The **File Upload and Download** Page is displayed. The Files that are uploaded to the Object Store are listed here. The following details are provided for each File.

   - **File ID** - The unique file ID associated with the file. This is auto-generated during the upload.
   - **Prefix** - The prefix is added to the file name.
   - **File Name** - The name of the file that is uploaded. This is automatically updated after you select the file.
   - **Stripe Name** - The Unique Identifier for storing a collection of files. Collection examples: Project, organization, tenant.
   - **Uploaded Date** - The file upload date.
   - **Download File** - Click to download a copy of the uploaded file.
   - **Delete** - Click to delete the file.

Related Topics

- Uploading/Downloading a File Using Utility
  Complete the following steps to upload or download files using the Utility.

- Uploading/Downloading a File Using PAR URL
  Complete the following steps to upload or download a file using the PAR URL.

3.2.2.2 Uploading/Downloading a File Using Utility

Complete the following steps to upload or download files using the Utility.

1. Click **Upload** on the **File Upload/Download Summary** screen.
2. Click **Drag and Drop** to browse and select a file for upload from the local directory.

   You can also browse to the local directory from the **File Explorer** and select the file and drop it here.

   The file name is automatically updated in the **Selected File** field.
3. Enter the **Prefix** to be added to the file name.

   The Prefix is added to the file name. In case, you have two files with the same file name, you can save them with different prefixes.
   Example: **/abc/test.txt** and **/def/test.txt**. Both these files have the same file name but different Prefixes.
4. Click **Upload** to upload the selected file.

   A confirmation message is displayed after successful upload and the file is listed in the Uploaded Files list.
   Downloading file(s)

   Complete the following steps to download a single file.

   a. Click the **Actions** menu corresponding to the file you want to download and select **Download.**
   b. Specify a name (optional) and file type (optional).
   c. Click **Save**.

   Complete the following steps to download multiple files at once.

   a. Select the checkbox corresponding to each file you want to download.
   b. Click the **Download Multiple Files** icon (top right corner).
   c. Specify a name for the compressed folder type.
   d. Click **Save**

   Deleting file(s)

   Complete the following steps to delete single file.

   a. Click the **Actions** menu corresponding to the file you want to delete and select **Delete.**
   b. Select **Yes** to confirm the deletion.

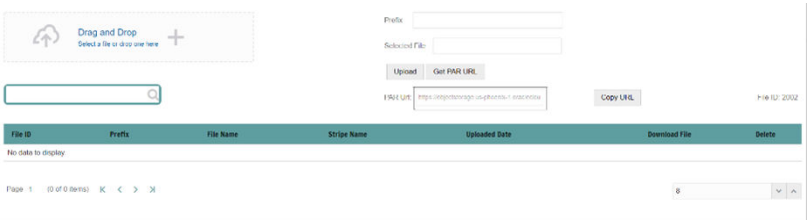
   Complete the following steps to delete multiple files at once.

   a. Select the checkbox corresponding to each file you want to delete.
   b. Click the **Delete Multiple Files** icon (top left corner).
   c. Select **Yes** to confirm the deletion.

3.2.2.3 Uploading/Downloading a File Using PAR URL

Complete the following steps to upload or download a file using the PAR URL.

Figure 3-16 Get PAR URL



1. Click **Drag and Drop** to browse and select a file for upload from the local directory.

   You can also browse to the local directory from the File Explorer and select the file and drop it. The file name is automatically updated in the **Selected File** .

2. Enter the **Prefix** to be added to the file name.
3. Click **Get PAR URL**, to generate the PAR URL and File ID which are required to upload the file.

   You can also generate PAR URL using Rest API. For more information refer to, Calling the API to Generate the URL.

4. Copy the PAR URL and note the related File ID.
5. Upload the file content referred with the specific PAR URL into the object store using the Console, CLI, or SDK.

   To upload using the CLI, enter the following curl command directly in local Gitbash.

   ```
   curl -X PUT --data-binary '@<local-filename>' <unique-PAR-URL>
   ```

   You can also use the following command.

   ```
   curl -T '<Filepath>' -X PUT <PAR_URL>
   ```

6. Scan the file referred with the specific File ID (obtained in Step 3) using Console, CLI, or SDK.

   Use the following CURL command, to Scan using CLI:

   ```
   curl -k --location --request PUT 'https://<Host:Port>/<Tenant-ID>/utils-
   service/v1/file/scan/<FileID>' \
   --header 'ofs_tenant_id: <Tenant-ID>' \
   --header 'ofs_service_id: <Service-ID>' \
   --header 'ofs_workspace_id: <WorkspaceId>' \
   --header 'Authorization: Bearer <Generated_Token>'
   ```

   To generate a bearer token, refer to Generate access token.

   A confirmation message is displayed after successful upload and the file is listed in the Uploaded Files list.

3.2.3 File Upload Automation

To simplify the file upload process, configure and execute the File Upload automation utility.

File Upload automation can be implemented by completing the following steps in sequence.

- Step 1: Generate Access Token
- Step 2: Generate PAR URL
- Step 3: Upload file to Object Store
- Step 4: Scan the file to ensure Upload was Successful

3.2.3.1 Step 1: Generate Access Token

Generate the Access Token for your Profitability and Balance Sheet Management Cloud Service by:

1. Submitting a RESTful API Post Request to your Oracle IAM environment as defined in the Identity Cloud Service User Guide. For information, see OAuth Runtime Tokens REST Endpoints.

Note that a sample code snippet has been provided below using cURL to generate the access token for Basic Authorization and assign it to a variable for use within a script:

```
access_token=`curl -s --insecure -H "Authorization: Basic $ENCODED" -H
"Content-Type:application/x-www-form-urlencoded;charset=UTF-8" --request
POST $IDCS_URL -
d"grant_type=password&username=$USERNAME&password=$PASSWORD&scope=urn:opc:idm:
__myscopes__urn:opc:resource:expiry=9153600" | python -c "import sys,
json;print(json.load(sys.stdin)['access_token'])"`
```

3.2.3.2 Step 2: Generate PAR URL

Generate the PAR URL for your Profitability and Balance Sheet Management Cloud Service by:

1. Submitting a RESTful API Post Request to your Cloud Service as defined in the Calling the API to Generate the URL section.

Note a sample code snippet has been provided below using cURL to generate the PAR URL and assign it to a variable for use within a script:

PAR URL Generation Code Snippet

```
curl --location --insecure --request POST "$FILEUPLOADURL" --header
"Authorization: Bearer $access_token" --header 'Content-Type: application/
json' --data-raw "{
    \"fileName\": \"$1\",
    \"fileSize\": \"$2\",
    \"mimeType\": \"$3\"
}" >> "$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse.out 2>&1
```

PAR URL Variable Assignment Code Snippet

```
grep -oE '(https)[^ ]*' "$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse.out >
"$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse1.csv
    while IFS="," read -r H1 H2
    do
        URLtrim="$H1"
        FinalPAR=${URLtrim::-1}
          echo -e "\n PAR_URL is $FinalPAR"
    done < "$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse1.csv
```

PAR URL Variable Assignment Code Snippet – Used in File Scanning Step

```
grep -oE '(fileId)[^ ]*' "$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse.out >
"$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse2.csv
    while IFS="," read -r F1 F2
    do
        FILEIDtrim="$F1"
        FINALFILEID=`echo "$FILEIDtrim"| sed -r 's/^.{8}//'`

        echo -e "\n FILE ID is $FINALFILEID"
    done < "$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse2.csv
```

3.2.3.3 Step 3: Upload file to Object Store

Upload the file to the Object Store of your Profitability and Balance Sheet Management Cloud Service by:

1. Submitting a RESTful API Post Request to your Cloud Service as defined in the Uploading/ Downloading a File Using PAR URL topic.

Note a sample code snippet has been provided below using cURL to upload the file:

```
curl -T "$HOME"/FILEUPLOAD_UTIL/"$1" -X PUT "$FinalPAR"
```

3.2.3.4 Step 4: Scan the file to ensure Upload was Successful

Scan the file that was uploaded to the Object Store of your Profitability and Balance Sheet Management Cloud Service by:

1. Submitting a RESTful API Put Request to your Cloud Service as defined by the code snippet below:

File Scanning Code Snippet – Using File ID from Step 2 – Generate PAR URL

```
if [ $last_error -eq 0 ]; then
        echo -e "\n *****Scanning the File *****"
        curl -k --location --request PUT "$SCANURL/$FINALFILEID" --header
'ofs_tenant_id: $TENANT' --header 'ofs_service_id: OFS_FTP' --header
'ofs_workspace_id: WS001' --header "Authorization: Bearer $access_token"
        last_error=$?
        if [ $last_error -eq 0 ]; then
            echo -e "\n ***File Upload is Successful please check File
Upload / Download UI***"
```

```
    else
        echo "Scan failed"
        exit -2;
    fi
else
    echo "Upload failed"
    exit -3;
fi
```

3.2.3.5 Automating the File Upload Process Using File Upload Utility

This section provides the procedure including the script to automate the process of uploading input data files using the File Upload utility.

You can download this script from this MoS Doc ID 2927077.1.

3.2.3.5.1 Executing the File Upload Automation Script

File Upload Automation script assists you to upload the files seamlessly.

Complete the following procedure to execute the file upload automation script.

Python 3.10 is required to access data elements from the API JSON responses.

1. Extract the **FILEUPLOAD_UTIL.zip** file located in the **$HOME** directory.
2. Copy the Data Loader input file (text file) to the **$HOME/FILEUPLOAD_UTIL** directory.
3. Edit the script **Env_setup.sh** file to update the following environment variables.
   - **IAM URL** - The Service Instance URL to access your IAM console.
     You can get the IAM URL from the following menu:

     Oracle Cloud Infrastructure Console > Identity Cloud.

     Syntax: `<IAM-url>/oauth2/v1/token`
   - **Encoded** - The **<OAuth Client ID>:<OAuth Client Secret>** encoded using **base64encode**
     To extract and encode the Client ID and Client Secret, refer to the following steps:
     a. Login to **Admin Console**.
     b. Go to **System Configuration** tab, and click **Component Details** tile.
     c. Click **OAUTH Creds** tab to view and copy the **OAUTH Client ID** and **OAUTH Client Secret** details.
     d. Using any **base64encode** utility, encode <OAUTH Client ID>:<OAUTH Client Secret>.
        Example (Input OAUTH Client ID and Client Secret):

        `ftptenant-prd_APPID:99140e14-4d30-4e86-85fb-09501fe45fe0`

        Example (Encoded OAUTH Client ID and Client Secret):
        `ZnRwcWExMDEyMzEtcHJkX0FQUElEOjBkMmU5MDBiLTlhYjItNGFmOS05OWM0LTEwNTYyMDVkYWYwNQ==`
   - **Username** - The Username to access the application.

> **Note:**
>
> The user should have appropriate roles and privileges. For more information about roles and priveleges, refer to #unique_148.

- **Password** - The password to login to the application.
- **Tenant** - The tenant associated with the application.
- **PBSM Host** - Details of the PBSM host on which the application is hosted.

Sample Env_setup.sh

```
IDCS_URL=https://idcs-xyz123.identity.c9xyz.oc9xyz.com/oauth2/v1/token
ENCODED=ZnRwbWFydXAxNDIyMzEtcHJkX0FQUElEOjk5MTQwZTE0LTRkMzAtNGU4Ni04NWZi
LTA5NTAxZmU0NWZlMA==
USERNAME=<user_name>
PASSWORD=<password>
TENANT=<tenant-prd>
PBSMHOST=dc.pbsmcloud.us-xxxxx -1.ocs.oc-test.com
```

4. Execute **PBSMCS_PAR_fileupload.sh** with the following parameters –
   - **filename** - The file to be uploaded
   - **filesize** - The file size in Bytes
   - **Mimetype** - The mimetype of the file.

   Format: `Filename<space>Filesize<space>mimetype`

   Example: `./PBSMCS_PAR_fileupload.sh input_20150101_filename_example_8007.txt 334 text/plain`

   This script generates the access token and the PAR URL. It also uploads the file into the object store and scans the file too.

   > **Note:**
   >
   > To upload multiple files, you must execute the script for each file, separately.

   Once the script is executed succesfully, the file is uploaded and added to the list of files in the File Upload/Download page. To access the File Upload/Download page refer to Upload or Download File from Object Store Using Console.

3.2.4 Generating PAR URL for File Operations

The PAR URL for File Operations API creates a PAR File that you can use to perform file operations in the Object Store for end-to-end integrations.

3.2.4.1 Generating PAR URL for File Upload

Generate PAR URL for File Upload

You can use this REST API to generate the PAR URL for File Upload. See the following sections for information on how to perform the POST operation.

- End Point Details

- Calling the API to Generate the URL

3.2.4.1.1 End Point Details

- **Method** – POST
- **URL** - `https://<HOST_NAME:PORT>/<TENANT>/utils-service/v1/file/uploadfile/parURL?prefix=<prefix>`
- **Content-Type** - Application/Json

3.2.4.1.2 Calling the API to Generate the URL

To call the API:

1. Open a relevant tool, such as via cURL command.
2. Prepare a cURL command with the authentication token and other details. For more information refer to the following code.

   Syntax

```
curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-service/v1/file/uploadfile/parURL?prefix=' \
--data-raw '{"fileName": "<remote filename>", "fileSize": <file size>, "mimeType": "<file type>"}' \
--header 'ofs_remote_user: <USERID>' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: <TENANT-ID>' \
--header 'ofs_workspace_id: WS001' \
--header 'content-type: application/json' \
--header 'Authorization: Bearer <TOKEN>'
```

   Example (truncated)

```
curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-service/v1/file/uploadfile/parURL?prefix=' \
--data-raw '{"fileName": "idcs_log1.txt", "fileSize": 100, "mimeType": "text/plain"}' \
--header 'ofs_remote_user: cneadmin' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: aaitestdev1001-prd' \
--header 'ofs_workspace_id: WS001' \
--header 'content-type: application/json' \
--header 'Authorization: Bearer
eyJ4NXQjUzI1NiI6Ildia25rQUR5TUZIMlhlQ1pKcTY1c3o4VzdEVWhKa0s4MldYY0hadk4wWkk
iLCJ4
...
...
sQXj0iohsSIEmQXVwwjhhqnc4eJNnmCjx8Tb7TXjx1MIQLeOIcfrIj5gkzoMKX94_7USxHv-6Lh
Bzw'
```

3.2.4.1.2.1 Request JSON Parameters

This section provides the list of parameters in the JSON Request.

Table 3-12 Request JSON Parameters

Name	Type	Required	Description
fileName	STRING	Yes	The name of the file to be uploaded. The following are the conditions for to enter in this field: • Must start with an Alphanumeric Character • Allowed characters are alphabets, numbers, and special characters - hyphen(-), dot(.), and underscore(_) • Length of characters must not be greater than 255 characters
fileSize	INTEGER	Yes	The size of the file (in Bytes) to be uploaded. The size of the file should be greater than 1 Byte and should be less than 10 TB. It is recommended to use multipart upload for uploading files of size more than 100 MB. For more information about uploading large objects and multipart uploads, refer to Working with Pre-Authenticated Requests.
mimeType	STRING	Yes	The mime type to be uploaded. The following mime types are allowed: • Text/CSV • Text/plain • DAT

Request JSON Sample

```
 [{
"fileName": "File.csv",
"fileSize": 7654,
"mimeType": "text/csv"
}]
```

3.2.4.1.2.2 Response JSON Parameters

This section provides the list of parameters in the JSON Response.

Table 3-13 POST JSON Response

Name	Type	Description
fileName	STRING	The name of the file to be uploaded.
uploadURL	STRING	The generated pre-authenticated URL to upload a file.
fileId	INTEGER	The unique File Identifier.

Response JSON Sample

```
{
   "payload": {
       "uploadURL": "https://objectstorage.us-phoenix-1.oraclecloud.com/p/
bdSI-hzigiAoUU0lyEKnuk0YGs05L172gt_woZAgqNFYmUFQeexV3BDfTO97mhBI/n/
oraclegbudevcorp/b/fsgbu_pbsm_cndevcorp_ftpqa101231-prd_default/o/default/
2023-01-31/jfr/f9ce031f-4a42-471d-b4da-d0577f3eca15",
```

```
        "createUser": "user1",
        "stripeName": "default",
        "fileId": 5025,
        "createDate": "2023-01-31T09:14:16",
        "token": "",
        "status": "success"
    }
}
```

3.2.4.1.3 Viewing List of Uploaded Files

Run the following cURL command to generate and view all the files that are uploaded using PAR URL.

Syntax

```
curl -k --location --request GET 'https://<hostname>/<TENANT-ID>/utils-
service/v1/listfiles stripeName=default' \
--header 'locale: en-US' \
--header 'ofs_remote_user: <user id>' \
--header 'ofs_tenant_id: < TENANT-ID >' \
--header 'ofs_workspace_id: WS001' \
--header "Authorization: Bearer <TOKEN>'
```

Example

```
curl -k --location --request GET 'https://dc.pbsmcloud.us-phoenix-1.ocs.oc-
test.com/aaitestdev1001-prd/utils-service/v1/listfiles?stripeName=default' \
--header 'locale: en-US' \
--header 'ofs_remote_user: cneadmin' \
--header 'ofs_tenant_id: aaitestdev1001-prd' \
--header 'ofs_workspace_id: WS001' \
--header "Authorization: Bearer ${TOKEN}"
```

Response

```
      {"payload":
[{"v_file_name":"Idcs_log3.txt","n_file_id":9916,"d_upload_date":"31-JAN-23
      06:33:43 AM","v_stripe_name":"default"},
{"v_file_name":"Idcs_log4.txt","n_file_id":9917,"d_upload_date":"31-JAN-23
      06:40:25 AM","v_stripe_name":"default"}],"count":2}
```

3.2.4.2 Generating PAR URL For File Download

You can use this REST API to generate the PAR URL for File Download. See the following sections for information on how to perform the post operation.

- Calling the API to Generate PAR URL for File Download Using File Name
- Calling the API to Generate PAR URL for File Download Using File ID

3.2.4.2.1 Calling the API to Generate PAR URL for File Download Using File Name

To call the API:

1. Open a relevant tool, such as via the cURL command.
2. Prepare a cURL command with the authentication token and other details. For more information refer to the following code.

Syntax

```
curl -k --location --request GET < 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/download?fileName=<file name>&stripeName=default&prefix=' \
 --header 'ofs_remote_user: <userid>' \
 --header 'locale: en-US' \
 --header 'ofs_tenant_id: <TENANT-ID>' \
 --header 'ofs_workspace_id: WS001' \
 --header "Authorization: Bearer <TOKEN>"
```

Example

```
curl -k --location --request GET 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/download?fileName=test3GB.xml&stripeName=default&prefix=' \
 --header 'ofs_remote_user: cneadmin' \
 --header 'locale: en-US' \
 --header 'ofs_tenant_id: aaitestdev1001-prd' \
 --header 'ofs_workspace_id: WS001' \
 --header "Authorization: Bearer ${TOKEN}"
```

Response

```
 {"payload":{"downloadURL":"https://objectstorage.us-
phoenix-1.oraclecloud.com/p/8R68eVcQAxQjNjK__S04MZjS-
v4BqEbWSILvu0w40kJNrzfKeCB8vWBwugW5XvsK/n/oraclegbudevcorp/b/
fsgbu_pbsm_cndevcorp_aaitestdev1001-prd_default/o/default/2023-01-20/rnz/
6c023e75-09e2-4265-815e-32cedcd2415e?
httpResponseContentDisposition=ATTACHMENT%3B%20filename%3Dtest3GB.xml"}}
```

3.2.4.2.2 Calling the API to Generate PAR URL for File Download Using File ID

To call the API, follow these steps:

1. Open a relevant tool, such as via the cURL command.
2. Prepare a cURL command with the authentication token and other details. For more information, refer to the following code.

Syntax

```
curl -k --location --request GET ' 'https://<hostname>/<TENANT-ID> /utils-
service/v1/file/downloadfile/<file id>' \
--header 'ofs_remote_user: <userid>' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: < TENANT-ID> ' \
--header 'ofs_workspace_id: WS001' \
--header "Authorization: Bearer <TOKEN>"
```

Example

```
curl -k --location --request GET 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/downloadfile/9916' \
--header 'ofs_remote_user: cneadmin' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: aaitestdev1001-prd' \
--header 'ofs_workspace_id: WS001' \
--header "Authorization: Bearer ${TOKEN}"
```

Response

```
{"payload":{"downloadURL":"https://objectstorage.us-
phoenix-1.oraclecloud.com/p/
gTxxzhqLEea4Or2TRkBqTqHxt_JogVFa9G_0wtN8NYy_op0Zk4lvKGDxxeXGhLq7/n/
oraclegbudevcorp/b/fsgbu_pbsm_cndevcorp_aaitestdev1001-prd_default/o/
default/2023-01-31/fae/2d63d2fe-2090-4fb7-a4c8-9940d22987db?
httpResponseContentDisposition=ATTACHMENT%3B%20filename%3DIdcs_log3.txt"}}
```

3.2.5 Deleting A File

Delete (DELETE) API helps to delete an uploaded file.

For more information about the Delete API, refer to Endpoint Details.

You can delete a file using one of the following methods:

- Using File ID
- Using File Name
- Delete multiple Files using File Names
- Delete files using a prefix value

3.2.5.1 End Point Details

- **Method** – POST
- **URL** - `https://<HOST_NAME:PORT>/<TENANT>/utils-service/v1/file/uploadfile/parURL?prefix=<prefix>`
- **Content-Type** - Application/Json

3.2.5.2 Deleting a File Using the File ID

Delete a file from the object store, using the file ID as the reference.

To delete a file:

1. Open a relevant tool, such as via cURL command.
2. Prepare a cURL command with the authentication token and other details. For more information refer to the following code.

   Syntax

   ```
   curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
   service/v1/file/deletefile/{fileId}
   ```

```
--header 'ofs_remote_user: <USERID>' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: <TENANT-ID>' \
--header 'ofs_workspace_id: WS001' \
--header 'content-type: application/json' \
--header 'Authorization: Bearer <TOKEN>'
```

Example (truncated)

```
curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/deletefile/5
--header 'ofs_remote_user: cneadmin' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: aaitestdev1001-prd' \
--header 'ofs_workspace_id: WS001' \
--header 'content-type: application/json' \
--header 'Authorization: Bearer
eyJ4NXQjUzI1NiI6Ildia25rQUR5TUZIMlhlQ1pKcTY1c3o4VzdEVWhKa0s4MldYY0hadk4wWkk
iLCJ4
...
...
sQXj0iohsSIEmQXVwwjhhqnc4eJNnmCjx8Tb7TXjx1MIQLeOIcfrIj5gkzoMKX94_7USxHv-6Lh
Bzw'
```

Response

```
{"payload":"File Deleted Successfully"}
```

3.2.5.3 Deleting a File Using Filename

Delete a file from the object store, using the file name as the reference.

To delete a file:

1. Open a relevant tool, such as via cURL command.
2. Prepare a cURL command with the authentication token and other details. For more information refer to the following code.

   Syntax

   ```
   curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
   service/v1/file/deletefilename/{filename}?prefix=<foldername>
   --header 'ofs_remote_user: <USERID>' \
   --header 'locale: en-US' \
   --header 'ofs_tenant_id: <TENANT-ID>' \
   --header 'ofs_workspace_id: WS001' \
   --header 'content-type: application/json' \
   --header 'Authorization: Bearer <TOKEN>'
   ```

> **Note:**
>
> Prefix is an optional parameter.

Example (truncated)

```
curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/deletefilename/test.txt?prefix=folder1
--header 'ofs_remote_user: cneadmin' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: aaitestdev1001-prd' \
--header 'ofs_workspace_id: WS001' \
--header 'content-type: application/json' \
--header 'Authorization: Bearer
eyJ4NXQjUzI1NiI6Ildia25rQUR5TUZIMlhlQ1pKcTY1c3o4VzdEVWhKa0s4MldYY0hadk4wWkk
iLCJ4
...
...
sQXj0iohsSIEmQXVwwjhhqnc4eJNnmCjx8Tb7TXjx1MIQLeOIcfrIj5gkzoMKX94_7USxHv-6Lh
Bzw'
```

Response

```
{"payload":"File Deleted Successfully"}
```

3.2.5.4 Deleting Multiple Files Using Filenames

Delete multiple files from the object store, using the file names as the reference.

To delete multiple files:

1. Open a relevant tool, such as via cURL command.
2. Prepare a cURL command with the authentication token and other details. For more information refer to the following code.

   Syntax

   ```
   curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
   service/v1/file/deletefilenames/{filenames}
   --data-raw '[filenames]' \
   --header 'ofs_remote_user: <USERID>' \
   --header 'locale: en-US' \
   --header 'ofs_tenant_id: <TENANT-ID>' \
   --header 'ofs_workspace_id: WS001' \
   --header 'content-type: application/json' \
   --header 'Authorization: Bearer <TOKEN>'
   ```

   Example (truncated)

   ```
   curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
   service/v1/file/deletefilenames
   --data-raw '["filename1.txt","filename2.txt","filename3.txt"]' \
   --header 'ofs_remote_user: cneadmin' \
   --header 'locale: en-US' \
   --header 'ofs_tenant_id: aaitestdev1001-prd' \
   --header 'ofs_workspace_id: WS001' \
   --header 'content-type: application/json' \
   --header 'Authorization: Bearer
   ```

```
eyJ4NXQjUzI1NiI6Ildia25rQUR5TUZIMlhlQ1pKcTY1c3o4VzdEVWhKa0s4MldYY0hadk4wWkk
iLCJ4
...
...
sQXj0iohsSIEmQXVwwjhhqnc4eJNnmCjx8Tb7TXjx1MIQLeOIcfrIj5gkzoMKX94_7USxHv-6Lh
Bzw'
```

Response

```
{"payload":"File Deleted Successfully"}
```

3.2.5.5 Delete files using a prefix value

Delete files from the object store, using a prefix value as the reference.

To delete files using a prefix value:

1. Open a relevant tool, such as via cURL command.
2. Prepare a cURL command with the authentication token and other details. For more information refer to the following code.

Syntax

```
curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/deleteprefix/<prefix_value>
--header 'ofs_remote_user: <USERID>' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: <TENANT-ID>' \
--header 'ofs_workspace_id: WS001' \
--header 'content-type: application/json' \
--header 'Authorization: Bearer <TOKEN>'
```

Example (truncated)

```
curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/deleteprefix/prefixvalue1
--header 'ofs_remote_user: cneadmin' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: aaitestdev1001-prd' \
--header 'ofs_workspace_id: WS001' \
--header 'content-type: application/json' \
--header 'Authorization: Bearer
eyJ4NXQjUzI1NiI6Ildia25rQUR5TUZIMlhlQ1pKcTY1c3o4VzdEVWhKa0s4MldYY0hadk4wWkk
iLCJ4
...
...
sQXj0iohsSIEmQXVwwjhhqnc4eJNnmCjx8Tb7TXjx1MIQLeOIcfrIj5gkzoMKX94_7USxHv-6Lh
Bzw'
```

Response

```
{"payload":"Files Deleted Successfully"}
```

3.2.6 Data File History

The Data File History screen in the OFS Cloud Service allows you to see the data files that are uploaded to the staging tables and their status.

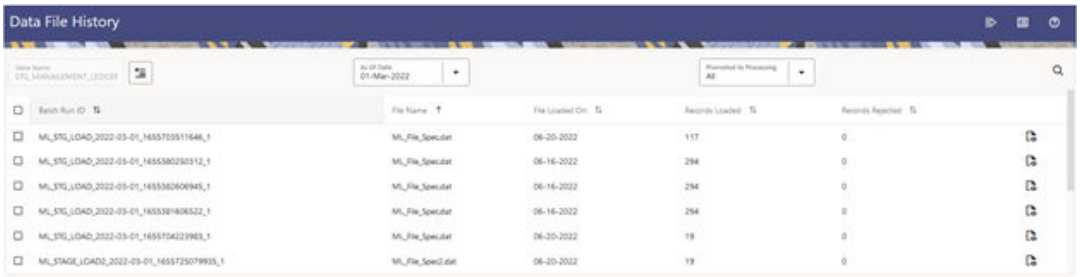
The Data File History summary screen allows you to do the following:

- Search for data files for which the stage data loader batch is already executed.
- Move the data from stage to processing tables.
- Delete the data from the stage or processing tables.
- Scan for invalid members.
- Create invalid members.

To open the Data File History window:

1. Navigate to the **Data Management Tools**, select **Data File Administration**, and then select **Data File History** to display the Data File History summary screen.

Figure 3-17 Data File History summary screen



The summary screen displays the following information of the data files:

- **Batch Run ID**: The ID used to run the batch.
- **File Name**: The data file name.
- **File Loaded On**: The date on which the data file is loaded.
- **Records Loaded**: The number of records loaded using the data file.
- **Records Rejected**: The number of records that are rejected from the data file.
- **View Details** (Icon): Select a Batch Run ID and click the details of the data file.

The following illustration is a sample of the data file's details.

Figure 3-18 File Details

- **Promote selected files to Processing** (button): To promote the selected file or files for processing. This triggers the Batch Scheduler and queues the selected file or files for processing.
- **Advanced Actions** (button): There are four options in the Advances Actions. The following table explains the four options and the related information that is required to complete the actions:

Table 3-14 Advanced Actions

	As Of Date	Table Name	Data File Specification	File Name(s)	Comments / Notes
Delete Data from Staging	Required	Required	Required	Optional	Required
Delete Data from Processing	Required	Required	Required	Required	Required
Scan for Invalid Members	Required	Required	Required	Optional	Not applicable
Create Invalid Members	Required	Required	Required	Optional	Not applicable

  - Click **Delete/Scan/Create** button as applicable.
    - **Delete Data from Staging**: The staging data uploaded from a data file will be deleted.
    - **Delete Data from Processing**: The processing data uploaded from a file will be deleted.
    - **Scan for Invalid Members**: To scan the staging data and identifying the dimension member codes present in the staging table, but not present in the corresponding dimension tables.
    - **Create Invalid Members**: To populate the dimension tables with members identified in the above scan.
- **Help** (Button): Click the Help icon to view the Data File History help.

Scan for Invalid Members and Create Invalid Members is also possible using the Scheduler Services.

Table 3-15 Scan and create Invalid Members

Task Code	Task Name	Component	Parameters
1 *	Scan_Staging_for_Invalid_Members	Scan_Staging_for_Invalid_Members	• Table Name • Data File Specification: select the Data File Specification name from the available list. • Data File Name • Fail When Invalid Members
	Create_Invalid_Members	Create_Invalid_Members	• Table Name • Data File Specification: select the Data File Specification name from the available list. • Data File Name

* Task Code in the above table is for illustration purpose only. You can name them as per your requirements.

Promoting a Data File for Processing

By promoting a Data File for processing, you insert the Data from the staging tables to the processing tables.

To promote a Data File for processing:

1. Click on the **Table Name** icon to display the **Category – Table Names** window. This window displays the Stage Table Names where data is already loaded. The tables are categorized into different groups and are as follows:
   - Transaction Summary
   - Ledger
   - Others
   - Schedule
   - Instruments

   Each of the above categories lists the tables available to which the data is loaded. The list of categories is dependent on the Metadata from the seeded tables that come with the various OFS Cloud Services and may differ from that shown above based on the services you have subscribed.
2. Select the **Table** for which you want to see the File History from the list.
3. Select the relevant **As Of Date** from the drop-down list. This drop-down list displays different As-of-Dates. These dates are based on processed or not processed data loading. For example, if you have already processed some data on a previous date, this drop-down displays that date and displays the current date.
4. Click on **Promoted to Processing** and select the following options:
   - **All**: To display all the Data Files that are specified on the selected As-of-Date.

- **Yes**: To display only the Data Files that are already specified and processed on the selected As-of-Date.
- **No**: To display only the Data Files that are specified but are in the queue to be processed on the selected As-of-Date.

5. Click the **Search** icon to display the Data Files information as per the option you selected in the previous step.
6. Select one of more **Batch Run IDs** that you want to promote for processing and click the **Promote selected files to Processing** button. This triggers the Batch Scheduler and schedules the Batch for processing. You can monitor the status using the Monitor Batch screen.

Reloading a Data File

OFS Cloud Services allow you to reload a Data File. For the detailed instructions on Reloading the Data File, see the Scheduler Service section.

> **Note:**
>
> While defining the Task, ensure that you select Delete Data Loader from the Component drop-down list.

3.3 Data Maintenance Interface

Data Maintenance Interface (DMI) helps to design a Data Form in a user-specified format. Further, it allows to perform maintenance activities using the Designed Form.

Form Builder

Form Builder allows the user to build a form to maintain the underlying data.

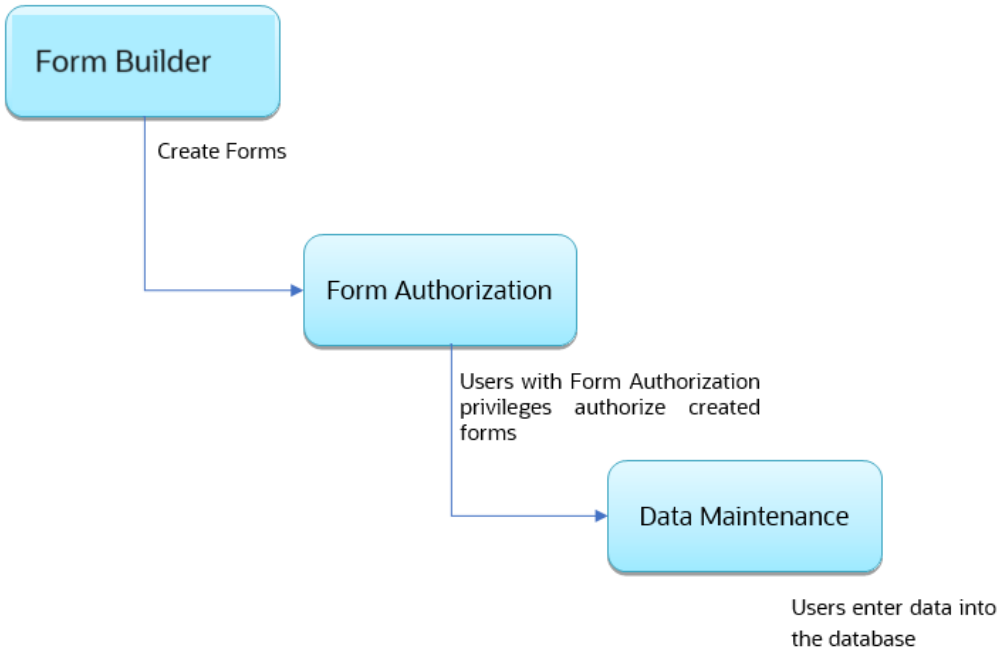
Data Entry

This allows the user to maintain the data either through the form that has been defined or do a bulk upload using the excel upload mechanism. A strong data governance process is enabled through an approval workflow of the data maintained.

Process of DMI Windows

The DMI Process starts with a user creating forms in the Form Builder. After the creation of forms, a user with Authorization Privileges authorizes the forms. The Authorized Forms are then used by users to enter data into the database.

Figure 3-19 DMI Process Flowchart



User Role Mapping and Access Rights

User access to the DMI UI and the ability to perform functions in it is dependent on the mapping of the user profile to the roles and the access rights assigned.

To access the DMI features and edit forms, you must be mapped to the following roles:

Table 3-16 User Role Mapping for Data Maintainence Interface

Role Code	Role Name	Functionality
DMIDSGNREAD	Data Designer Read	Assign this role to the user to access the Configure View menu from Navigation Tree. NOTE: The mapping of this role does not allow view, edit, and add actions.
DMIDSGNAUTH	Data Designer Auth	Assign this role to the user to Authorize, Excel Upload, and Designer Summary.
DMIDSGNREJ	Data Designer Reject	Assign this role to the user to Reject, Excel Upload, and Designer Summary.
DMIDGNFORM	Data Designer Form	Assign this role to the user to Create Designer Form Definition.
DMIDGNTEMPLATE	Data Designer Template	Assign this role to the user to Create Excel upload Definition.

Table 3-16 (Cont.) User Role Mapping for Data Maintainence Interface

Role Code	Role Name	Functionality
DMIDSGNDEL	Data Designer Delete	Assign this role to the user to Delete, Excel upload, and Designer Summary.
DMIDGNVIEW	Data Designer View	Assign this role to the user to Create View Definition.
DMIDSGNWRITE	Data Designer Write	Assign this role to the user to Add, Edit and Copy all kinds of definitions in Designer screen.
DMIDATAREAD	Data Entry Read	Assign this role to the user to access the Data View menu from the Navigation Tree. NOTE: The mapping of this role does not allow view, edit, and add actions.
DMIDATAALL	Data All Summary	Assign this role to view the list of all Component Records in Data Entry Screen.
DMIDATAWRTE	Data Entry Write	Assign this role to the user to Add, Edit Records in Data Entry Screen.
DMIDATADEL	Data Entry Delete	Assign this role to the user to Delete a Record Summary Data Entry Screen
DMIDATAAUTH	Data Entry Auth	Assign this role to Authorize a Record Summary in Data Entry Screen.
DMIDATAREJ	Data Entry Reject	Assign this role to Reject a Record Summary in Data Entry Screen.
DMIDGNAUTO	Enable Auto Approve	The user mapped to this function will have access to create Auto Approved Forms
DMIDGNAMND	Enable editing of approved forms	User with this role can edit/ amend approved forms.

Note:

All the DMI roles are mapped to a single group, Data Maintenance admin group. If a user is mapped to this group all the DMI roles are automatically assigned to the user.

3.3.1 Access the Data Maintenance Interface

To access the Data Maintenance Interface (DMI):

1. Login to your Oracle Cloud account, with the required credentials to access DMI.
2. Select an application, to access the DMI for that application.

   For example, to access DMI for CFECS, select **Cash Flow Engine Cloud Service (CFECS)**.

> **Note:**
>
> The navigation steps vary for different applications. Refer to the respective application documentation for accessing Data Maintenance Interface.

3. Click **Data Management Tools** and click **Data Management Interface**, to access DMI menu.
4. Click one of the following menu items to access the respective pages:
   - Form Builder - Access form definition summary and also create various types of form definitions.
   - Data Entry

3.3.2 Form Builder

Access the list of Form definitions already created in the environment.

The Form Definitions Summary lists all the existing Form Definitions in the application.

You can create forms from the Form Designer View. The forms in the application are created with details configured for data maintenance and require authorization for use after creation. You can also edit, view, and delete forms, from the Forms Definitions Summary, based on the assigned roles and privileges. For more information, refer User Role Mapping and Access Rights.

To view the Form Definitions Summary:

1. Click **Data Maintenance Interface**.
2. Click **Form Builder** in the DMI navigation list to access the **Form Definitions Summary**.

   The following details are included the Summary page.
   - **Name** - The unique name of the Form Definition
   - **Description** - The Form Definition description.
   - Type - The form definition type:
     - **Excel Upload** – creates form based on uploaded Excel Sheet.

       > **Note:**
       >
       > Microsoft Office 2016 Standard version as well as Office 365 version are supported.

     - **Data Exporter** – creates form based on an entity table.
     - **Data Entry** – creates the form based on the entities, attributes and rulesets provided by the user.
   - **Status** - The processing status of the form definition. The various processing statuses are:
     - **Draft** – when the form is under development and is yet to be submitted for approval.
     - **Pending Approval** – When the approval is pending.
     - **Approved** – When the form definition is approved.

- **Created By** - The Username of the logged in User who created the form.
- **Actions** - View, copy or edit or amend a form definition.
- **Info** - The form definition details including:
  - Created Date
  - Last Modified By
  - Authorizer
  - Authorizer comments

Use **Search** to quickly access the required forms or check the Forms tile to view a list of existing forms. To search for a specific Form Definition, input search terms in the **Form Name** or **Description** field, or use a combination of both, and click **Search**. Click **Cancel** to clear the search criteria and view all form records.

Sort the Form Definition based on **Name**, **Description**, and **Created By** fields. You can also sort the page in ascending/descending order.

To filter and view Form definitions with a specific processing status, click the respective status name at the top of the page.

3.3.2.1 Creating New Forms in Form Builder

Form creation involves selecting entities, displaying columns with attributes on the form, and if required, selecting authorization of data. Security settings provide for the creation of specific-user access for the forms and authorization.

To add a form :

1. In the **DMI Summary** page, click **Add**, to access the **Designer - Configure page**.
2. Select the form definition type as follows:
   - **Excel Upload** – creates form based on uploaded Excel sheet.
   - **Data Exporter** – creates form based on an entity table.
   - **Data Entry** – creates the form based on the entities, attributes and rulesets provided by the user.

   For more information about creating various form definitions:
   - Creating Forms Using Excel Upload
   - Creating forms using Data Exporter
   - Creating Forms Using Data Entry

3.3.2.1.1 Creating Forms Using Excel Upload

Excel Upload Definition Type creates new forms based on the uploaded Excel file that has column names as per the table in the application data source.

While creating forms using Excel Upload, you can also modify the mapping for the attributes. After the new form is approved from the Forms Definition Summary Page, users with the necessary role and permission can perform Data Entry for the records updated by the Excel file.

> **Note:**
>
> Microsoft Office 2016 Standard version as well as Office 365 version are supported.

To create forms using Excel Upload:

1. Select Excel Upload in the Create Form Definition page and add the following details.
   - **Code** - The unique Form code. This value is auto-generated.
   - **Name** - The Form Name. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed.
   - **Description** - The Form Definition description. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed
   - **Auto Map Entities** - Enable this option to to auto map the attributes in the Excel file with the attributes in the Entity Table.

   At any point of time during the form creation, click **Save** to add the new form to the Form Summary. The form is saved in the **Draft** format. Click **Actions** and select **Edit**, to update the form definition.
2. Click **Continue** to access the **File Upload** tab.
3. In the **File Upload** tab, enter the following details:
   - **Template Name** and **Description** for the excel template.
   - Click **Drag and Drop** and select the excel file to update the required table.

   > **Note:**
   >
   > You can also drag and drop the required excel file to the **Drag and Drop** area.

   The excel file is uploaded and a confirmation box is displayed, and the **Mapped Entities Tab** is displayed.
4. After entering the **File Upload** information, click **Continue** to access the **Mapped Entities** tab.
5. In the **Mapped Entities** tab, select the **Primary Entity** name of the table that needs to be modified.

   > **Note:**
   >
   > Only the tables data which can be edited are displayed in the **Entity** drop-down list.

   If the table has Child tables, the Child tables are displayed in the **Mapped Entities** tab. You can select the required child tables for which data should be input during data entry.
6. Select **Enable Bulk Authorization** if you want to enable the bulk authorization of all the records when you edit an approved Form from Data Entry.

7. Enable **Auto Approve** if you want the Forms Definition to be automatically approved from Forms Definition Summary page and is enabled for data entry.

   Alternatively, you can also get the form approved manually. For manual approval, disable the auto approve option.

   A user with the required role can then perform the data entry without the need for an approval process. For more information, see User Role Mapping and Access Rights.

8. Click **Continue**, to proceed with the **Mapped Attributes** tab.
9. Click the drop-down arrow corresponding to the table in the Entity Name.

   The source attributes from the table and the mapped attributes from the Excel file are displayed. If the selected table has Child tables, the Child tables that you select from the Mapped Entities tab are also displayed in the **Mapped Attributes** tab. You can configure the attributes for the master table and its child tables here.

10. Click the required mapping in the **Override Mapping Column** and enter the required attribute name if you want to change the default mapping.
11. To activate data security, Select the check box next to the **Attribute Name**, in the **Mapped Attributes** Column.
12. Click the **Lock** icon adjacent to a specific attribute name, to configure a specific data security condition.

    The condition that you configure is applicable when a user performs the data entry for the table records for each approved Forms Definition from the Data Entry Page. For more information, refer Enabling Data Security for New Form Definitions.

13. Click **Continue** to proceed to the **User Security** tab.
14. Select the user or user groups who can perform data entry to maintain the data in the table.

    For more information about adding user security, refer to Enabling User Security for New Form Definitions.

15. Click **Data Preview** to preview the form data.
16. Click **Save** if you want to save the forms definition in draft format. The form is added to the **Form Summary** with **Draft** status.
17. Click **Submit** if you want to submit the Forms Definition for manual/auto approval.

    For more information refer to Approving and Rejecting New Form Definitions. After approval/auto approval, the form is added to the **Form Definition Summary**.

3.3.2.1.2 Creating Forms Using Data Entry Option

Use the Data Entry option to create a Forms Definition and select the table and attributes that you want to modify.

You can enter the values for the table records in the approved Forms Definition from Data Entry, after the new Forms Definition is approved from the Forms Definition Summary Page.

To create a forms definition:

1. Select **Data Entry** in Create New Form Definition page and enter the required details.
2. Enter the following details:
   - **Code** - Unique form code. This value is auto-generated.
   - **Name** - The form name. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed.

- **Description** - The form definition description. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed.
- **Threshold** - The maximum number edits allowed per row.

3. Click **Continue** to access the **Entities tab**.
4. Select the table that you want to modify in the **Primary Entity** Field.

> **Note:**
>
> Only the tables data which can be edited are displayed in the **Entity** drop-down list.

If the selected table have child tables, the child tables is also displayed. You can select the required Child tables for which you wish to input the data during data entry.

> **Note:**
>
> You can select up to four child tables only for each master table.

5. Select **Enable Bulk Authorization**, if you want to enable the bulk authorization of records while performing data entry.
6. Enable **Auto Approve** if you want the Forms Definition to be automatically approved from Forms Definition Summary page and is enabled for data entry.

   Alternatively, you can also get the form approved manually. For manual approval, disable the auto approve option.

   A user with the required role can then perform the data entry without the need for an approval process. For more information, see User Role Mapping and Access Rights.
7. Click **Continue**, to proceed with the **Attributes** tab.
8. Select the **Filter** from the existing filters in the drop-down list or click **Filter** to apply a new attribute filter to the form definition.
9. Click the drop-down arrow corresponding to the table in the **Entity Name**, to view the attributes in the entity table.

   If your table has child tables, the Child tables that you select from the Entities tab also gets displayed in the Attributes tab.
10. Select the attributes for which you want to modify the data from the **Attribute Name**.
11. Select **Participate in Data Security** if you want to configure a specific condition.
12. Click the **Lock** icon adjacent to a specific attribute name, to configure a specific data security condition.

    The configured condition is applicable when a user enters data in table for each approved Forms Definition from the Data Entry Page. For more information, refer Enabling Data Security for New Form Definitions.
13. Enter **Select Columns** to search and select specific columns.
14. Click **Continue** to access the **Ruleset** tab.

    The list of attributes associated with the parent and the Child tables are displayed in the Ruleset tab.

15. Assign permission to add data during data entry for those attributes that are set to Editable/Read-only mode. You cannot modify the key fields set in read-only mode.
16. Click Continue and proceed to the **User Security** tab.
17. Click **User Security** to select the user or user groups who can perform data entry to maintain the data in the table.

    For more information about adding user security, refer to Enabling User Security for New Form Definitions.
18. Click **Submit** if you want to submit the Forms Definition for manual/auto approval.

    For more information refer to Approving and Rejecting New Form Definitions. After approval/auto approval, the form is added to the **Form Definition Summary**.

3.3.2.1.3 Creating Forms Using Data Exporter

Forms created using Data Exporter are used to export table data to `CSV` or `JSON` format.

While creating forms using Data exporter, you can also include filters and dynamic placeholders to view and export specific set of data.

To create forms using Data Exporter:

1. Select **Data Exporter** in Create New Form Definition page.
2. Enter the following details:
   - **Source** - Select the input source as table/view.
   - **Code** - Unique Form Code. This is auto-generated.
   - **Name** - The name of the form in Form Name. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed.
   - **Description** - The Form Definition description. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed.
   - **Row Limit Per File** - The number of maximum table rows allowed per file. The minimum number of rows is 100 and the maximum limit is 100000.

     For example, if you have 500 rows in a table and the row limit is set to 100, then the table is split into 5 files.
3. Click **Continue** to proceed with the **Entity and Attributes Details** tab.
4. **Compress File**: Keep this option selected to automatically compress files into a .zip archive when downloading. Example: If you have 500 rows in a table and the row limit is set to 100, then the table is split into 5 files. With the **Compress File** option enabled, the user can download these 5 files compressed into a single .zip file.
5. Select the table that you want to modify in the **Entity** Field.

   If the selected table have child tables, the child tables is also displayed. You can select the required Child tables for which you wish to input the data during data entry.

   > **Note:**
   >
   > You can select up to four Child tables only for each Master table.
6. Select the **Filter** from the existing filters in the drop-down list or click **Filter** to apply a new attribute filter to the form definition.

7. Click **Select columns** to view only specific columns.
8. Enable **Auto Approve** if you want the Forms Definition to be automatically approved from Forms Definition Summary page and is enabled for data entry.

   Alternatively, you can also get the form approved manually. For manual approval, disable the auto approve option.

   A user with the required role can then perform the data entry without the need for an approval process. For more information, see User Role Mapping and Access Rights.
9. Click the drop-down arrow corresponding to the table in the **Entity Name**, to view the source attributes from the table and the mapped attributes from the Excel file.

   If the selected table has Child tables, the Child tables that you select from the Mapped Entities tab are also displayed in the **Attributes** tab. You can configure the attributes for the master table and its child tables.
10. Click **Continue** to access the **Data Preview** tab preview the form data.
11. Click **Submit** if you want to submit the Forms Definition for manual/auto approval.

    For more information refer to Approving and Rejecting New Form Definitions. After approval/auto approval, the form is added to the **Form Definition Summary**.

3.3.2.1.4 Creating Data Filters for New Form Definitions

Filters help to view and export specific set of data from data exporter forms.

Complete the following steps if you want to add filters to the Forms Definition:

1. Click **Filter**, to access the **Filter Condition** pane.
2. Enter/ select the following details.
   - **Column** - Select the column from the applying the filter.
   - **Condition** - Select one of the following filter conditions, to filter the column data.
     - **Comparison** - '=', '!=', '< >', '>', '<', >=, <=,'IN', 'NOT IN', 'ANY', 'BETWEEN', 'LIKE', 'IS NULL', and 'IS NOT NULL'.
   - **Type** - Select one of the following filter types.
     - **Static** - Select Static, to enter a value and execute the filter using only one value. You cannot change the value at a later point.
     - **Dynamic** - Select Dynamic, to change the filter value when needed.
       After setting the filter type to Dynamic, select the **Placeholder** and set one of the default seeded values, to process the filter.

       > **Note:**
       >
       > Only values that are already seeded in the Database table, are displayed in the Placeholder drop-down list.
   - **Filter Value** - Select/enter the filter value.

> **Note:**
>
> For Language Placeholder the default locale language is displayed and cannot be modified.

3. Click **Add** to add a new Filter expression. You can add multiple Filter expressions to the same filter.

   The filter is added to the list of filters.

   Mouse-over the place holder filter, to view more details about the filter.

4. Click **Validate** to verify the filter condition is valid.

   A confirmation is message is displayed, if the filter is valid.

5. Click **Apply**, to add the new filter to the filter condition.
6. Click **Reset**, to clear all the filter expressions and create a new expression.
7. Click **Delete** to delete an existing filter expression.
8. Click **Edit** to modify a filter expression. After editing the expression, click **Validate**, to verify if the condition is valid.
9. Click **Apply** to add the filter expression to the form definition.

3.3.2.1.5 Enabling Data Security for New Form Definitions

Data security conditions allows you to apply certain filters when a user performs the data entry for the table records for each approved Forms Definition from the Data Entry page.

Consider that you configure the condition `COUNTRY_NAME = 'INDIA'` for the reference table **DIM_COUNTRY**. When a user performs the data entry for this Forms Definition from the Forms Definition - Summary Page and enters a country name other than 'INDIA', the record gets rejected by the application when another user approves this record.

Complete the following steps to configure Data Security for the Forms Definition:

1. Select the check box next to the **Attribute Name**, in the **Mapped Attributes** Column.

   > **Note:**
   >
   > Data Security information must be configured for each attribute name, separately.

2. Click the **Lock** icon, to access the **Data Security page**.
3. Select the **Reference Table** based on which you want to build your condition from the Reference Table drop-down list.
4. Select the required column, condition, and filter value, and build the required expression.
5. Click **Apply**, to enable the data security for the new form definitions.

3.3.2.1.6 Enabling User Security for New Form Definitions

The User Security option helps you to select the users/user groups who can add, edit, delete and/or authorize data entry.

To enable user security:

- Select the required user group or user to assign permissions from the **Map Users / Groups**, to complete the user security configuration.

  When you select the user group or user, the permissions for each approved Forms Definition are displayed. These permissions are the actions that the selected user group or user can perform while performing Data Entry.

Table 3-17 Permissions in the Map Users / Groups Pane

Option	Description
Add /Edit	Add or modify records in an approved Forms Definition
Delete	Delete records in an approved Forms Definition
Authorize	Authorize the records in an approved Forms Definition
Duration From	Optional. Select the start date for which the permissions are available to the user or user group.
Duration To	Optional. Select the end date for which the permissions are available to the user or user group.

> **Note:**
>
> If you select a user group for User Security, you can view the users mapped to that group by clicking the **Users** icon.

3.3.2.2 Approving and Rejecting New Form Definitions

You can validate and approve the new Forms Definition if you have the required role assigned to you.

If the configuration in the Forms Definition is incorrect, you can reject the Forms Definition. The rejected Forms Definition changes into Draft status. You can then request the required user to edit the Forms Definition and submit it for approval again.

You can also view, copy, and edit each Forms Definition from the Forms Definition – Summary page by clicking Menu. These actions are available based on the roles assigned to you. For more information, refer User Role Mapping and Access Rights.

3.3.2.2.1 Approving a Forms Definition

You can approve new forms based on the assigned roles.

To check about the assigned roles, refer User Role Mapping and Access Rights.

To approve a Forms Definition:

1. In the Form Builder, click **Menu** in the Forms Definition that is in **Pending Approval** status, and then click **Approve**, to access the **Configure page**.
2. Click **Approve** and then enter the required description for the approval in the Comments field.
3. Click **Submit**, to approve the form definition and view it in the **Data Entry page**.

Once the form is approved, you can edit/amend the approved forms if you have **DMIDGNAMND** role assigned.

3.3.2.2.2 Rejecting a Forms Definition

You can reject new forms based on the assigned roles.

To check about the assigned roles, refer User Role Mapping and Access Rights.

To reject a Forms Definition:

1. In the Form Builder, click **Menu** in the Forms Definition that is in **Pending Approval** status, and then click **Reject**, to access the **Configure page**.
2. Click **Reject** and then enter the required description for the approval in the Comments field.
3. Click **Submit**.

   The Forms Definition is rejected, moved to **draft** status. The form definition is displayed in Forms Definition Summary page. You can then edit the Forms Definition in draft status and submit it for approval again.

   For more information on editing a Forms Definition, see Editing Form Definitions.

3.3.2.3 Managing Form Definitions

You can view, edit, copy, and delete the existing Form Definitions from the Form Definition Summary Page, based on the assigned roles.

To check about the assigned roles, refer to User Role Mapping and Access Rights.

In the Summary Page, highlight a specific Definition and click **Action**. The following options are displayed:

Table 3-18 Action Details

Action	Description
View	View the **Member details** for a specific Member Definition.
Edit/Amend	Edit/amend the **Member details** of a form definition.
Copy	Copy the Member Definition Details and create another Member Definition by changing Alphanumeric Code, Numeric Code and Name.
Re-Upload	Upload a new Excel sheet for an Excel upload form definition. You need to delete the attached excel sheet before uploading the new data.
Delete	
Approve	If you have the required role, you can approve a new Form that is in Awaiting Approval status. For more information, refer to Approving a Forms Definition.
Reject	If you have the required role, you can approve a new Form that is in Awaiting Approval status. For more information, refer to Rejecting a Forms Definition.

3.3.2.4 Viewing Form Definitions

You can view the form definition details using the View option, based on the assigned roles.

To check about the assigned roles, refer User Role Mapping and Access Rights.

You can view the details of an individual Form Definition:

1. Highlight the Form Definition and click **Action**.
2. Click **View**, to access the **Form Definition page** with the selected Form definition details.

3.3.2.5 Editing/Amending Form Definitions

You can modify both approved and rejected form definitions, based on the assigned roles.

To check about the assigned roles, refer User Role Mapping and Access Rights. Forms that are already approved cannot be edited. You can amend the approved forms if you have **DMIDGNAMND** role assigned.

> **Note:**
>
> You cannot amend an approved form, if the form has any pending data entry activity.

To edit individual form details:

1. Highlight the form definition and click the **Action**.
2. Click **Edit**, to access the **Form Definition page** with the details.

   To modify an approved form, click **Amend**.
3. Update the required information and click **Submit**.

   You can also **auto-approve** the form during submission.

   The modified form definition is updated in the form design summary.

3.3.2.6 Copying Form Definitions

You can copy individual Definition Details, to recreate another new Definition, if you have assigned roles.

To check about the assigned roles, refer User Role Mapping and Access Rights.

To copy an existing form definition:

1. Highlight the Definition and click **Action**.
2. Click **Copy**, to view the **Form Definition Page**.
3. Edit the unique information and modify details like entity table, attribute filters, user and data security details and click **Save**, to create a new form definition.

3.3.2.7 Re-Uploading Form Definitions

You can attach a new Excel Sheet to an Excel upload form definition and re-upload the form definition, based on the assigned roles.

To check about the assigned roles, refer to User Role Mapping and Access Rights..

To re-upload an Excel upload form definition:

1. Highlight the Definition and click **Action**.
2. Click **Re-Upload**, to access the **Form Definition page**.
3. In the **File Upload** tab, click **Remove**, to delete the existing Excel sheet.
4. Click **Drag and Drop** and select the new Excel sheet to be uploaded.

3.3.2.8 Deleting Form Definitions

You can delete the form definitions that are in Draft status, based on the assigned roles.

To check about the assigned roles, refer User Role Mapping and Access Rights.

To delete a form definition :

1. Highlight the form definition and click the **Action**
2. click **Delete**.

   The selected form definition is deleted after confirmation.

3.3.3 Data Entry

The Data Entry feature of Data Maintenance Interface (DMI) enables you to maintain or modify the table data by using the Forms Definition that is created and approved from Forms Definition Summary page. For more information on Forms Definitions, see Creating Forms Definition.

If the approved Forms Definition is created by using the designer option, a user with the necessary role can add or modify the records in the table as per the configuration in the Forms Definition. These records are then sent to another user with the necessary permission for final approval.

If the approved Forms Definition is created by using an Excel file, a user with the necessary permission can verify and approve the records that are modified with the values from the Excel file. If the records modified by the Excel file are incorrect, the user can reject the records. The rejected record can be modified by a different user with the necessary role and can be sent for the final approval again. The Forms Definitions that are created by using an Excel file are labeled with an Excel icon in Data Entry.

3.3.3.1 Viewing Data Entry

You can view records based on the assigned roles. For more information about the roles, refer to User Role Mapping and Access Rights.

Complete the following steps to view Data entry:

1. Login to your Oracle Cloud account, with the required credentials to access DMI.
2. Select an application, to access the DMI for that application.

   For example, to access DMI for CFECS, select **Cash Flow Engine Cloud Service (CFECS)**.

> **Note:**
>
> The navigation steps vary for different applications. Refer to the respective application documentation for accessing Data Maintenance Interface.

3. Click **Data Management Tools** and click **Data Management Interface**.

   The **Navigation List** is displayed.

4. Click **Data Entry**.

   The **Data Entry page** is displayed. All the approved forms are displayed in the Data Entry page. Forms in Draft and Awaiting Approval status can be accessed from the Form Builder page.

3.3.3.2 Adding Data to Table – Forms Created Using Data Entry

If the Forms Definition is created using the designer option, the user with the necessary role can add or delete records and also update the values for the table records as per the configuration in the Forms Definition.

These records are then submitted for approval to another user with the necessary role. For more information, refer to User Role Mapping and Access Rights.

To update/delete data in the table records:

1. Highlight the record and click the **Action**.
2. Click **Edit**, to update the records.

   The records are classified based on the following Status:

   - **Draft** – Records that are created but not submitted. In Draft state, you can add new rows or delete/edit an existing row submitted for auto-approval.
   - **Ready** – Records that are approved. You can only edit the records.

   For adding/deleting records and editing existing draft or Ready records, refer to the following sections:

Related Topics

- Adding/Editing a Draft Record
  You can add a record to the table or edit a record set in the Draft status. The added record is set to Draft status.
- Deleting Draft Records

3.3.3.2.1 Adding/Editing a Draft Record

You can add a record to the table or edit a record set in the Draft status. The added record is set to Draft status.

To add or edit a draft record:

1. Select **Draft** from the **Status** drop-down list, to view all the entity records set to **Draft** status.
2. To add a new record, click **Add**.

   A new entry set to **Draft** status is added to Entity details page. This entry is empty. Edit the record to add the attribute details.

3. To edit a record, click **Edit** next to the record.

4. In the **Edit** page, enter the values in the attributes that you want to modify and click **OK**.

   You can repeat the steps for all the records for which the data needs to be entered.

5. To modify all the entries in a specific column, click **Bulk Update**.

   a. Select the column to modify the data.

   b. Enter the new value and click **OK**.

6. Click the modified record in draft status, and then click **Submit for Approval** or **Submit with Auto Approval**.

   If the record is submitted with auto approval, it is approved instantaneously.

   If the record is submitted for approval, is sent for approval, and is changed to **Awaiting status**. A user with the necessary role can approve these records. For more information, see Approving and Rejecting Records after Data Entry.

   After approval, the status is changed from **Draft** to **Ready** status. Refer Editing Approved Records, to edit the records in **Ready** status.

> **Note:**
>
> If the user has configured the **Participate In Data Security** option while creating a Forms Definition, you must enter the value as per the configured condition. If you enter a value that does not meet the condition, then the record is rejected by the application and the approval gets failed. You can view the details of the rejection by using the Audit trail option for each record. For information on the Participate In Data Security option, see Enabling Data Security for New Form Definitions.

3.3.3.2.2 Deleting Draft Records

You can delete the records in Draft status. If the record is approved and moved to Ready status, it cannot be deleted.

1. Select **Draft** from the Status drop-down list.

   The entity records with Draft status are displayed for entering data are displayed.

2. Select a record and click **Delete**.

   To delete multiple records, select all the required records and click **Delete**.

   To bulk delete all the records, select the Check box on the Header. All the records are selected. Then, click **Delete**.

3.3.3.2.3 Editing Approved Records

The approved records are set to Ready Status.

When you edit the record, it is moved to Draft Status.

1. Select **Ready** from the Status drop-down list, to view the entity records with Ready status are displayed.

2. To edit a record, click **Edit** next to the record.

3. Update the values for the attributes that you want to modify and click **OK**.

   You can repeat the steps for all the records for which the data needs to be entered.

4. To modify all the entries in a specific column, click **Bulk Update**.
   a. Select the column to modify the data.
   b. Enter the new value and click **OK**.
5. Click the modified record in draft status, and then click **Submit for Approval** or **Submit with Auto Approval**.

   To submit multiple records, select all the required records and click **Submit**.

   To bulk submit all the records, select the check-box on the header. All the records are selected. Then, click **Submit**.

   If the record is submitted with auto approval, it is approved instantaneously. The record is sent for approval and is changed to Awaiting status. A user with the necessary role can approve these records. For more information, see Approving and Rejecting Records after Data Entry.

> **Note:**
>
> If the user has configured the Participate In Data Security option while creating a Forms Definition, you must enter the value as per the configured condition. If you enter a value that does not meet the condition, then the record is rejected by the application and the approval gets failed. You can view the details of the rejection by using the Audit trail option for each record. For information on the Participate In Data Security option, see Enabling Data Security for New Form Definitions.

3.3.3.3 Forms Created Using Excel Upload

When a Forms Definition created using an Excel file is approved from Forms Definition Summary Page, the table records in the selected table are updated using the data in the Excel file.

The records are set to **Awaiting** status for the approved forms definition in data entry page. You can verify the records modified by the Excel file records and approve them if you are assigned to the necessary role. If the records modified by the Excel file are incorrect, you can reject the records. The status of the rejected records is changed to Draft. A user with the necessary role can edit the records in draft status and submit them for approval again.

- To approve records, see Approving a Draft Record.
- To reject records, see Rejecting a Record.
- To edit a record in draft status, see Editing a Rejected Record.

3.3.3.4 Approving and Rejecting Records

A user with the necessary role can approve or reject the edited records.

For more information related to user roles, refer to User Role Mapping and Access Rights.

3.3.3.4.1 Approving Draft Records

You can approve the records set to Draft status.

To approve records :

1. In the **Data Entry** page, select **Draft** from the **Status** drop-down list.

The entity records with Draft status are displayed.

2. Select the required record.

   You can select multiple records, to perform bulk Approval. Bulk Approval is enabled only if Bulk Authorization is activated during Form Creation.

3. Enter the required comment in the Comments Field, and then click **Approve**.

   The record is approved successfully with the values from the Excel file.

3.3.3.4.2 Rejecting a Record

You can reject an record set to Awaiting status.

To reject a record :

1. Click **Menu** in the required Forms Definition from the Data Entry page.
2. Click **Edit**.

   The Entity Details page is displayed. The records that are waiting for the final approval are displayed here.

   Select the required record, and then click **Reject**.

   You can select multiple records to perform bulk rejection. Bulk rejection is enabled only if Bulk Authorization is activated during Form Creation.

3. Enter the required comment in the Comments field, and then click **Reject**.

   The record is rejected, and the status is changed to **Draft**. A user with the necessary role can now edit the record.

3.3.3.4.3 Editing a Rejected Record

You can edit the records that are in draft status and send them approval to the user with the necessary role.

To edit a record:

1. Select **Draft** from the **Status** drop-down list.
2. Click **Edit** in the record that you want to edit.
3. Modify the required attributes, and click **OK**.
4. Select the record and then click **Send for Approval**.

   The modified record is now moved to **Awaiting** status. A user with the necessary role can approve the record.

> **Note:**
>
> If the user has configured the **Participate In Data Security** option while creating a Forms Definition, you must enter the value as per the configured condition. If an incorrect value is entered, the record gets rejected by the application and the approval is failed. You can view the details of the rejection by using the Audit Trail option for each record. For information on the Participate In Data Security option, see Enabling Data Security for New Form Definitions.

3.3.3.5 Exporting Data Exporter Form Definitions

After creating data exporter form definitions, you can export or download the reports to CSV or JSON format.

To export or download a report:

- In the Data Entry summary page, click **Action** next to the data exporter form to be exported and select one of the following options
  - Custom Export - export the report only for selected attributes. You can also create and apply filter conditions to specific columns to generate customized reports.
  - Export - export the report for all the attributes. A complete report including all the records and attributes is generated.

3.3.3.5.1 Custom Exporting Data Exporter Forms

When you create forms using Data Exporter option, you can export the report to .CSV format.

To custom export data exporter forms :

1. Click **Action** next to the form to be exported and click **Custom Export**, to view the **Data Exporter - Configure** page.
2. Click **Start**, to access the **Entity and Attributes** tab.
3. Select the attributes to be added to the custom report.
4. Click **Continue**, to view the **Filters** tab.
5. Set the filter conditions for specific columns and click Continue to view the **Data Preview** tab.
6. Select the report file format (.CSV or JSON) and also the number of records per page.
7. View the list of records to validate the data.
8. Click **Export** to export the report in CSV format.

   The Data export request will be submitted.
9. Proceed to the Data entry page to view the status of the form and download the report.

3.3.3.5.2 Exporting Data Exporter Forms

Forms created using Data Export option can be exported as a .CSV file or a JSON file.

Export Data Exporter forms:

1. Click **Action** next to the form to be exported and click **Export**.

   The Data export request is submitted.
2. Proceed to the Data entry page to view the status of the form and download the report.

3.3.3.5.3 Viewing Data Exporter Report Status

View the status of all the reports generated based on a Data Exporter form.

To view report status:

- Click **Action** next to the form to be exported and click **Status/Download**, to view the status of all the reports generated for a specific data exporter form.

3.3.3.5.4 Downloading Reports

You can download the reports exported as .CSV file.

To download a report :

1. Click **Data View**.

   The **Data Entry page** is displayed.

2. Click **Action** next to the form to be exported and click **Status/Download**, to access the **Data exporter Report Status** page.

3. Click the **Download** icon adjacent to a report to download the report to the local directory in `.CSV` format.

   You can also copy the link to download the report. Enter the link in a Web browser, to access the report.

3.3.4 Adding DMI Tasks in Scheduler Service

The Data maintenance Interface is now integrated with the Scheduler services and you can use Scheduler services, to process form definitions created using Data Exporter.

By using Scheduler Services for DMI automation, you can automate and streamline the data processing for form definitions created using the Data Exporter options.

Ensure that you have the assigned roles to perform automated data exporter form download.

To schedule a DMI task for form definitions created using Data Exporter:

1. Log in to your **Cloud services** and access **Scheduler Services**.
2. Select **Define Batch**, to view the list of existing batches.
3. In the Define Batch page, click **Create**, to access the **Create Batch** page.
4. Enter the generic Batch information (**Code, Batch Name, Batch Description, and Batch Parameters**), and click **Save** to create a new Batch and proceed with creating a new Task.
5. In the **Left Navigation list**, select **Define Tasks**, to access the list of existing tasks.
6. In the Define Task page, select the **DMI Batch** to associate the new task
7. Click **Add**, to **Create a new task**.
8. Enter the generic Task details (**Task Code, Task Name and Task Description**), and the following DMI specific details:
   - **Component** - Select Data Maintenance Interface, to assign this as a DMI specific task.
   - **Report Template** - Select **Pre-defined template**, to access the following DMI specific template parameters.
     - **App ID** - The unique application ID of the application utilizing the Scheduler services for task automation.
     - **Module Name** - Select the module required for the DMI tasks, from the list of Seeded modules.
     - **Report Code** - Select the Report code to be added to the generated report.
     - **Report Type** - Set the report type to `CSV/JSON`.
     - **Available Place holders** - (Optional). Select the placeholder required for the report.

- **Placeholder Values** - (Optional). Enter the placeholder values to be included in the generated report.
- **Additional Filters** - (Optional). Enter the filters to be applied to the data, to generate reports with specific information. For details, see Dynamically export relevant records.
- **Report Name Prefix** - (Optional). Enter the unique prefix to be added to the report name for easy identification of the report.
- **Report Name** - (Optional). Provide a name for the report to be generated.

9. Click **Save** to create a new DMI specific task, and proceed with scheduling the batch.
10. In the Left Navigation list, select **Schedule Batch**, to access the list of batches.
11. Select the DMI batch for execution and click **Execute**.
12. During batch execution, click **Monitor Batch**, to check the progress.
13. Select the **Batch** and the **Run ID** to access the required task, and click **Start Monitor** to view the task execution progress in the **Visualizations** tab.
14. Click **List View** to view the task execution details of all the executed tasks.

    After the task execution is complete, the generated report is saved to the object store.
15. Click **View Execution Logs** corresponding to the DMI task, to view the execution log information.
16. Scroll to the required **Batch Run Id** and **copy the log details to clipboard**.
17. Paste the copied log information to a notepad, to get the PAR URL for downloading the report.
18. Paste the PAR URL in a Web browser, to download the report to the local directory.

3.4 Data Quality Framework

Data Quality Framework consists of a scalable rule-based engine which uses a single-pass integration process to standardize, match, and duplicate information across global data.

Topics:

- Introduction to Data Quality Framework
- Roles and Functions for Managing DQ Framework
- Data Quality Rules
- Data Quality Groups
- Adding a DQ Check Task
- Execution Summary

3.4.1 Introduction to Data Quality Framework

Data Quality Framework consists of a scalable rule-based engine which uses a single-pass integration process to standardize, match, and duplicate information across global data.

Data Quality Framework within the Infrastructure system facilitates you to define rules and execute them to query, validate, and correct the transformed data existing in an environment. This framework includes the following components:

- Data Quality Rules - Data Quality Rules allows you to create a DQ (Data Quality) definition and perform Data Quality checks using Single column and Multi-column checks.
- Data Quality Groups - Data Quality Groups facilitates you to logically group the defined DQ definitions.

3.4.2 Roles and Functions for Managing DQ Framework

The following roles and function are required to create, view and manage the Rules and Groups in DQ Framework.

Role	Action
DQACC - DQ Access	Data Quality Rule Access Role
DQADVND - DQ Advanced	Data Quality Rule Advanced Role
DQAUTH - DQ Authorize	Data Quality Rule Authorize Role
DQAUTOAUTHR - DQ Auto Authorize Rulw	Data Quality Auto Authorize Rule
DQREAD - DQ Read	Data Quality Rule Read-only Role
DQWRITE - DQ Write	Data Quality Rule Write Role

Functions	Action
DQ_SUMM - Data Quality Rule Summary	Access DQ Rule Summary
DQ_GP_EXEC - Execute Data Quality Group	Execute DQ Rule Group
DQ_GP_ADD - Add Data Quality Group	Add DQ group
DQ_ADD - Add Data Quality Rule	Add DQ Rule
DQ_EDT - Data Quality Edit Rule	Edit DQ Rule
DQ_VIW - Data Quality View Rule	View DQ Rule
DQ_GP_VIW - Data Quality View Rule Group	View DQ Rule Group
DQ_GP_DEL - Data Quality Delete Rule Group	Delete DQ Rule Group
DQ_DEL - Data Quality Delete Rule	Delete DQ Rule
DQ_AUTH - Data Quality Authorisation Rule	Authorize DQ Rule
DQ_GP_EDT - Data Quality Edit Rule Group	Edit DQ Rule Group
DQ_GP_ADD -Data Quality Add Rule Group	Add DQ Rule Group
DQAUTOAUTH - Data Quality Auto Authorize	Save the Rule/Group in authorized state
DQ_PURGE - DQ Rule Purge	Purge the DQ Rule
DQ_GP_SUMM - Data Quality Group Summary	Access DQ Group Summary
DQ_GP_EXEC - Data Quality Execute Rule Group	Execute DQ Rule
DQ_GP_PURGE - DQ Group Purge	Purge the DQ Group
DQ_GP_AUTH - DQ Group Authorisation	Authorize DQ Group
DQ_EXE_SUMMARY- DQ Execution Summary	Access DQ Execution Summary
DQ_EXE_ASSIGN - DQ Execution Assignment	Enable Data correction in the execution summary

3.4.3 Data Quality Rules

Data Quality Rules allows you to create a DQ (Data Quality) definition using data quality checks based on single column or multiple columns of a single base table. The defined Data Quality Rules can be logically grouped and executed together.

3.4.3.1 Data Check Definitions

Data Check definitions included the Data Quality Rules help in performing data quality check and correction.

You can include the following Data quality checks in the DQ Rule.

- **Single Column Check** - You can set the Check Type to Single Column Check during DQ Rule creation. This check will perform Data Quality Check on only one column selected during Rule creation. For more details about the various Single column Checks, refer to Single Column Data Check Definitions.
- **Multi Column Check** -You can set the Check Type to Multi Column Check during DQ Rule creation. This check will perform Data Quality Check on one or more columns of a single base table, selected during Rule creation. For more details about the various Multi-column Checks, refer to Multi Column Data Check Definitions.

3.4.3.1.1 Single Column Data Check Definitions

Single Column Data Checks help to perform data quality check on only one column selected during DQ Rule creation.

You can include the following Data Quality checks in the DQ Rule, if the check type is set to Single Column Check.

- **Range Check** - Range Check identifies if the base column data falls outside a specified range of Minimum and Maximum value. Range check can be enabled only if the base column has date or number value.
  - Select the check-box to enable the Range check.
  - Set the warning level to **Severity**, **Warning** or **Information**.
  - If the selected Base Column is of **Date** type, select Minimum and Maximum date range. If the selected base column is of **Number** type, enter the Range value. You can specify numeric, decimal, and negative values for number Data type.
  - Check the Inclusive check-box, to include the specified date/value during the data check.
  - Click **Edit** to add specific filter expressions, as additional conditions. For more information, refer to Creating Expressions.
  - Select the **Assignment** option. The Assignment option is enabled only if Warning/ Information is selected as the Warning level.
    * Select the Assignment Type from the drop-down list. For more information, see Assignment Types.
    * Specify the **Assignment Value**.
    * Select the **Message Severity** as 1 or 2 from the drop-down list.
    * Select a pre-defined Message to be displayed from the drop-down list.
      To enter a specific message other than the listed pre-defined messages, select **Custom Message**, in the Message drop-box and enter the required **Custom Message**.
- **Null Value Check** -Null Value Check checks identifies if there is any null value in the selected column.
  - Select the check-box to enable the Null Value check.

  - Set the warning level to **Severity**, **Warning** or **Information**.
  - Click **Edit** to add specific filter expressions, as additional conditions.
  - Select the **Assignment** option. The Assignment option is enabled only if Warning/ Information is selected as the Warning level.
    * Select the Assignment Type from the drop-down list. For more information, see Assignment Types.
    * Specify the **Assignment Value**.
    * Select the **Message Severity** as 1 or 2 from the drop-down list.
    * Select a pre-defined Message to be displayed from the drop-down list.
      To enter a specific message other than the listed pre-defined messages, select **Custom Message**, in the Message drop-box and enter the required **Custom Message**.

- **Blank Value Check** -Null Value Check checks identifies if there is any entry in the selected column is blank.
  - Select the check-box to enable the Blank Value check.
  - Set the warning level to **Severity**, **Warning** or **Information**.
  - Click **Edit** to add specific filter expressions, as additional conditions.
  - Select the **Assignment** option. The Assignment option is enabled only if Warning/ Information is selected as the Warning level.
    * Select the Assignment Type from the drop-down list. For more information, see Assignment Types.
    * Specify the **Assignment Value**.
    * Select the **Message Severity** as 1 or 2 from the drop-down list.
    * Select a pre-defined Message to be displayed from the drop-down list.
      To enter a specific message other than the listed pre-defined messages, select **Custom Message**, in the Message drop-box and enter the required **Custom Message**.
- **Data Length Check** -Data Length Check checks for the length of the base column data using a minimum and maximum value and identifies if it falls outside the specified range.
  - Select the check-box to enable the Data Length check.
  - Set the warning level to **Severity**, **Warning** or **Information**.
  - Enter the Minimum and maximum values for validation.
  - Click **Edit** to add specific filter expressions, as additional conditions.
- **Duplicate Check** - Duplicate Check can be used when a combination of column is unique and identifies all the duplicate data of the base table in terms of the columns selected for the duplicate check.
  - Select the check-box to enable the Duplicate Check.
  - Set the warning level to **Severity**, **Warning** or **Information**.
  - Click **Edit** to add specific filter expressions, as additional conditions.
  - Click **Edit** and select the required column to be added to the **Column List**, for duplicate check validation.
- **Custom Check/Business Check**- Custom Check/Business Check is a valid SQL query to identify the data with the query specified as the Custom/business SQL. You can define the

SQL, but the Select clause of the query has to follow the order as specified in the template of the Custom Check panel.
Sample Template : `"SELECT 'N_COUNTRY_SKEY' PKNAMES, N_COUNTRY_SKEY PK1, null PK2, null PK3, null PK4, null PK5, null PK6, null PK7, null PK8, V_COUNTRY_DESC ERRORCOL FROM DIM_COUNTRY WHERE N_COUNTRY_SKEY >50"`

- Select the check-box to enable the Custom Check.
- Set the warning level to **Severity**, **Warning** or **Information**.
- Enter the SQL Query to perform the custom check.

- **Column Reference/Specific Value Check** - Column Reference / Specific Value Check compares the base column data with another column of the base table or with a specified direct value using the list of pre-defined operators.
  - Select the check-box to enable the Column Reference check.
  - Set the warning level to **Severity**, **Warning** or **Information**. Column reference check can be enabled only if the base column has date or number value.
  - Select the **Mathematical Operator** from the drop-down list.
  - Select the **Filter Type** as one of the following:
    - Select **Specific Value** and specify the Value. You can specify numeric, decimal, and negative values for number Data type.
    - Select **Another Column** and select Column Name from the drop-down list.
  - Click **Edit** to add specific filter expressions, as additional conditions.
  - Select the **Assignment** option. The Assignment option is enabled only if Warning/ Information is selected as the Warning level.
    - Select the Assignment Type from the drop-down list. For more information, see Assignment Types.
    - Specify the **Assignment Value**.
    - Select the **Message Severity** as 1 or 2 from the drop-down list.
    - Select a pre-defined Message to be displayed from the drop-down list.
      To enter a specific message other than the listed pre-defined messages, select **Custom Message**, in the Message drop-box and enter the required **Custom Message**.
- **List of Value** - List of Value Check verifies the values where a dimension / master table is not present. This check identifies if the base column data is not matching with any value or code specified in a list of values.
  - Select the check-box to enable the List of Value check.
  - Set the warning level to **Severity**, **Warning** or **Information**.
  - Select **Input Values** and specify the List of Values. You can specify numeric or String values.
  - Click **Edit** to add specific filter expressions, as additional conditions.
  - Select the **Assignment** option. The Assignment option is enabled only if Warning/ Information is selected as the Warning level.
    - Select the Assignment Type from the drop-down list. For more information, see Assignment Types.
    - Specify the **Assignment Value**.

    * Select the **Message Severity** as 1 or 2 from the drop-down list.
    * Select a pre-defined Message to be displayed from the drop-down list.
      To enter a specific message other than the listed pre-defined messages, select **Custom Message**, in the Message drop-box and enter the required **Custom Message**.

- **Referential Integrity Check** - Referential Integrity Check identifies all base column data which has not been referenced by the selected column of the referenced table. Here, the reference table and columns are user specified.
  - Select the check-box to enable the Referential Integrity Check.
  - Set the warning level to **Severity**, **Warning** or **Information**. Column reference check can be enabled only if the base column has date or number value.
  - Select the **Table** (Referential Integrity Check dimension table) from the drop-down list. The base table selected under the Select grid is excluded from the drop-down list.
  - Select the Column from the drop-down list. The list displays those columns that have the same Data Type as that of the Base Column selected under Select grid.
  - Select the **Is Composite Key** check-box if the base column is part of a Composite Key.
  - Click **Edit** to add specific filter expressions, as additional conditions.

3.4.3.1.2 Multi Column Data Check Definitions

Multi Column Data Check definitions help in data quality checks and correction of one or more columns of a single table, selected during Rule creation.

3.4.3.1.3 Assignment Types

To populate the Assignment Type details, select any of the below Assignment Type option from the dropdown list and do the following:

- **No Assignment** - This assignment is selected by default and does not have any target column update, but the message details are pushed.
- **Direct Value** - Enter the **Assigned Value**. You can specify number, date or string values, as required.
- **Another Column** - Select the required Column as **Assigned Value** from the drop-down list.
- **Expression** - Specify the required expression in the Specify Expression Page. For more information, refer to Creating Expressions.

3.4.3.2 Creating Expressions

You can define an expression in the Expression Builder to combine two selected tables.

The expression builder includes the following sections:

- **Entities** - consists of the Entities folder with the list of tables that you selected from the Entity Groups folder. Double-click the Entities folder to view the selected dimension tables (Product and Segment tables).
- **Functions** – The 2 types of functions are,
  - **Database Functions** - consists of functions that are specific to databases.

  - **User Defined Functions** - use these functions along with Operators to specify the join condition.
- **Operators** - Consists of the function operators categorized into folders. The various types of operators are,
  - **Arithmetic** - +, -, %, * and /
  - **Comparison** - '=', '!=', '< >', '>', '<', >=, <=,'IN', 'NOT IN', 'ANY', 'BETWEEN', 'LIKE', 'IS NULL', and 'IS NOT NULL'.
  - **Logical** - 'NOT', 'AND' and 'OR'
  - **Set** - UNION, UNION ALL, INTERSECT and MINUS
  - **Other** - The Other operators are 'PRIOR', '(+)', '(' and ')'.

To specify the join condition:

1. Select the **Entity** of the fact table to which you want join the dimension entities.
2. Select a **Function** depending on the database type.
3. Select the **Operator** you want to use for the join condition.
4. Select the **Second Entity** from the Entities pane that you want to join with the first entity. You can also select more than one table and link to the fact table.

   The defined expression is displayed in the Expression pane. Click **Reset** to reset the values.
5. Click **OK**.

   The defined expression is validated as per the selected table and entity definition and on successful validation, it is added to the DQ Rule.

3.4.3.3 DQ Rules Summary

The Data Quality Rule Summary page contains the list of user-defined Data Quality Rules with details such as Name, Status, Folder, Is Executed, Version, Is Grouped, Check Type and Base table.

Refer to the following procedure to view DQ Rules Summary and the relevant details:

- Click **Data Quality Rules**, to access the Data Quality Rules Summary.

  The Data Quality Rules Summary page with the following details is displayed.
  - **Name** - The Unique Identifier Name of the Data Quality Rule.
  - **Status** - The Approval status of the specific rule.
    - **Approval** - The Rule is approved and ready for execution. The approved rules can be grouped further for execution.
    - **Pending for Approval** - The rule requires approval and can be executed only after approval.
    - **Draft** - A defined rule is set to**Draft** status until it is submitted for approval by the creator.
    - **Rejected** - The rejected rules are sent back to the creator with the Approver comments.
  - **Folder** - The folder associated with the rule.
  - **Version** - The current active version of the rule.

When a new definition is created, it will be saved as version 1 and once it is authorized, it will be in Active status. After you modify any DQ Rule and save, it will be saved with version as highest available version +1. For example, if you modify a DQ Rule of version 2 and the highest version available is 4, after you save the definition, its version becomes 5. Only the latest version will be in Active status.

- **Check Type** - Select one of the following check types:
  - **Single Column Check** - define conditions based on individual checks on a single column. For more information, refer to Single Column Data Check Definitions.
  - **Multi Column Check** - define conditions based on multiple columns of a single base table. These checks are not pre-defined and can be specified (user-defined) as required. For more information, refer to Multi Column Data Check Definitions.
- **Base Table** - The base table within the environment, associated with the rule.
- **Created By** - The login name of the user who created the rule.
- **Created Date** - The rule creation date.
- **Action** - Click **Action**, to view, approve, reject edit, or delete the rule.

To search for a particular rule, enter the first few letters of the rule name in the Search column.

You can also sort the rule summary based on the Status, Folder name, check type, record status, Rule name and Select table.

To sort the Summary based on the Status, click **Status** in the Search bar, and select the required status.

3.4.3.4 Creating DQ Rule

You can create a Data Quality Rule Definition by specifying the DQ Definition details along with the entity details and the type of data quality check to be performed on the selected base table. You can also define the required search conditions to query and correct the transformed data.

1. To create a DQ Rule, click **Add Rule** on the DQ Rules Summary.

   The Data Quality Rules page with DQ Group Details and DQ Rules Mapping tab is displayed.

2. Click **Start**, to enter the following basic details for the new DQ Rule.
   - **Name** - The unique identifier name for the rule.
     The name should start with alphabet and should not be more than 50 characters.

     Blank space ( ), **Underscore (_)** and **Hyphen (-)** are allowed as special characters.
   - **Description** - The description/details for the rule.
     The description should start with alphabet and should not be more than 250 characters.
   - **Folder** - Select the folder present in the current environment, to be associated with the rule.
   - **Check Type** - Select one of the following check types for the rule.
     - **Single Column** - Select Single column to perform data quality check only on one column. For more information, refer to Single Column Data Check Definitions.
     - **Multi-Column** - Select Multi-Column to perform data quality check on more than one column in a single table. For more information, refer to Multi Column Data Check Definitions.

- **Access-type** - Select one of the following Access types.
  - **Read-only** - only the creator can edit the rule. Other users can only view the rule.
  - **Read-Write** - all users can view, modify any fields (including Access Type), and also delete the DQ Rule.
- Check **Auto DQ Group Required** option, to create a new DQ group, for this Rule. The new group will be associated only with the created DQ rule. The group name will be set as <DQ_Rule_Name_group>, and this group will have only Read-only access.
- Check **Auto Assignment**, to execute the rule, and also perform the assignment.

> **Note:**
>
> The Auto Assignment is applicable only to the Auto DQ Group.

- Click **Continue** to proceed with the Entity Selection page.

3. Enter/select the following entities:
   - **Table** - Select the basic table on which the rule is executed.
   - If the rule is a single-column rule, select the **Base Column**, to be included for the rule execution. Base column will not be present for Multi-Column rule.
     You can search table and columns based on their physical and logical names, using the toggle button.
   - Select the **Identifier Columns** required to execute the rule.
     The default primary key fields present in the selected entity table are automatically added as identifier columns. They cannot be deleted.
     - To select multiple columns, click **Edit**.
     - Select the required columns from the **Available Members** pane and move them to **Selected Members** pane.
   - Click **Edit**, to include the filter expression.
     The **Specify Expression** page is displayed. For more information refer to Creating Expressions.
     - Select the entities to be included in the filter expression and click **OK**.
4. Click **Continue**, to proceed with the **Data Check Definitions**.
5. Select the required Data Check Definitions, to validate the data.

   Enter/select the required information for each Data Check Definition. For more information about each Data check type, refer to Data Check Definitions.
6. Click **Submit**, to submit the new DQ Rule for approval.

   The DQ Rule is saved with the status **Pending for Approval**, in the Rules Summary and a confirmation message is displayed.

   While creating the DQ Rule, you can also click **Save As Draft**, to save the new incomplete DQ Rule at any point of time and resume the process at a later point. A confirmation message is displayed, after the draft is saved successfully.

   The new Rule added to the DQ Rules Summary, and is set to **Draft** Status in the DQ Rules Summary.

> **Note:**
>
> If the user has **DQAUTOAUTH** Role assigned, the Rule will be auto-approved.

3.4.3.5 Editing DQ Rules

You can update all the definition details except for the Definition Name, Check Type, Table, and the Base Column selected.

You can only edit the DQ rules that are set to **Draft, Approved** and **Rejected** status. You cannot edit the rules that are set to **Pending for Approval** status.

To edit the required Data Quality Rule definition details:

1. Click **Action** adjacent to the DQ Rule to be modified.
2. Click **Edit**, to modify the DQ Rule.
3. Click **Start** to edit the **DQ Rule Details**.
4. Modify the description and click **Continue** to proceed with editing the Entity Selection details.

   You can also click **Save as Draft**, to save the changes and proceed with Submission later.
5. Modify the Filter expression and click **Continue** to proceed to **Data Check Definitions** page.
6. Add/remove the data checks required during rule execution and click **Submit**, to submit the modified rule for approval.

   The rule is updated and added to the DQ Rules Summary. A confirmation message is displayed.
   The Rule is set to **Pending for Approval** state.

> **Note:**
>
> If the user has **DQAUTOAUTH** Role assigned, the Rule will be auto-approved.

3.4.3.6 Approving/Rejecting a Data Quality Rule

An authorizer can approve a user-defined Data Quality Rule definition or reject an inappropriate DQ Definition listed within the Data Quality Rule Summary.

You should be mapped to DQ Authorizer function role to approve or reject a DQ Definition.

> **Note:**
>
> You can only approve those DQ Rules that are set to **Pending for Approval** status.
> If the user has **DQAUTOAUTH** Role assigned, the DQ rule will be auto-approved.

To view a Data Quality rule, and approve/ reject Data Quality rule:

1. Click **Action** adjacent to the DQ Rule to be approved/rejected.

2. Click **Preview**, to view the DQ Rule.

   All the details pertaining to the selected rule is displayed.

3. Click **Approve/Reject**, after reviewing the rule.
4. Enter valid reason for approval or rejection.
5. Click **Approve/Reject**.

   The DQ Rule is approved/rejected and a confirmation message is displayed.

3.4.3.6.1 Bulk Approving/Rejecting Data Quality Rules

An authorizer can approve multiple user-defined Data Quality Rule definitions or reject an inappropriate DQ Definition listed within the Data Quality Rule Summary.

You should be mapped to DQ Authorizer function role to approve or reject a DQ Definition.

> **Note:**
>
> You can only approve those DQ Rules that are set to **Pending for Approval** status. If the user has **DQAUTOAUTH** Role assigned, the DQ rule will be auto-approved.

> **Note:**
>
> When you initiate bulk approval/rejection, all the selected rules are approved/rejected based on the user input. If you want to stop the approval/rejection of one specific rule, cancel the whole process and restart again.

To view several Data Quality rules, and approve/ reject them:

1. Filter Rule Summary, to view only the rules with **Pending For Approval** Status.

   All the rules that need be approved/rejected are displayed.

2. Select the rules for approval/rejection.

   You can select all the rules displayed in a page, by clicking the check box next to the **Name** header. To select all the rules in the Summary, with **Pending** Status, select **Click All Rules in Summary** link.

3. Click **View Details**, to view the Rule details of all the selected rules.

   All the rule details, and base table for the selected rules are displayed. Review the details and add appropriate comments and click **OK**.

   You can also **Proceed without Viewing** the details.

4. Click **Approve/Reject**.

   The selected DQ Rules are approved/rejected and a confirmation message is displayed.

3.4.3.7 Deleting a Data Quality Rule

You can remove the Data Quality Rule definition(s) that are not grouped in the Data Quality Framework. A grouped and non-executed Data Quality Rule definition can still be deleted by unmapping the same from all the associated group(s).

To delete a DQ Rule:

1. Click **Action** adjacent to the DQ Rule to be approved/rejected.
2. Click **Delete**, to delete the DQ Rule.

   The selected rule is set to **Pending for Approval** status and is deleted after approval.

> **Note:**
>
> If the user has **DQAUTOAUTH** Role assigned, the Rule will be auto-deleted.

3.4.3.8 Purging a Data Quality Rule

You can delete a Data Quality Rule definition permanently from the setup.

You can purge only those DQ Rules that are deleted after approval.

To delete a DQ Rule:

1. Click **Action** adjacent to the deleted DQ Rule.
2. Click **Purge**, to delete the DQ Rule from the setup.

   The selected rule is is deleted permanently after confirmation.

3.4.4 Data Quality Groups

Data Quality Groups facilitates you to logically group the defined DQ Definitions .

DQ Group Definitions can be executed through Scheduler Services. For more information, refer to Adding a DQ Check Task .

3.4.4.1 DQ Groups Summary

The Data Quality Groups Summary displays the list of user-defined Data Quality Groups with the other details such as Name, Folder, Creation Date, Created By, Last Modification Date, Last Modified By, Last Run Date, and Last Run Status. .

You can create and execute DQ Group definitions and view, modify, copy, refresh, or delete DQ Group definitions within the Data Quality Groups Summary.

- Click **Data Quality Groups**, to access the Data Quality Groups Summary.

  The Data Quality Rules Summary with the following details is displayed.

  - **Name** - The Unique Identifier Name of the Data Quality Group.
  - **Status** - The Approval status of the specific group.
    - **Approval** - The group is approved and ready for execution.
    - **Pending for Approval** - The group requires approval and can be executed only after approval.

  - **Draft** - A defined group is set to **Draft** status until it is submitted for approval by the creator.
  - **Rejected** - The rejected rules are sent back to the user with the Approver comments.

- **Version** - The current active version of the group.
  When a new definition is created, it will be saved as version 1 and once it is authorized, it will be in Active status. After you modify any DQ Group and save, it will be saved with version as highest available version +1. For example, if you modify a DQ Group of version 2 and the highest version available is 4, after you save the definition, its version becomes 5. Only the latest version will be in **Active** status.
- **Folder** - The folder associated with the group.
- **Created Date** - The group creation date.
- **Created By** - The login name of the user who created the Group.
- **Last Run Date** - The last date on which the DQ Group was executed.
- **Last Run Status** - The last execution state if the specific DQ Group.
  - **Success** - The last execution of the selected DQ Group was completed successfully.
  - **Failed** - The last execution did not complete.
  - **NA** - The DQ Group was not executed.
- **Action** - Click **Action**, to view, approve, reject, edit, execute, delete, or view the dependency of the group.

To search for a particular group, enter the first few letters of the group name in the Search column.

You can also sort the groups summary based on the Status, Folder name, record status and group name.

3.4.4.2 Creating DQ Groups

You can create a DQ Group definition by defining the DQ Definition details and mapping the required DQ Rules which are authorized and approved within the system.

The DQ Group definition is flexible and purpose driven. Groups can be created for different subject areas such as Credit and Market or it can be application specific like Basel II, Economic capital.

1. To create a DQ Group, click **Add Group** in the DQ Group Summary.

   The Data Quality Group page with DQ group Details and DQ Rules Mapping tab is displayed.

2. Click **Start**, to enter the following basic details for the new DQ Group.

   - **Name** - The unique identifier name for the groups.
     The name should start with alphabet and should not be more than 50 characters.

     Blank space ( ), **Underscore (_)** and **Hyphen (-)** are allowed as special characters.
   - **Folder** - Select the folder present in the current environment, to be associated with the group.
   - **Description** - The description/details for the group.
     The description should start with alphabet and should not be more than 250 characters.

- Check **Auto Assignment**, to execute the group, and also perform the assignment.
- **Access-type** - Select one of the following access types.
  - **Read-only** - Only the creator can edit the group. Other users can only view the group.
  - **Read-Write** - All users can view, modify any fields (including Access Type), and also delete the DQ Group.

3. Click **Continue** to proceed with the Data Rules Mapping page.

   The list of available rules are displayed in the Data Rules Mapping page.

4. Select the Rules to be added to the new DQ Group.
5. Click **Submit**, to submit the new DQ Group for approval.

   The DQ Groups is saved with the status **Pending for Approval**,in the Group Summary and a confirmation message is displayed.

   While creating the DQ Group, you can also click **Save As Draft**, to save the new incomplete DQ Group at any point of time and resume the process at a later point. A confirmation message is displayed, after the draft is saved successfully.

   The new Group added to the DQ Groups Summary, and is set to **Draft** Status in the DQ Groups Summary.

> **Note:**
>
> If the user has **DQAUTOAUTH** Role assigned, they can save and approve the DQ Group, immediatly after creating it.

3.4.4.3 Editing DQ Groups

You can modify all the details of a saved Data Quality Group Definition, except the Group name.

To edit the required Data Quality Group Definition details:

1. Click **Action** adjacent to the DQ Group to be modified.
2. Click **Edit**, to modify the DQ Group.
3. Click **Start** to edit the **DQ Group Details**.
4. (Optional). Modify the description and click **Continue** to proceed with adding/deleting the rules associated with the DQ Group.
5. Add/remove the DQ Rules associated with the DQ Groups and click **Submit**, to submit the modified group for approval.

   The group is updated and added to the DQ Groups Summary. A confirmation message is displayed.
   The Group is set to **Pending for Approval** state.

> **Note:**
>
> If the user has **DQAUTOAUTH** Role assigned, they can save and approve the DQ Group, immediatly after creating it.

3.4.4.4 Approving/Rejecting a Data Quality Group

An authorizer can approve a user-defined Data Quality Group definition for further execution or reject an inappropriate DQ Definition listed within the Data Quality Rule Summary.

You should be mapped to DQ Authorizer function role to approve or reject a DQ Definition.

> **Note:**
>
> You can only approve those DQ Rules that are set to **Pending for Approval** status. If the user has **DQAUTOAUTH** Role assigned, they can save and approve the DQ Group, immediatly after creating it.

To view a Data Quality Group, and approve/ reject it:

1. Click **Action** adjacent to the DQ Groups to be approved/rejected.
2. Click **Preview**, to view the DQ Groups.

   All the details pertaining to the selected rule is displayed.
3. Click **Approve/Reject**, after reviewing the groups.
4. Enter valid reason for approval or rejection.
5. Click **Approve/Reject**.
6. The DQ Group is approved/rejected and a confirmation message is displayed.

3.4.4.4.1 Bulk Approving/Rejecting Data Quality Groups

An authorizer can approve multiple user-defined Data Quality Groups or reject an inappropriate DQ Groups listed within the Data Quality Group Summary.

You should be mapped to DQ Authorizer function role to approve or reject a DQ Definition.

> **Note:**
>
> You can only approve those DQ Groups that are set to **Pending for Approval** status. If the user has **DQAUTOAUTH** Role assigned, the DQ group will be auto-approved.

> **Note:**
>
> When you initiate bulk approval/rejection, all the selected groups are approved/ rejected based on the user input. If you want to stop the approval/rejection of one specific group, cancel the whole process and restart again.

To view several Data Quality groups, and approve/ reject them:

1. Filter Group Summary, to view only the groups with **Pending For Approval** Status.

   All the groups that need be approved/rejected are displayed.

2. Select the groups for approval/rejection.

   You can select all the groups displayed in a page, by clicking the check box next to the **Name** header. To select all the groups in the Summary, with **Pending** Status, select **Click All Groups in Summary** link.

3. Click **View Details**, to view the Group details of all the selected Groups.

   All the group details, and base table for the selected groups are displayed. Review the details and add appropriate comments and click **OK**.

   You can also **Proceed without Viewing** the details.

4. Click **Approve/Reject**.

   The selected DQ groups are approved/rejected and a confirmation message is displayed.

3.4.4.5 Executing DQ Groups

You can execute an approved Data quality group.

To execute a data quality group:

1. Click **Action** adjacent to the DQ Group to be modified.
2. Click **Execute** to access the **Execute Group** page.
3. Enter/select the following details:
   - The **Threshold** percentage for the maximum number of errors permissible during the DQ check. By default, this is set to 100.
   - Set **Fail If Threshold Breaches** to **TRUE**, to abort the job and not include the failure records in the DQ table, when the DQ check errors are more than the set threshold value.
     If the **Fail If Threshold Breaches** is set to **FALSE**, the DQ group will be executed and the failure records will be inserted in the DQ Result tables.
   - Set **Stop Insert on Threshold Breach** to **Y** , to the stop the execution when there is a thereshold breach. The execution will be stopped even if **Fail If Threshold Breaches** is set to **False**.
   - Enter the **Additional Parameters** required for the Run DQ Rule filtering criteria for execution in the pattern: Key#Data type#Value; Key#Data type#Value; and so on.
   - Set the **Rule Execution Connection** value. By default this is set to **Data**.
   - Set the **Result Store Connection** value. By default, this is set to **Data**.
   - Select **As of Date** to execute to DQ group.
4. After providing the required details, click **Run**, to begin the execution.

3.4.4.6 Deleting a Data Quality Group

You can remove the Data Quality Group definition(s) that are not grouped in the Data Quality Framework. A grouped and non-executed Data Quality Rule definition can still be deleted by unmapping the same from all the associated group(s).

To delete a DQ Group:

1. Click **Action** adjacent to the DQ Group.
2. Click **Delete**, to delete the DQ Group.

   The selected group is deleted after confirmation.

> **Note:**
>
> If the user has **DQAUTOAUTH** Role assigned, the Group will be auto-deleted.

3.4.4.7 Purging a Data Quality Group

You can delete a Data Quality Group definition permanently from the setup.

To delete a DQ Group:

1. Click **Action** adjacent to the deleted DQ Group.
2. Click **Purge**, to delete the DQ Group from the setup.

   The selected Group is is deleted permanently after confirmation.

3.4.5 Adding a DQ Check Task

You can add a new DQ check Task in the Scheduler Services and add the task to a Batch Definition, for execution.

For more information about adding a task to the Batch and about Scheduler Services, refer to Scheduler Services documentation.

To add new task using the Define Tasks page in Scheduler Services, perform the following steps:

1. Click **Define Tasks** from the Header panel.
2. Select the **Batch**, to add new task.
3. Click **Add**, to add a new DQ task in the **Create Task** page.
   - Complete all the generic details in the Create Task Page. For more information refer to Adding a Task.
   - Select the **Task Type** as DQ Task.
   - Select the **Group** to perform the DQ check.
   - Enter the **Threshold** percentage for the maximum number of errors permissible during the DQ check. By default this value is set to 100.
   - Set **Fail If Threshold Breaches** to **TRUE**, to abort the job and not include the failure records in the DQ table, when the DQ check errors are more than the set threshold value.

     If the **Fail If Threshold Breaches** is set to **FALSE**, the job will proceed further and the failure records will be inserted in the DQ Result tables.
   - Enter the **Additional Parameters** required for the Run DQ Rule filtering criteria for execution in the pattern: Key#Data type#Value; Key#Data type#Value; and so on.
4. Click **Save** to add the new DQ task to the selected Batch.

3.4.6 Execution Summary

The Execution Summary provides the consolidated list of executed DQ batches, for the last 30 days .

You can also view the consolidated details related to the total number of records analysed, total number of passed records and the pass percentage and total number of error records and

their percentage.The number of error records categorized based on the Data checks is also displayed as a pie chart.

To view the Execution Summary Details:

- Click **Execution Summary**, to access the consolidated Execution Summary.

  The Execution Summary page with the following details is displayed.

  - **Batch ID** - The Unique Identifier Name of the particular Batch in which the DQ group is added for Data Quality Check.
  - **Process Instance ID** - The unique identifier of the execution process.
  - **DQ Group** - The DQ group associated with the Batch for Data Quality check.
  - **DQ Group Desc** - The DQ group description.
  - **FICMIS Date** - FICMIS Date refers to the date with which the data for the execution would be filtered. In case the specified MIS date is not present in the target table, execution completes with the message **No Records found**.
  - **Execution Date** - The last execution date of the Batch.
  - **Scanned Records** - The total number of records scanned for Data Quality check.
  - **Erroneous Records** - The total number of records that failed the Data Quality check.
  - **Execution Status** - The DQ Batch execution status.
  - **Assignment Status** - The current Assignment status of the DQ Batch.
  - **Action** - Click **Action**, to view the Run Details of the DQ Batch.

  To search for a particular Batch, enter the first few letters of the Batch name in the Search column.

  You can also sort the Execution summary based on the Execution Date, FICMIS Date, Execution status and Group Name, Assignment Status, Batch Id and Process Instance ID.

3.4.6.1 Viewing Run Details

Execution Details page provides the information related to the Data Quality Rule and the Data Quality Check executed during a Batch Execution.

You can also view the consolidated details related to the total number of records analysed, total number of passed records and the pass percentage and total number of erro records and their percentage.
The number of error records categorized based on the Data checks is also displayed as a pie chart.

1. Click **Action** adjacent to the specific Batch.
2. Click **View Run Details**, to access the Run details of the particular Batch execution.

   The Run details of the selected Batch is displayed with the following information.

   - **Rule** - The Rule name of the executed DQ Rule.
   - **Entity** - The Table entity associated with the Rule.
   - **Column** - The column associated for Data Quality check
   - **Check Type** - The type of check performed on the Data.
   - **Consolidated Records Scanned** - The total number of records scanned.
   - **Error Records** - The total number of erroneous records.

- **Assignment Type** - The assignment type set during the DQ rule creation.

3. Generate and download the report, and perform assignment action based on the report.

> **Note:**
>
> To perform assignment, you must have the **DQ_EXE_ASSIGN** role assigned.

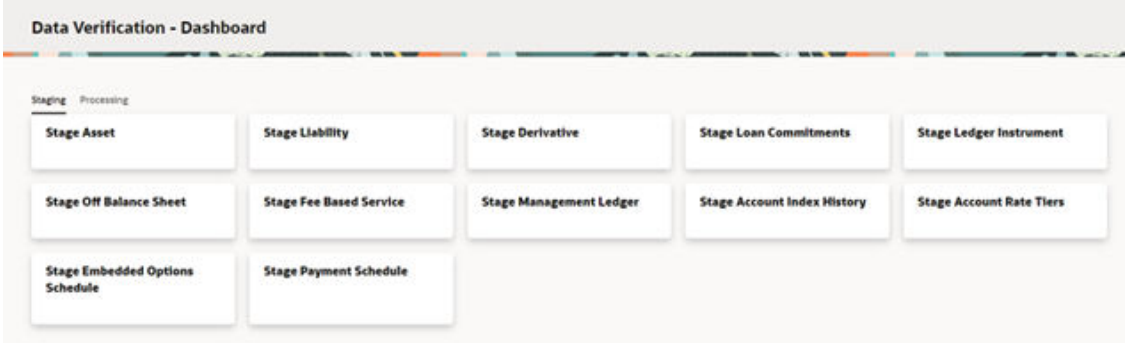
After the assignment process is completed, the Assignment status of the particular DQ Batch is set to **Success**.

3.5 Data Verification

The Data Verification UI helps you to verify the data that is loaded from the source systems to the Cloud Service's stage and processing tables, make minor corrections/adjustment to the data, and add new data directly into the tables. This UI allows you to add one record at a time and is not recommended for high volume additions as entering data is a lengthy process.

To open the Data Verification screen, from the LHS menu, select **Data Management Tool**, and then select **Data Verification**.

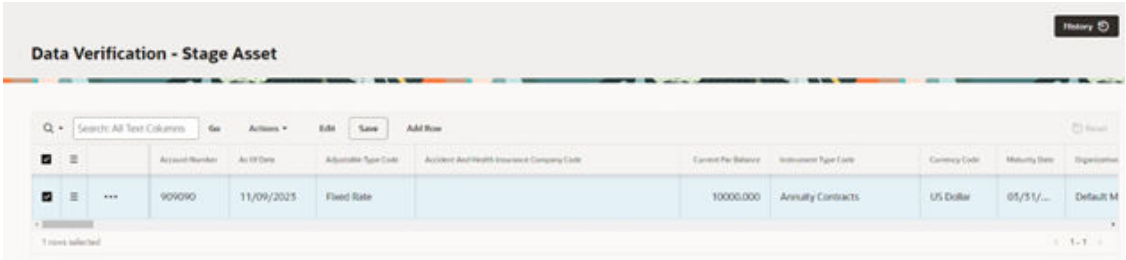
Figure 3-20 Data Verification Dashboard



This screen displays two tabs namely Staging and Processing. The Staging tab displays the tables that are in the staging level where you can select a table, see the data, carry out corrections, or add new data. The Processing tab displays the tables that are at the processing level and you can do all the actions similar to Staging tables.

When you select a table, a new window is displayed with a grid where you can see the selected columns.

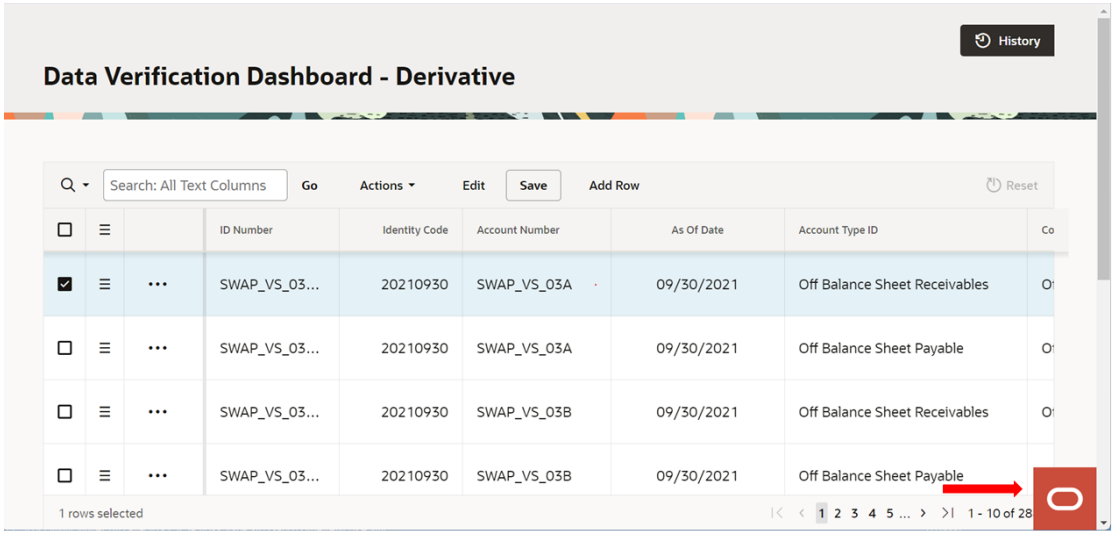
Figure 3-21 Data Verification – Stage Asset (sample Staging table)



Navigating through Data Verification

Once you select a table and modify or verify your details, you can navigate back to the Dashboard or a specific Table by clicking the O logo at the bottom-right corner. This takes you to the Ask Oracle screen where the Dashboard and all the tables are listed. You can click on the line item that you want to go to that Dashboard.

Figure 3-22 Navigation through Data Verification



Users and Roles

The following roles and functions are required to use the Data Verification UI, edits the data, and add data to the Stage and Processing tables.

Table 3-19 Roles and Role Names

Role	Role Name
RLGADMACC	Data Management Access
RLGADMWRITE	Data Management Write
RLGADMREAD	Data Management Read Only
RLGADMPASRN	Data Management PA Access

The access to the users can be restricted up to table level because all the users need not have access to all the tables.

Add a New Record

To add a new record to a selected stage/processing table, click **Add Row**. Enter/populate the mandatory and the relevant columns and then click Save. When you click **Add Row**, you must enter the mandatory key columns first, and then click ellipsis (…) icon. After this your can click the ellipsis (…) icon to open the Edit Table window, fill the relevant details and then save the details.

Delete a Row

To delete a row, select the row and click the hamburger icon to collapse the menu where you can select **Delete Row**.

Duplicate a Row

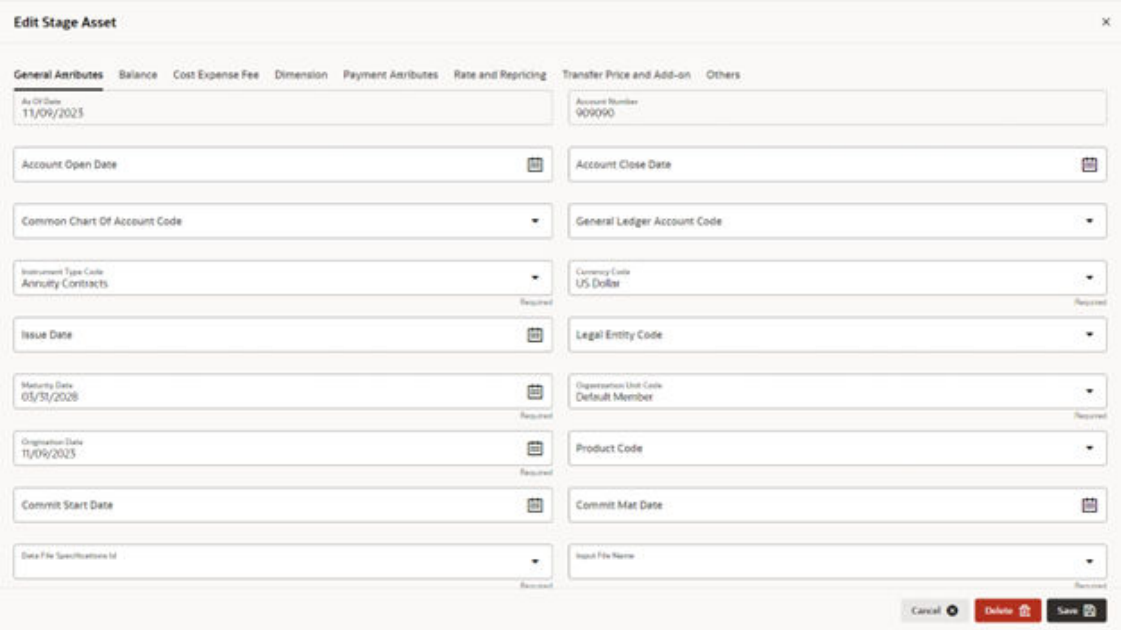
You can select a row and click **Duplicate Row** from the hamburger menu. This creates duplicate row with the same values in the Data Verification - <Table> screen.

Edit a Record

To edit a record, select a row from the Data Verification window. There are two ways in which you can edit the columns from the table.

- Select a row from the Data Verification grid and click the **Edit** button. This enables the columns that are exposed. You can double-click the entry to edit. Editing the key columns in the table is restricted.
- Select a row from the Data Verification grid and click the ellipsis (…) icon, and then click **Edit**. This opens the Edit Table window. This window displays all the columns from the table. The columns are categorized based on their nature and displayed in different tabs. You can select the relevant columns and edit. After you update the relevant details, click **Save**.

Figure 3-23 Sample Edit Table



Actions Menu

The Actions menu displays a list of actions that you can perform on a selected record. Few actions are explained below:

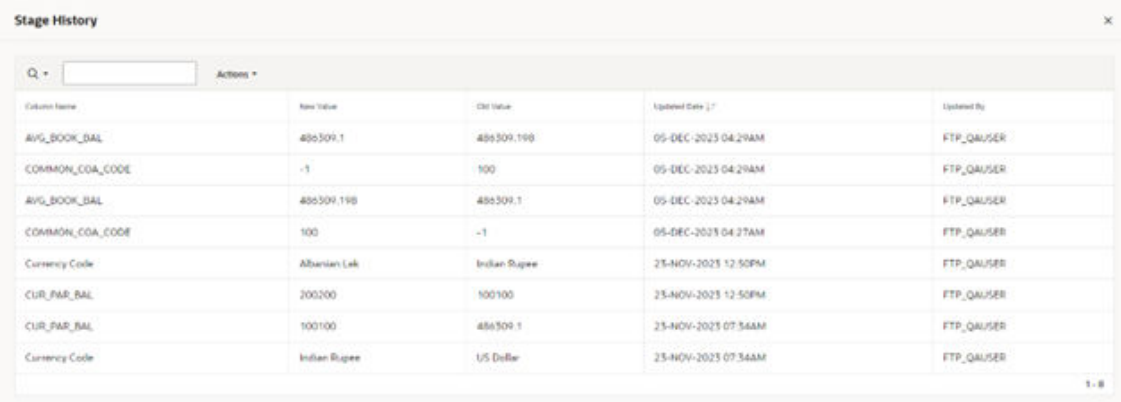
- **Columns**: This displays the Columns window where you reorder the displayed columns, remove form display columns that you don't want to be displayed. If you don't want to display a particular column, select the check-box against the column name, and then click Save.

- **Filter**: This helps you to set a criterion to search a particular record.
  You can also set a filter by selecting the Search button on the top-left-corner of the grid. This collapses list of all the columns in the selected table. You can select a column and filter the records based on it.
- **Data**: Displays sorting options.
- **Format**: From here, you can set the number of rows per page to be displayed.
- **Report**: This option allows you to generate and save a report.

View History

This option displays the changes carried out on a selected record. To see the history on a record, select the record, click the ellipsis (…) icon, and then select View History. This displays the history of updates on the selected record with details such as Column Name, New Value, Old Value, Updated Date, and Updated By.

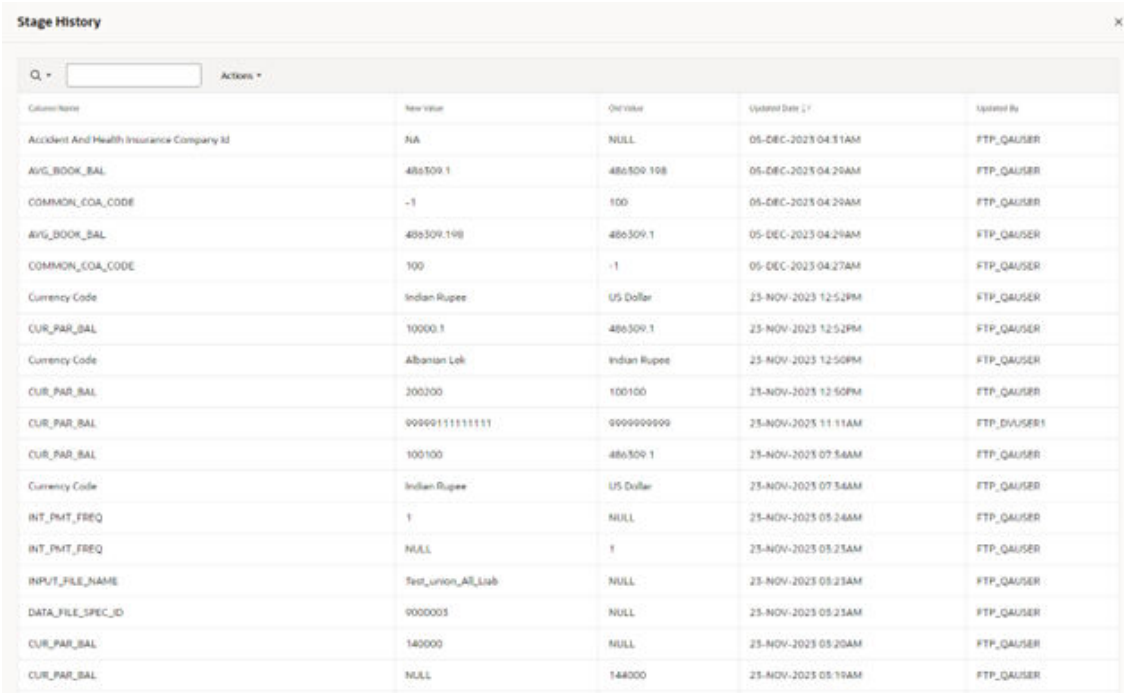
Figure 3-24 History at Record Level



To navigate back to the Dashboard or the selected table's Data Verification screen, you can click on the O logo at the right-bottom corner, and then select Dashboard on the next screen. You can also type the table name for a quick search.

To see the history of all the records on a particular table, select the record and click the History button on the top right-hand corner of the screen. This displays all the updates done on the all the records in the table. A sample screen of the history on the table is as follows:

Figure 3-25 History at Table Level



3.6 Data Housekeeping

The Data Housekeeping UI helps you to perform the followings tasks based on user defined criteria:

- Delete data from selected tables
- Drop partitions and truncate subpartitions from selected tables
- Archive the data from selected tables

You can use this as data retention in PBSM cloud services.

To open the Data Housekeeping screen, from the LHS menu, select **Data Management Tool**, and then select **Data Housekeeping**.

Users and Roles

The following roles and functions are required to use the Data Housekeeping UI.

Table 3-20 Roles and Role Names

Role Code	Role Name	Function Code	Function Name
RLDHKANALYST	Data Housekeeping Analyst Role	DHKADD	Create Data Housekeeping Policy
		DHKRUN	Run Data Housekeeping Policy
		DHKDEL	Delete Data Housekeeping Policy
		DHKEDIT	Edit Data Housekeeping Policy

Table 3-20 (Cont.) Roles and Role Names

		DHKVIEW	View Data Housekeeping Policy
		DHKLOG	View Data Housekeeping Policy execution log
RLDHKAUTH	Data Housekeeping Authorizer Role	DHKAUTH	Authorize Data Housekeeping Policy
		DHKADD	Create Data Housekeeping Policy
		DHKRUN	Run Data Housekeeping Policy
		DHK	Delete Data Housekeeping Policy
		DHKEDIT	Edit Data Housekeeping Policy
		DHKVIEW	View Data Housekeeping Policy
		DHKLOG	View Data Housekeeping Policy execution log
RLDHKAUDIT	Data Housekeeping Auditor Role	DHKVIEW	View Data Housekeeping Policy
		DHKLOG	View Data Housekeeping Policy execution log

Data Housekeeping Summary

Search Policy

Prerequisites: Predefined Policy

To search for a Policy:

1. You can search a policy is through the **Search** drop-down option. Select **Policy Name**, **Policy Type**, **Seeded Policy Flag**, **Last Execution Status**, and **Created By** from **Search** drop-down.
2. Enter the **Policy Name**, **Policy Type**, **Seeded Policy Flag**, **Last Execution Status**, and **Created By** in Search Criteria and click **Go**.

Rows that contain the string you are searching for are fetched and displayed in the Data Housekeeping Summary.

The Data Housekeeping Summary displays the following information:

New Policy: Click the New Policy icon on the page header to build a new policy.

- **Policy Name**: The policy name.
- **Schedule**: Shows the time when the policy is scheduled.
- **Type**: The Type (Archive, Drop Partition, Delete) of the policy.
- **Seeded Policy Flag:** Shows the type of policy as **Yes** if the policy is seeded.
- **Last Run Date:** The Date and Time when the policy was last modified.

- **Created Date:** the date when policy was created.
- **Last Execution Status:** The status of policy after execution.
- **Actions:** Click this icon to view a list of actions that you can perform on the Policy.
  - **View:** View existing policy.
  - **Edit:** Edit existing policy. To edit a rule, you must have Read/Write privilege.
  - **Authorize:** Select Authorize to approve the policy for execution.
  - **Withdraw Jobs:** Select Withdraw Jobs to cancel the Job execution.
  - **View Log:** Select View Log to view the audit information of the policy. This information includes pending and running jobs.
  - **Delete:** You can delete policies that you no longer require. Note that only policy owners and those with Read/Write privileges can delete Policies. A policy that has a dependency cannot be deleted. A policy cannot be retrieved after deletion.
  - **Job Execution Details:** Shows the execution details of selected policy.

3.6.1 Create Data Housekeeping Policy

To create a new Data Housekeeping policy, follow these steps:

1. Navigate to the **Data Housekeeping Summary** Page.
2. Click the **New Policy** icon. The **Create Data Housekeeping** Page is displayed.
3. Click **Start** to create a new policy.
4. Enter the required details and Submit.

   Below are the supported Policy Types:

   - Create Drop-Partition Policy
   - Create Archive Policy
   - Create Delete Policy
   - Create Nullify Policy

3.6.1.1 Create Drop Partition Policy

This section provides the details on dropping the partition data from selected tables based on user defined criteria.

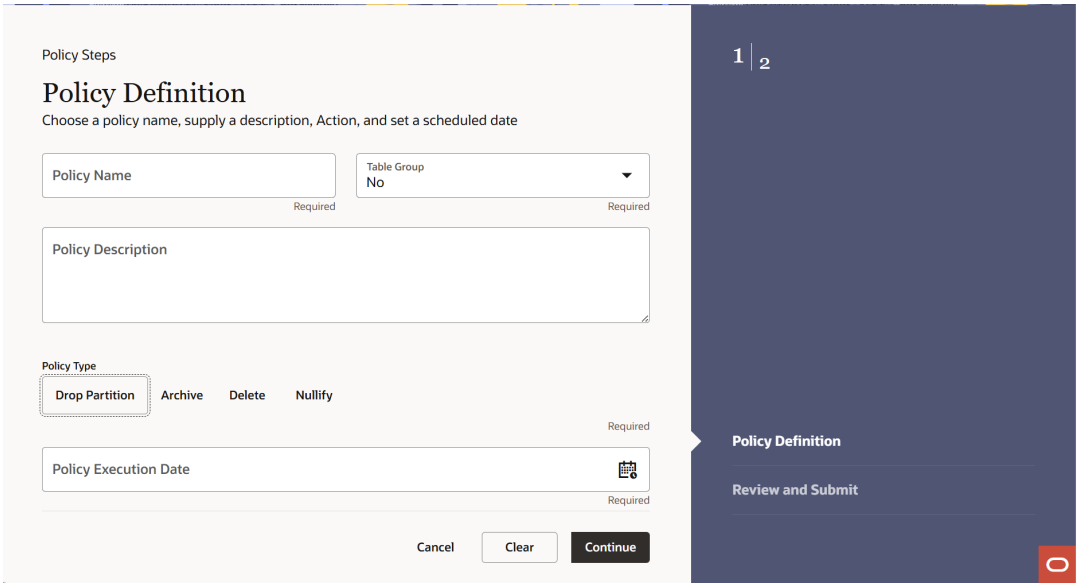
To create Drop Partition Policy, follow these steps:

1. Navigate to **New Policy** page.
2. Follow the steps mentioned in below sections:
   a. **Step 1:** Policy Definition
   b. **Step 2:** Selection
   c. **Step 2:** Preview and Submit

Step 1: Policy Definition section

1. From **Policy Details** tab, click **Start**. The **Policy Definition** page is displayed.

Figure 3-26 Policy Definition section

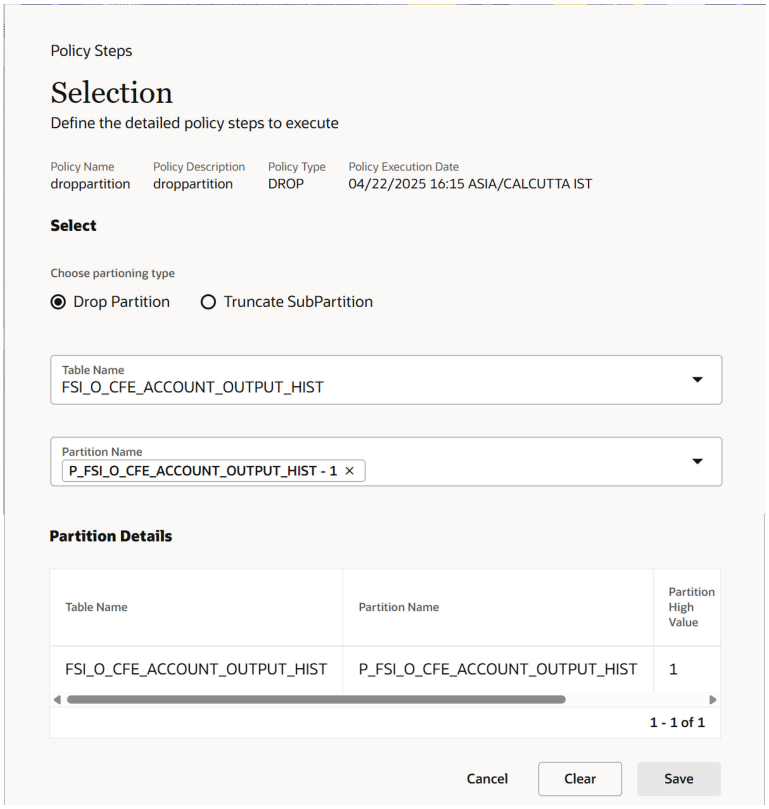


2. Enter the following details:
   - **Name:** Name of Policy
   - **Description:** Description of Policy
   - **Table Group:** If this option is selected as **No**, then you can select **Policy Type** as **Drop Partition**.
   - **Type:** Type of Policy as Drop Partition
   - **Policy Execution Date:** Select the execution date and time of policy using calendar
3. Click **Continue**.

Step 2: Selection section

1. Navigate to the **Selection** section. The **Selection** window is displayed to define the partitions.
2. Select the **Partition type** as **Drop Partition** or **Truncate Subpartition**.
   a. If **Partition type** is selected as **Drop Partition**, then following window is displayed:

Figure 3-27 Partition type as Drop Partition



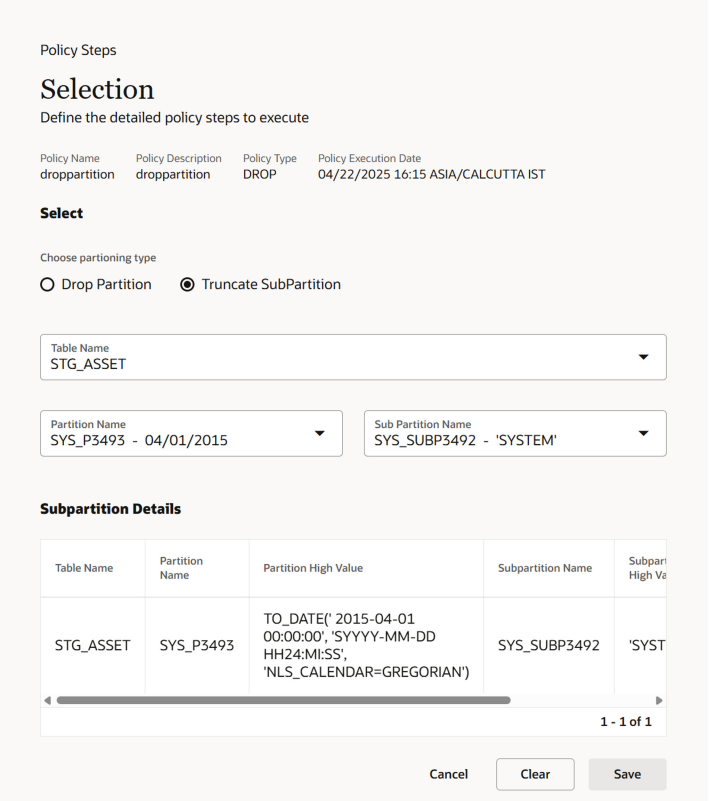
b. Select the table(s) for which you want to do the partitions. The list of available partitions is displayed that contain data.

c. Select the **Partition Name**. Partition Name shows the partition of the selected table from the database.
The Partition details will be displayed in **Partition Details** section. This shows the Table Name, Partition Name, column name and metdata on which partition is created. This doesn't show empty partitions.

d. Click **Continue**.

a. If **Partition type** is selected as **Truncate Subpartition**, then following window is displayed:

Figure 3-28 Partition type as Truncate Subpartition



b. Select the table(s) for which you want to do the sub partitions. The list of available sub partitions is displayed that contain data.

c. Select the **Sub Partition** Name. Sub Partition Name shows the columns and metadata on which sub-partition has been created.
The Sub Partition details will be displayed in **Subpartition Details** section. This shows the Table Name, Subpartition Name, column name and metdata on which partition is created. This doesn't show empty partitions.

d. Click **Continue**.

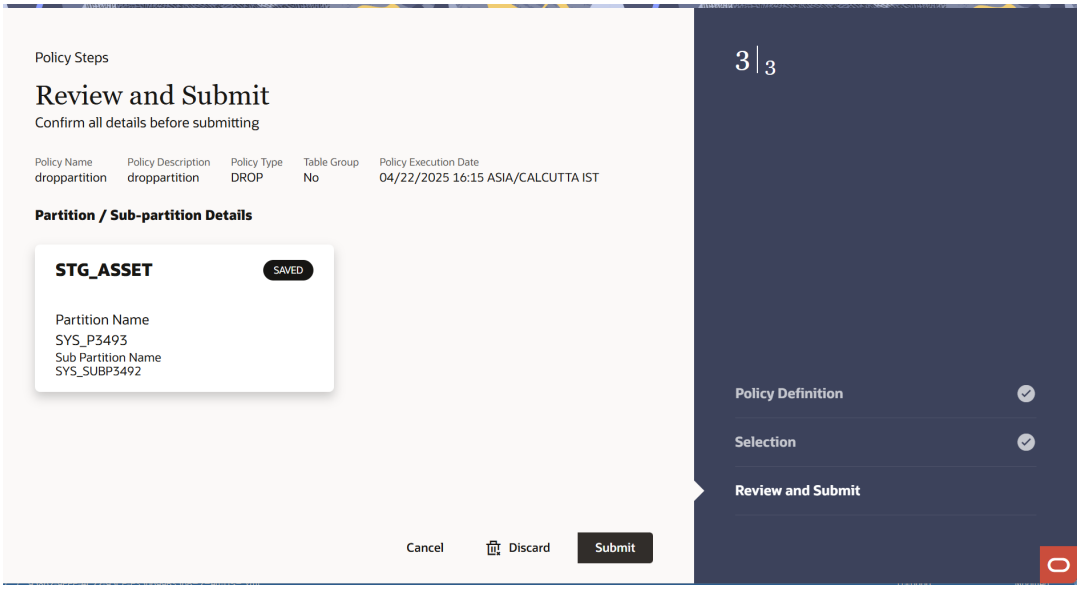
> **Note:**
>
> If only sub-partition is selected to remove then only data from it will deleted. Sub-partition is not dropped to enable customer re-load data in it, if needed. Sub-partitions in PBSM data model is created with a pre-defined list.

3. Click **Save**.
4. Click **Continue**.

Step 3: Preview and Submit section

1. Navigate to **Preview and Submit** section. Review the policy details.

Figure 3-29 Preview and Submit section



2. Click **Submit** to create the policy. The created policy will be displayed on **Data Housekeeping Summary** page.

3.6.1.2 Create Archive Policy

This section provides the details on archiving the data from selected tables based on user defined criteria.

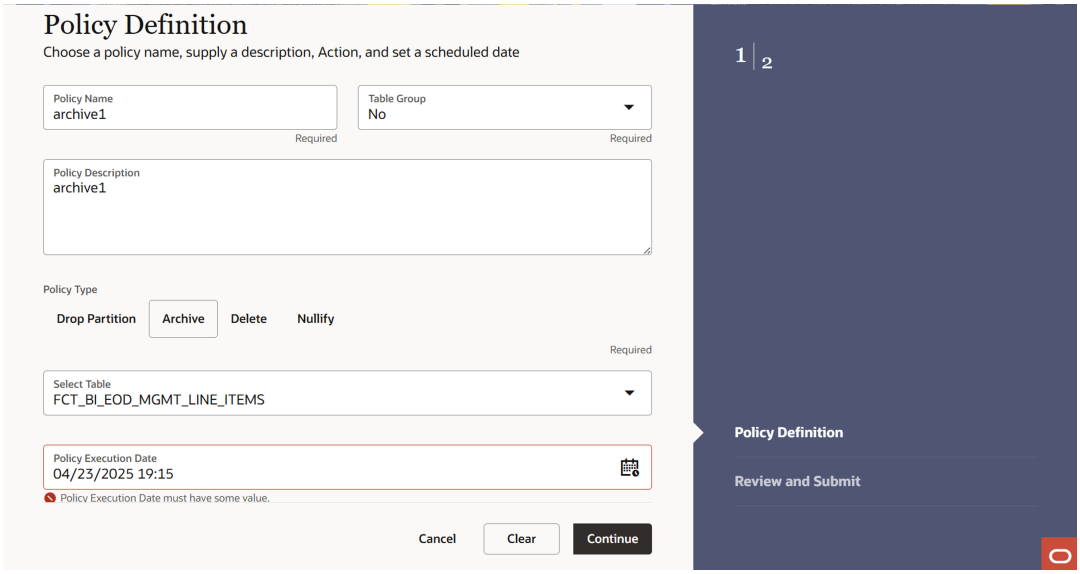
To create Archive Policy, follow these steps:

1. Navigate to **New Policy** page.
2. Follow the steps mentioned in below sections:
   a. **Step 1:** Policy Definition
   b. **Step 2:** Condition
   c. **Step 3:** Preview and Submit

Step 1: Policy Definition section

1. From **Policy Details** tab, click **Start**. The **Policy Definition** page is displayed.

Figure 3-30 Policy Definition section



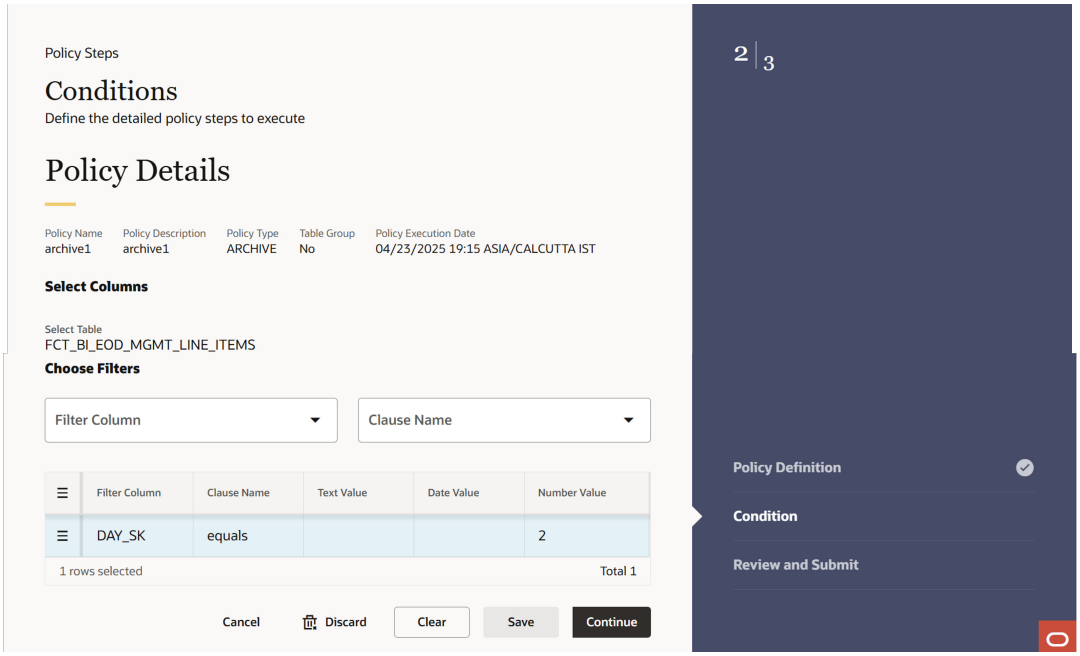
2. Enter the following details:
   - **Name:** Name of Policy
   - **Description:** Description of Policy
   - **Table Group:** If this option is selected as **No**, then you can select **Policy Type** as **Drop Partition**.
   - **Type:** Type of Policy as Archive
   - **Policy Execution Date:** Select the execution date and time of policy using calendar

Step 3: Conditions

This section allows you to define the conditions(s) to archive the table.

1. Navigate to the **Conditions** section.

Figure 3-31 Conditions section



2. Select the column(s) using **Filter Column**.
3. Select operator from **Clause Name** drop-down. The list of operators displays based on the selected Column Name.

> **Note:**
>
> You must select at least one condition to avoid the full table archive. Use AND if you want to use multiple columns. You can select columns from pre-defined list. Don't use wild card characters. Supported operators are: >, <, <=, and =>.

4. Enter condition value for selected column.
   For example, If you have selected **Column** as **Account Number**, then select **Equals** operator from **Clause Name** drop-down, and enter alphanumeric value in **Value** field.

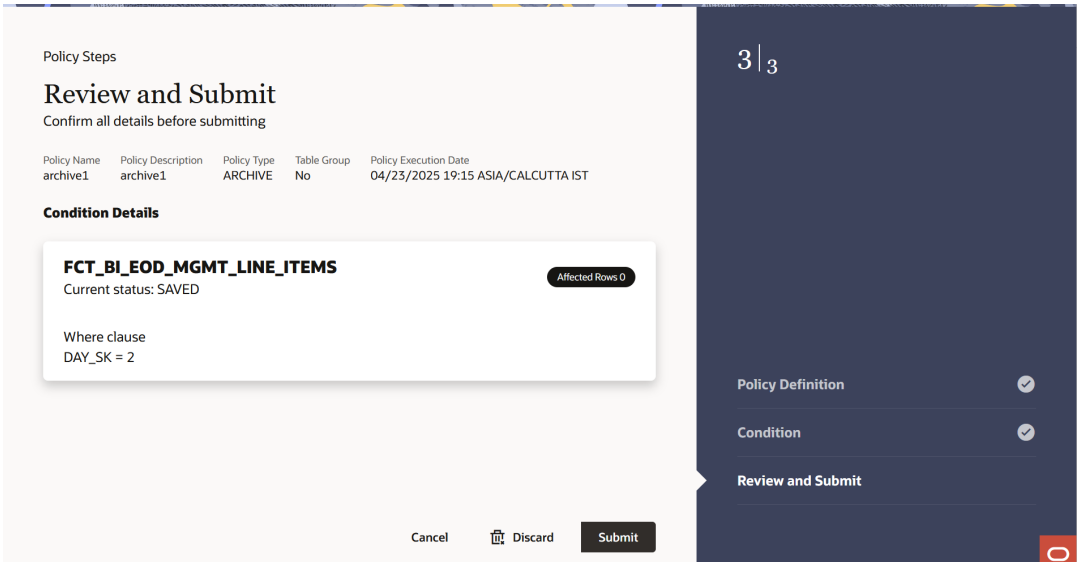
   Click **Row Actions** icon to view single row, add a new row, create duplicate row, delete row, refresh row, or revert changes.

   To add more conditions, define the condition and click **Save**.
5. Click **Continue**.

Step 3: Preview and Submit section

1. Navigate to **Preview and Submit** section. Review the policy details.

Figure 3-32 Preview and Submit section



2. Click **Submit** to create the policy. The created policy will be displayed on **Data Housekeeping Summary** page.

> **Note:**
>
> Data that is archived remains in the same table but is invisible to user. Thus, they cannot be inserted back as it will violate unique constraint of concerned table.

3.6.1.3 Create Delete Policy

This section provides the details on deleting the data from selected tables based on user defined criteria.

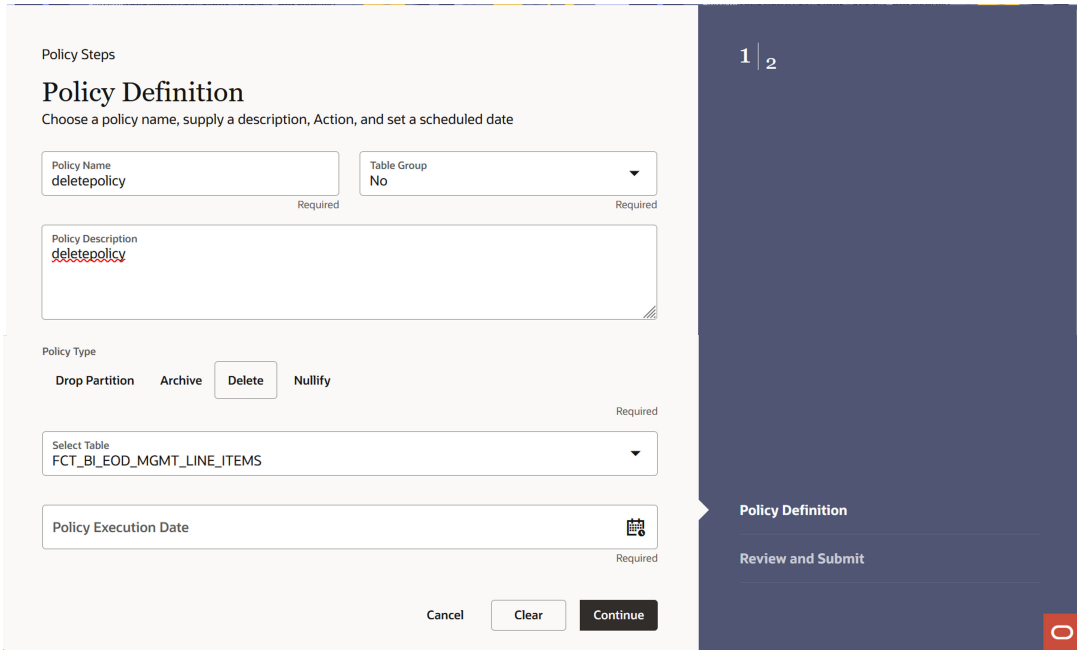
To create Delete Policy, follow these steps:

1. Navigate to **New Policy** page.
2. Follow the steps mentioned in below sections:
   a. **Step 1:** Policy Definition
   b. **Step 2:** Condition
   c. **Step 3:** Preview and Submit

Step 1: Policy Definition section

1. From **Policy Details** tab, click **Start**. The **Policy Definition** page is displayed.

Figure 3-33 Policy Definition section



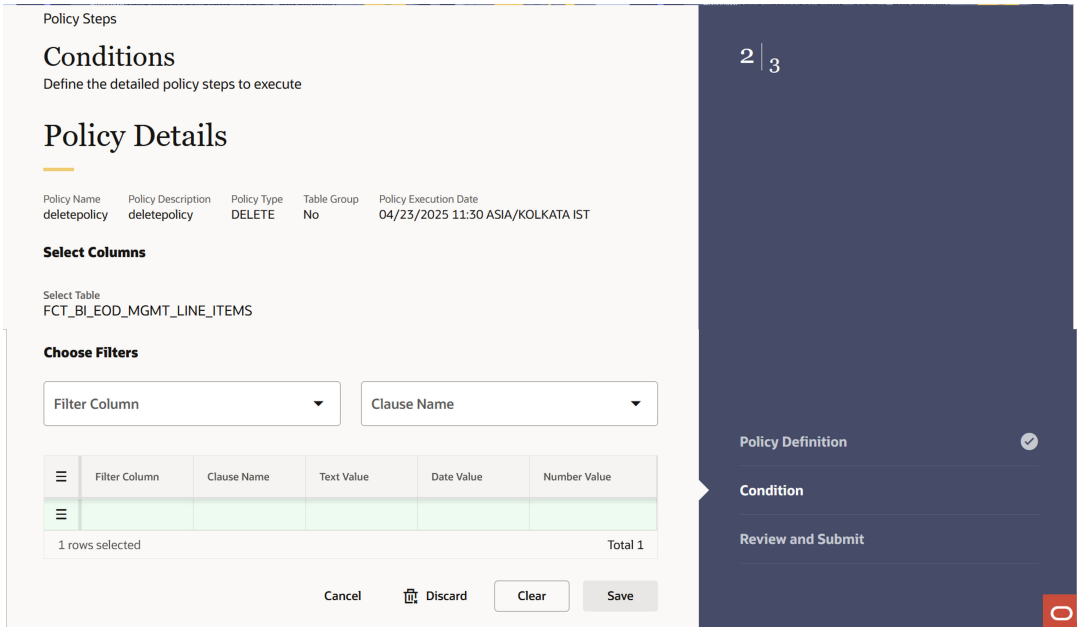
2. Enter the following details:
   - **Name:** Name of Policy
   - **Description:** Description of Policy
   - **Table Group:** If this option is selected as **No**, then you can select **Policy Type** as **Drop Partition**.
   - **Type:** Type of Policy as **Delete**
   - **Policy Execution Date:** Select the execution date and time of policy using calendar

Step 2: Conditions

This section allows you to define the conditions(s) to Delete the table.

1. Navigate to the **Conditions** section.

Figure 3-34 Conditions section



2. Select the column(s) using **Filter Column**.
3. Select operator from **Clause Name** drop-down. The list of operators displays based on the selected Column Name.

> **Note:**
>
> You must select at least one condition to avoid the full table Delete. Use AND if you want to use multiple columns. You can select columns from pre-defined list. Don't use wlid card characters. Supported operators are: >, <, <=, and =>.

4. Enter condition value for selected column.
   For example, If you have selected **Column** as **Account Number**, then select **Equals** operator from **Clause Name** drop-down, and enter alphanumeric value in **Value** field.

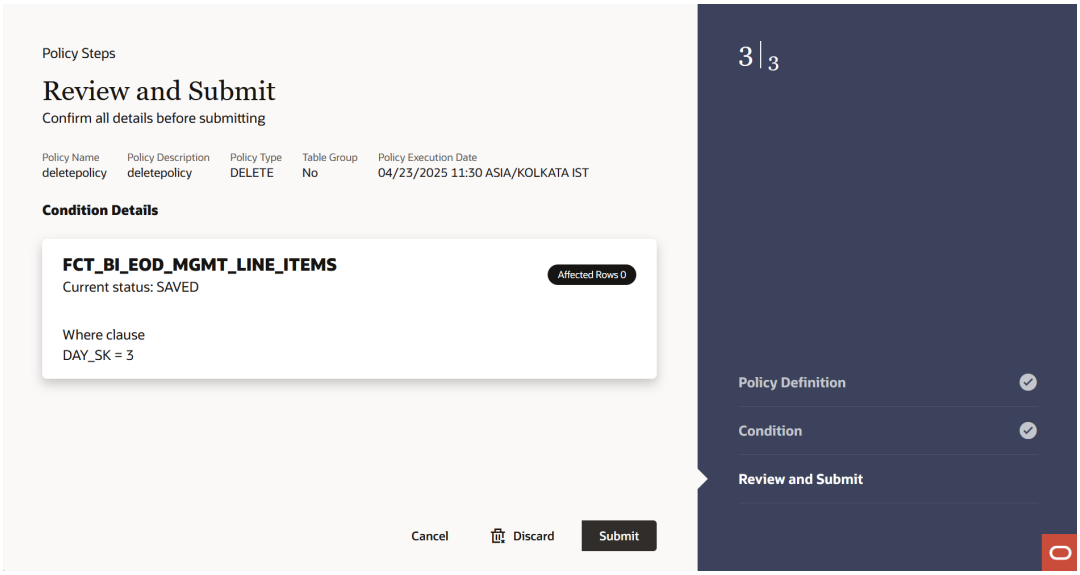
   Click **Row Actions** icon to view single row, add a new row, create duplicate row, delete row, refresh row, or revert changes.

   To add more conditions, define the condition and click **Save**.
5. Click **Continue**.

Step 3: Preview and Submit section

1. Navigate to **Preview and Submit** section. Review the policy details.

Figure 3-35 Preview and Submit section



2. Click **Submit** to create the policy. The created policy will be displayed on **Data Housekeeping Summary** page.

3.6.1.4 Create Nullify Policy

This section provides the details on nullifying the column from selected tables based on user defined criteria.

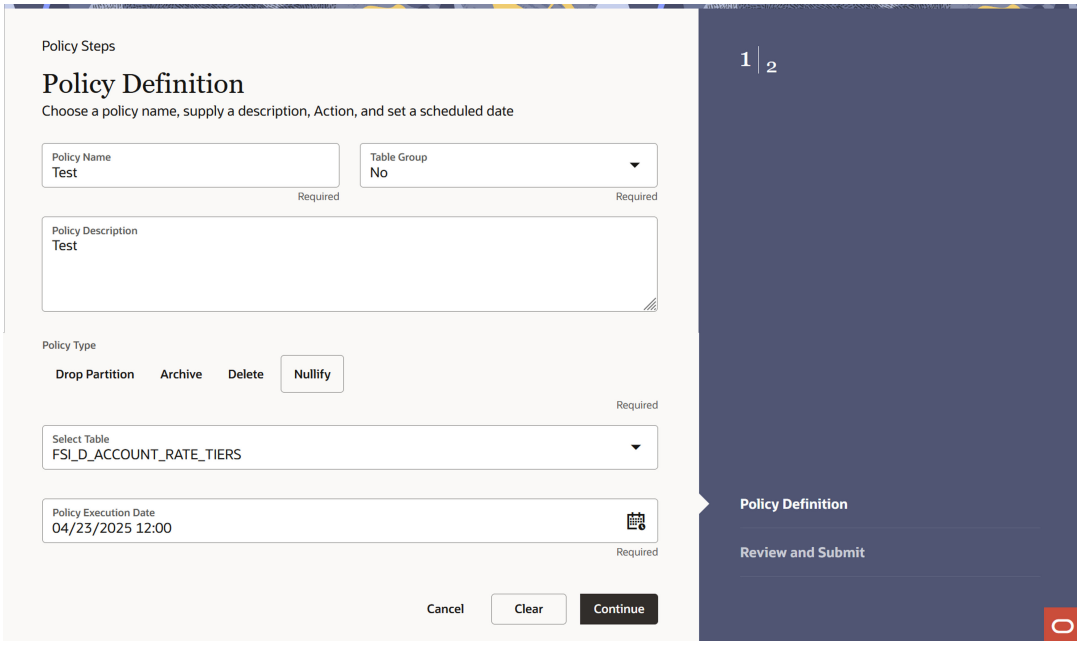
To create Nullify Policy, follow these steps:

1. Navigate to **New Policy** page.
2. Follow the steps mentioned in below sections:
   a. **Step 1:** Policy Definition
   b. **Step 2:** Choose Columns
   c. **Step 3:** Condition
   d. **Step 4:** Preview and Submit

Step 1: Policy Definition section

1. From **Policy Details** tab, click **Start**. The **Policy Definition** page is displayed.

Figure 3-36 Policy Definition section

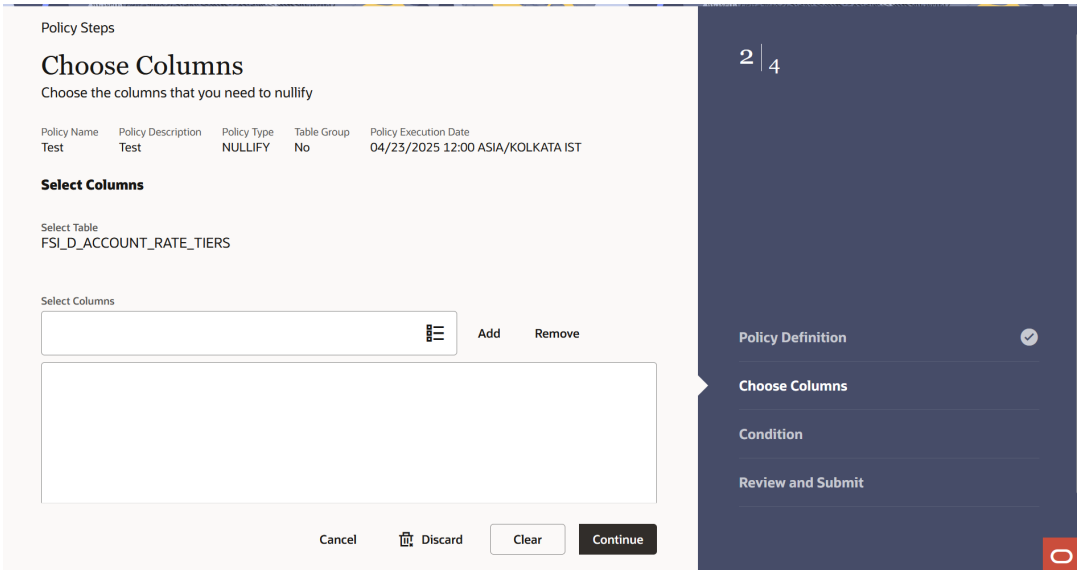


2. Enter the following details:
   - **Name:** Name of Policy
   - **Description:** Description of Policy
   - **Table Group:** If this option is selected as **No**, then you can select **Policy Type** as **Drop Partition**.
   - **Type:** Type of Policy as Nullify
   - **Policy Execution Date:** Select the execution date and time of policy using calendar

Step 2: Choose Columns section

1. Navigate to the **Choose Columns** section.

Figure 3-37 Choose Columns

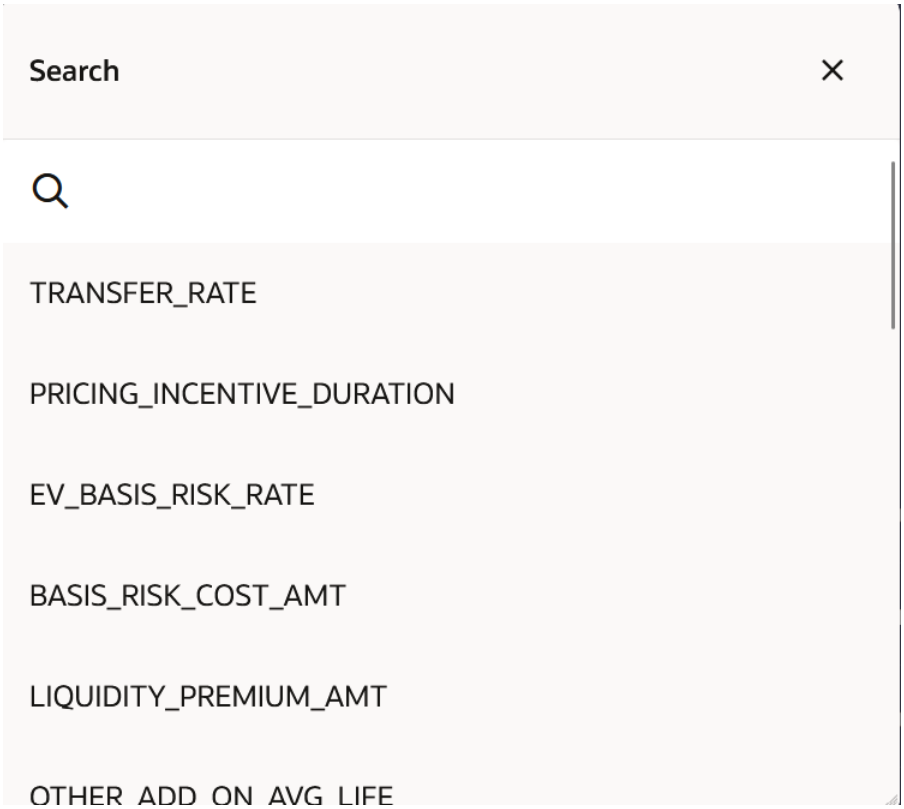


2. To select the columns which you want to nullify, click

Figure 3-38 Search Columns

in Select Columns field. The Search window is displayed.

Figure 3-39 Search Columns



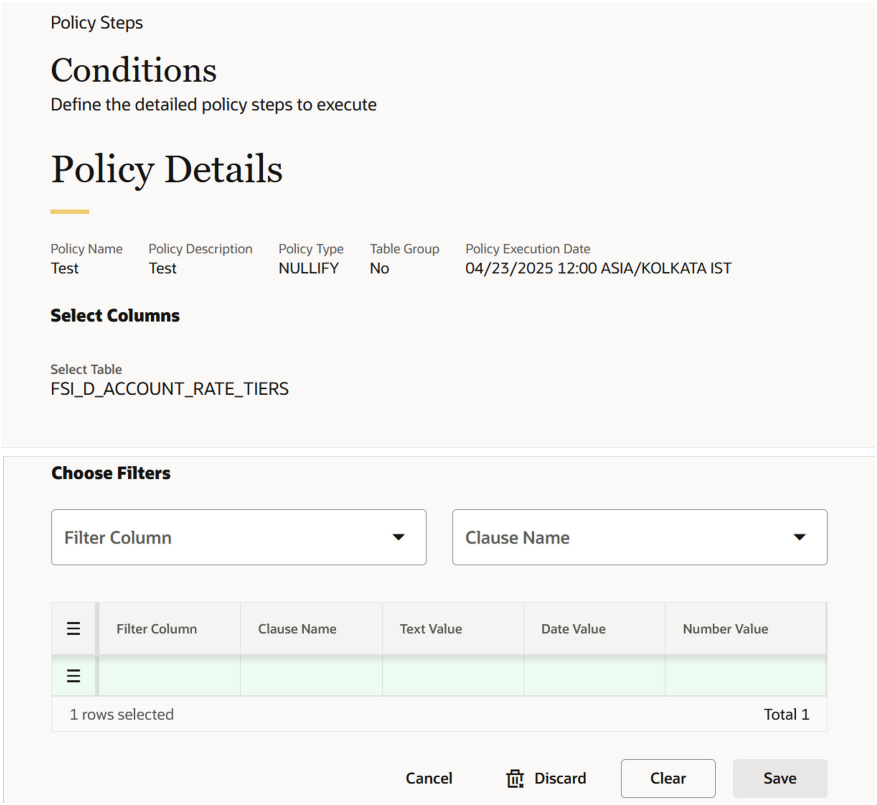
3. Select columns and click **Add**.
4. Click **Continue**.

Step 3: Conditions

This section allows you to define the conditions(s) to archive the table.

1. Navigate to the **Conditions** section.

Figure 3-40 Conditions section



2. Select the column(s) using **Filter Column**.
3. Select operator from **Clause Name** drop-down. The list of operators displays based on the selected Column Name.

> **Note:**
>
> You must select at least one condition to avoid the full table archive. Use AND if you want to use multiple columns. You can select columns from pre-defined list. Don't use wild card characters. Supported operators are: >, <, <=, and =>.

4. Enter condition value for selected column.
   For example, If you have selected **Column** as **Account Number**, then select **Equals** operator from **Clause Name** drop-down, and enter alphanumeric value in **Value** field.

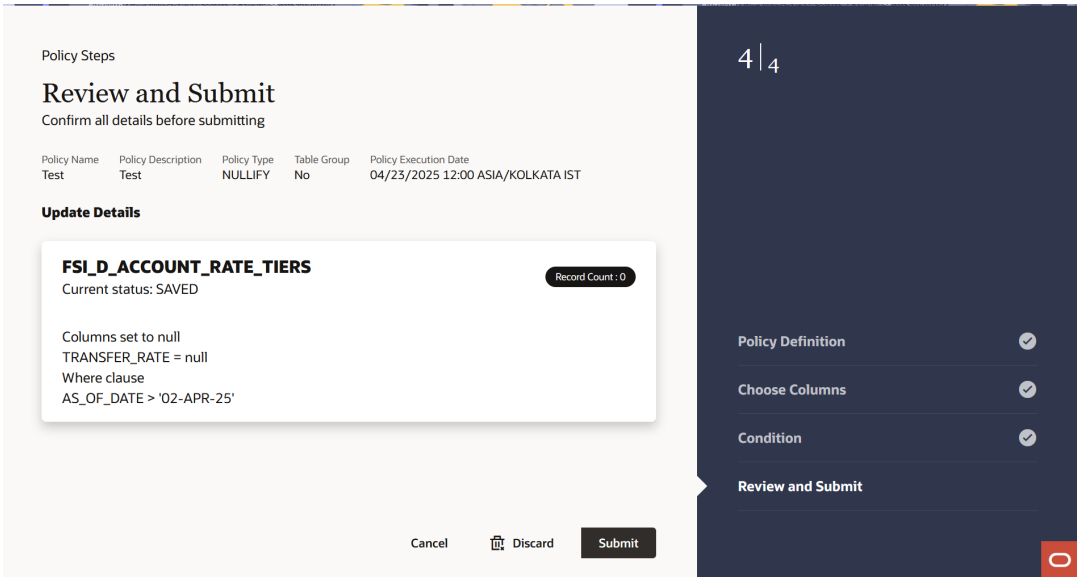
   Click **Row Actions** icon to view single row, add a new row, create duplicate row, delete row, refresh row, or revert changes.

   To add more conditions, define the condition and click **Save**.
5. Click **Continue**.

Step 4: Preview and Submit section

1. Navigate to **Preview and Submit** section. Review the policy details.

Figure 3-41 Preview and Submit section



2. Click **Submit** to create the policy. The created policy will be displayed on **Data Housekeeping Summary** page.

> **Note:**
>
> Data that is archived remains in the same table but is invisible to user. Thus, they cannot be inserted back as it will violate unique constraint of concerned table.

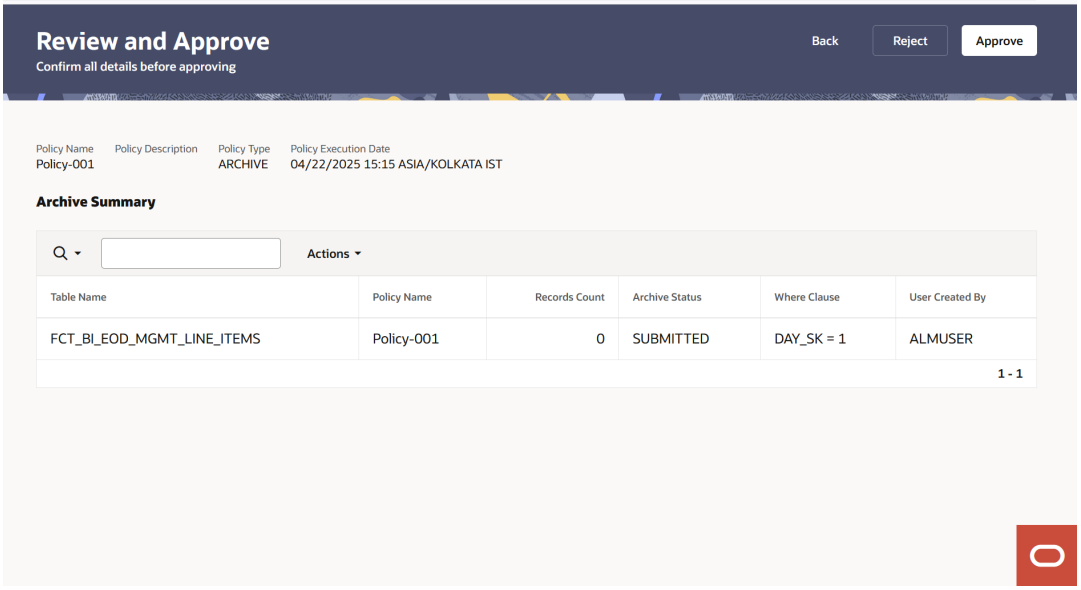
3.6.2 Authorize a Policy

To authorize a policy, follow these steps:

Predefined Data Housekeeping Policy

1. Navigate to the **Data Housekeeping Summary** page
2. Search for a policy that you want to authorize. For further information, see the Data Housekeeping Summary section
3. Click on the **Action** icon against the policy name and select **Authorize**.

Figure 3-42 Authorize Policy



4. Click **Approve**.
5. Enter Policy comments and click **OK**.

Figure 3-43 Policy Comments

Data Housekeeping policy gets executed on scheduled date and time after authorization. It runs automatically at the defined date and time which was set during the policy creation.

3.6.3 Withdraw a Policy

> **Note:**
>
> Policies can be withdrawn if there is more than 15 minutes left in the scheduled time.

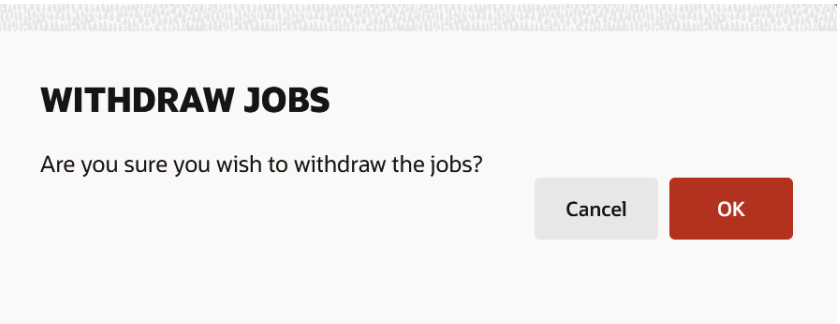
To withdraw a policy, follow these steps:

Predefined and approved Data Housekeeping Policy

1. Navigate to the **Data Housekeeping Summary** page
2. Search for a policy that you want to authorize. For further information, see the Data Housekeeping Summary section
3. Click on the **Action** icon against the policy name and select **Withdraw Jobs**.

   A confirmation box is displayed. Click OK.

Figure 3-44 Withdraw Jobs



3.7 Balance Reconciliation

The Profitability and Balance Sheet Management Cloud Service's Balance Reconciliation module helps you to Reconcile the selected processing/instrument/account balances against the Management Ledger. If any differences are found, you will have the flexibility to choose significant differences and create plug entries for those in the Ledger_Instruments table.

> **Note:**
>
> All General Ledger Accounts must mandatorily have a Reconciliation product mapped to them.

You can define the dummy attributes for the Product-Currency combinations, whichever General Ledger Account is used for Reconciliation. Default dummy attributes are auto populated based on the linked product ID and currency selected in Reconciliation dimensions.

Reconciliation is a three-step process.

- Reconciliation Definition and Default Attributes setup
- Reconciliation Report verification
- Plug entry creation and writing the Reconciliation differences back to Ledger Instruments table

To access the Balance Reconciliation module, from the LHS Menu, navigate to **Data Management Tools**, and select **Balance Reconciliation**.

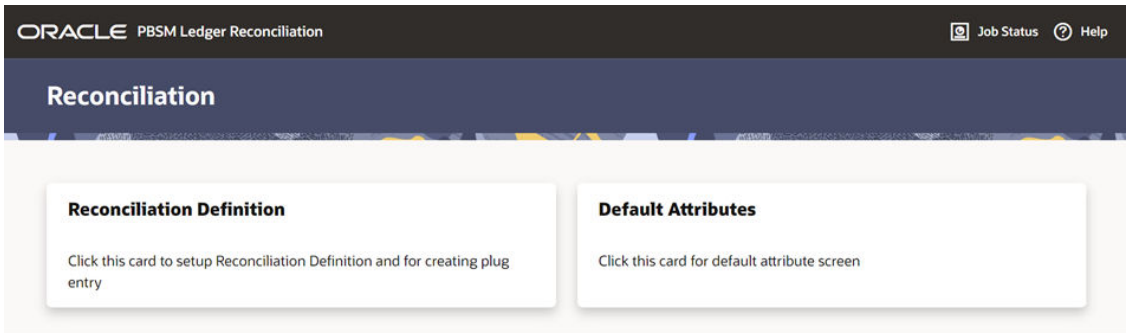
The Balance Reconciliation landing screen displays the following two cards:

- Reconciliation Definition

- Default Attributes

> **Note:**
>
> 1. Ledger Balances with Balance Type CD as only 0, will be considered for reconciliation.
> 2. Balance Sheet category will be derived based on Common COA linked as attribute with selected GL account, which subsequently has Account Type defined as attribute of the concerned Common COA.
> 3. Reconciliation Product must be defined as attribute of GL accounts which participate in reconciliation, so system can pick account attributes for the plug entry creation.

Figure 3-45 Reconciliation Landing Screen

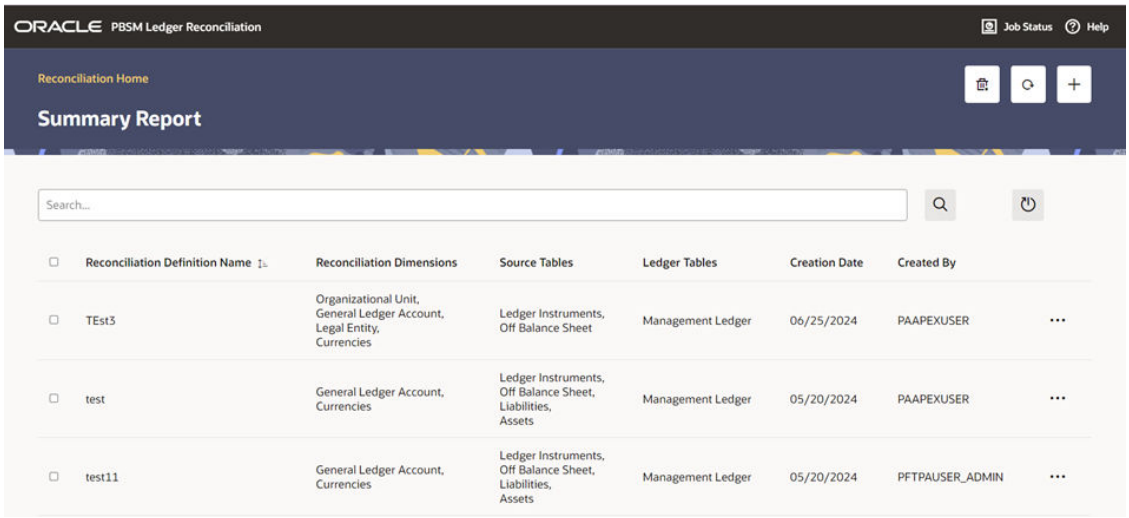


3.7.1 Reconciliation Definition

The Reconciliation Definition summary screen allows you to search for any definitions from the displayed list.

The Reconciliation Definition summary screen is as follows:

Figure 3-46 Reconciliation Definition Summary Screen



This screen displays the following definition attributes for easy identification:

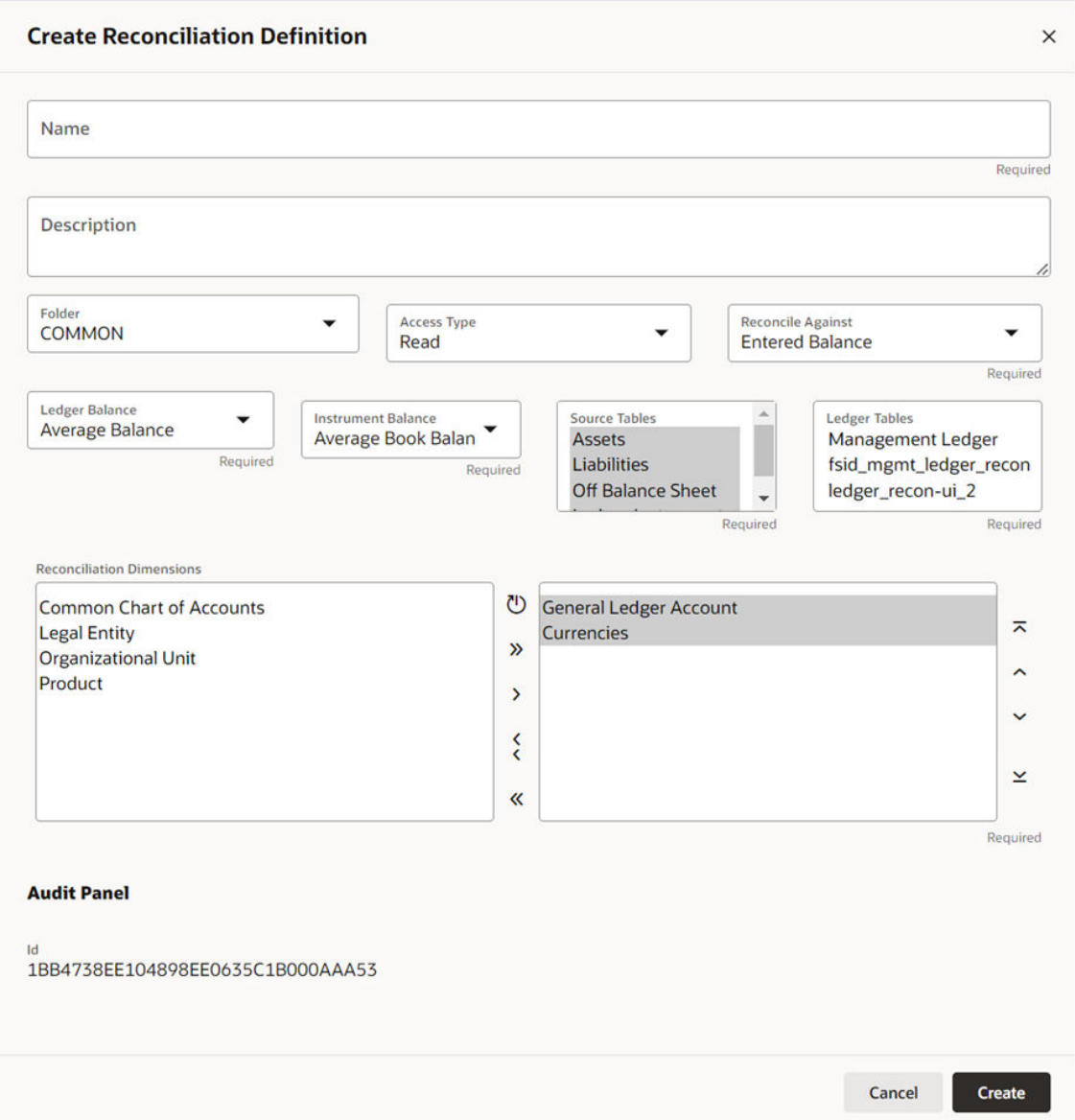
- Reconciliation Definition Name
- Reconciliation Dimensions across which reconciliation is performed
- Source Tables against which reconciliation is performed
- Ledger Tables
- Creation Date
- Created By
- Actions icon

3.7.1.1 Adding a New Reconciliation Definition

The Create Reconciliation screen allows you to define a new Reconciliation Definition.

To add a new Reconciliation Definition, click the **Add** button on the summary screen.

Figure 3-47 Create Reconciliation Definition Screen



Reconciliation Definition set up allows you to choose for which Instrument Table, across which Dimensions and on which Balance Type (Cur Book Bal or Cur Par Bal); you would like to perform reconciliation. For example, you can choose to reconcile against just GL Account ID and Currency or do reconciliation at much granular level by selecting the Org Unit, Legal Entity along with GL Account ID and Currency.

While selecting reconciliation key dimensions, you have the option to choose from activated placeholder dimensions as well along with seeded key dimensions.

Similarly, there is a seeded FSI_D_MANAGEMENT_LEDGER table, which will be used by default for balance reconciliation against selected portfolio of accounts. In case, there are any activated placeholder management ledgers as well, those will also be available for selection and subsequently for balance reconciliation.

3.7.1.2 Reconciliation Balance

Management Ledger stores balance using Financial Elements, while corresponding Cur/Avg Balance can be picked directly from the dedicated columns in the Instrument Tables. So, you have an option to choose if you want to reconcile against 100 (ending balance)/140 (average balance). In the Management Ledger for FE 100, you can further select between CUR_BOOK_BAL/CUR_PAR_BAL from Instrument table. By Default, CUR_PAR_BAL would remain selected. You are allowed to create plug entries only when comparison is done against ending balance. For Average balance, you can only see the difference report but would not be allowed to create plug entries.

You can choose to reconcile in functional or local currency as per the selection made under ‘Reconcile Against’; Functional or Entered Currency.

You can do the comparison only for Asset, Liability, or can include Ledger Instrument table also. At run time, the As-of-Date can be passed for which Balance Reconciliation will be performed.

3.7.1.3 Actions Performed on Reconciliation Definition

To delete one or multiple Reconciliation Definitions, you can select the checkboxes against each one of them and press the **Delete** button.

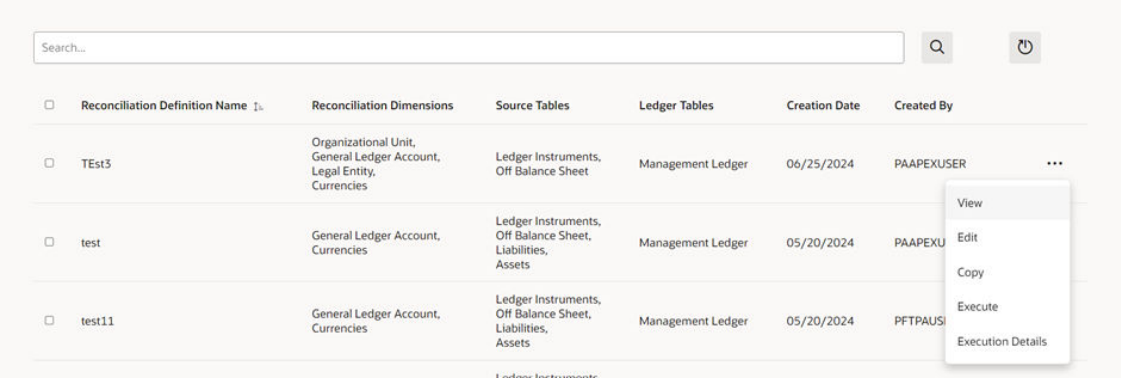
A confirmation message will let you confirm and delete selected definitions.

You can also perform search based on following fields:

- Name
- Reconciliation Dimensions
- Source tables against which reconciliation is performed
- Folder where the reconciliation definition is stored

The following screen display the **Actions** menu from which the different actions that you can perform on existing Reconciliation Definitions.

Figure 3-48 Actions Icon and Different Actions

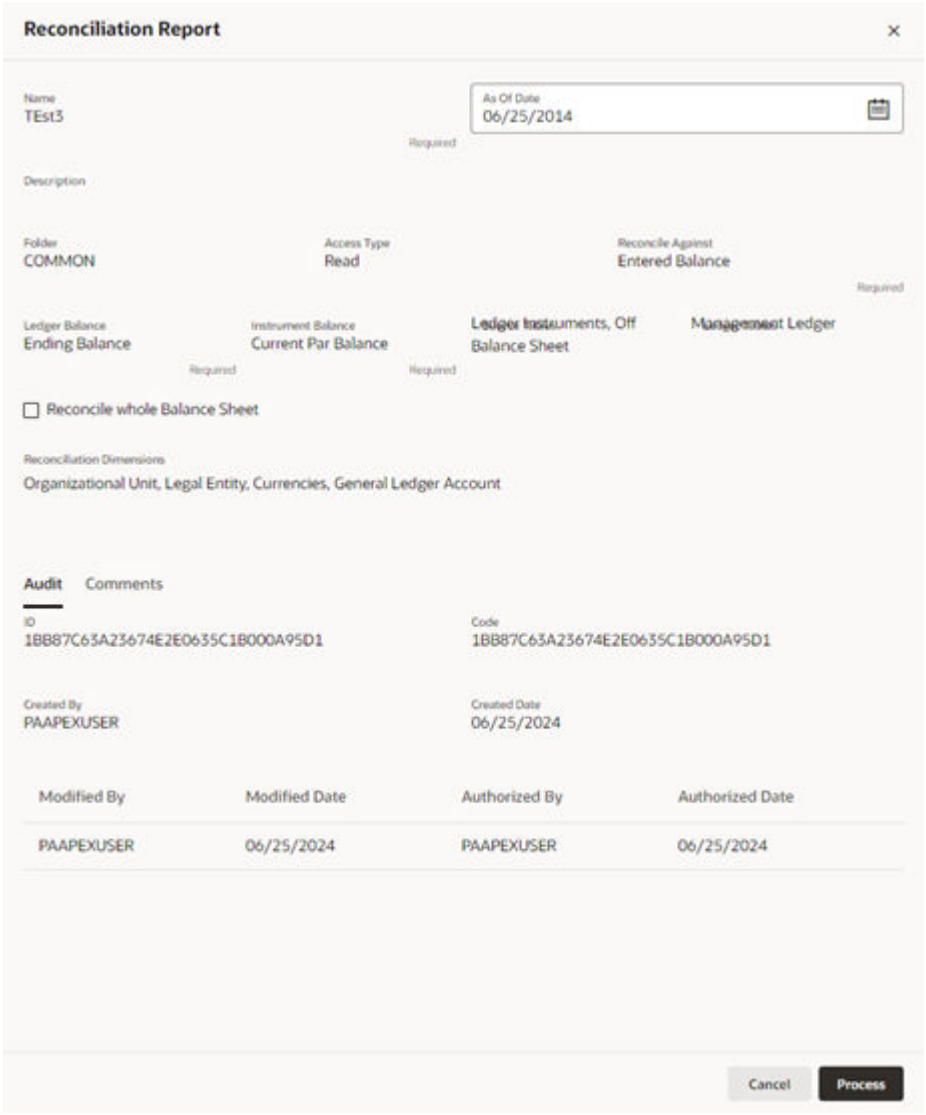


The following are the actions:

- **View**: Click this action button and view the definition in read only format.

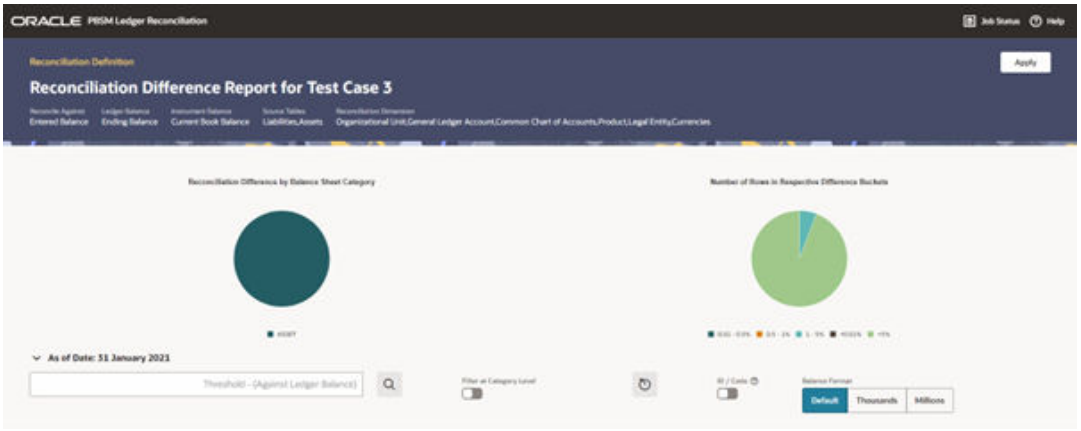
- **Edit**: Click this action button and edit the definition.
- **Copy**: Click this action button and copy the definition to create another definition with similar parameters.
- **Execute**: Click this action button and perform the reconciliation as per the selected parameters.
  As-of-Date is a run time parameter, you can choose for which date reconciliation needs to be performed. After clicking **Process**, the Reconciliation Difference Report will be generated as follows:

Figure 3-49 Reconciliation Report



Report starts with the summary across Balance Sheet categories and difference buckets pie charts, which can help you to get an idea about the reconciliation difference in a quick glimpse.

Figure 3-50 Reconciliation Difference Report



The detailed report is displayed as follows, where you can filter out insignificant difference using ‘Threshold Percentage’, also threshold can be applied at each row level or for whole Balance Sheet category level. If threshold is applied at Balance Sheet category level, all the rows that belong to the Balance Sheet category which is less than given percentage will be hidden from the Reconciliation Difference Report. A download button allows you to download the Reconciliation Report.

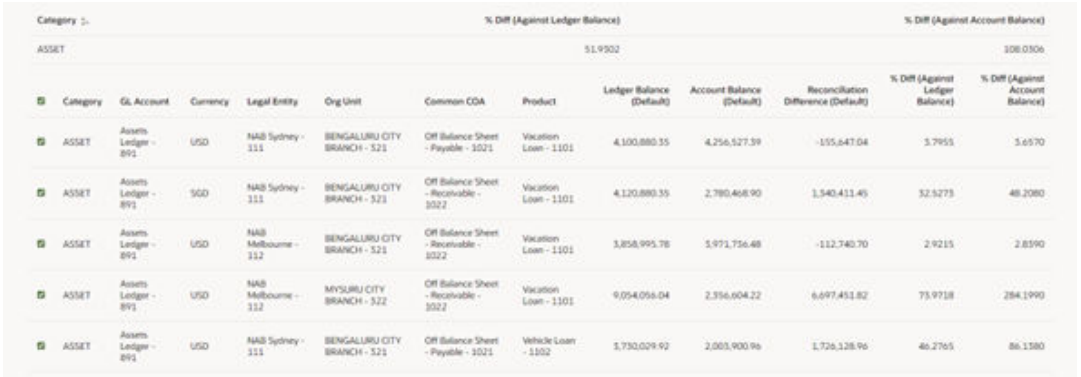
You can select **Filter at Category Level** toggle switch to apply threshold at ‘consolidated difference reports’, which is at balance sheet category level OR can directly apply the threshold to each difference row, which is available at the unique combination of selected key dimensions.

You can select the **ID / Code** toggle switch to see the CD data. By default, the toggle switch displays the ID data.

You can also change the unit of balance to thousands or millions.

You can see difference in both percentage and absolute format.

Figure 3-51 Differences in Percentage and Absolute Formats

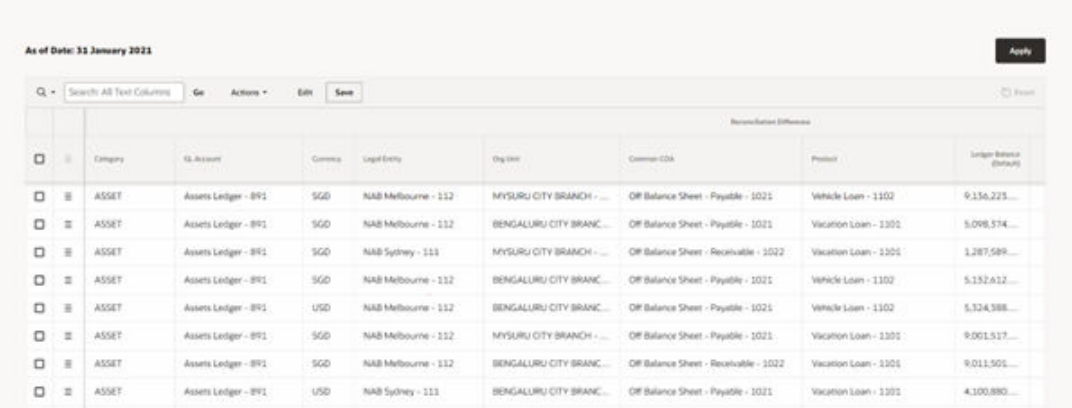


As a next step to create the plug entries for filtered rows, you can click the **Apply** button in extreme right corner. Following a grid appears, along with default attributes fetched from default product attributes: if you like, you can update any of these attributes before plug entries are created for the selected difference records. You can use the **Edit** and **Save** button to edit the default product attributes like Amortization Type, Interest Rate Code, and

so on. You cannot edit any Code (CD) or VARCHAR attributes. Only attributes like Number, Rates, Dates, Term can be edited. All types of balances like Org balance, Current/Average balance are same as the reconciliation difference.

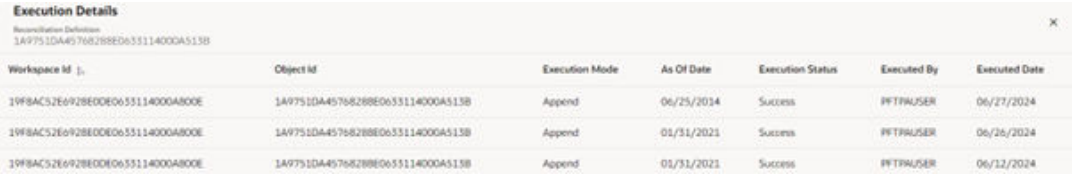
After you are convinced with the entered values for all the account attributes, you can click Apply. A job will be submitted and plug entries will be created in the FSI D Ledger Instruments table. To differentiate the plug entries from the customer real accounts, Data source CD will be used, with value 3, which signifies the 'Difference balance entries due to reconciliation performed between account and ledger'.

Figure 3-52 Differences in Percentage and Absolute Formats



- **Execution Details**: You can click this action button and view all the runs for a selected definition, along with the user information who has triggered the execution.

Figure 3-53 Excution Details



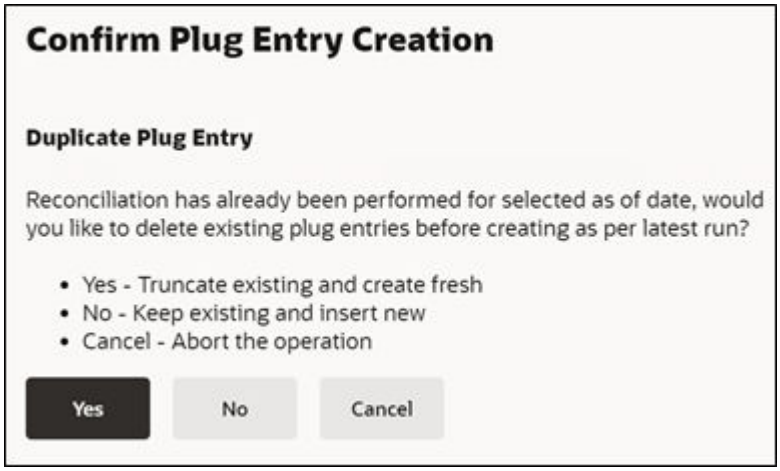
3.7.2 Duplicate Runs for Same As-of-Date

If for a particular As-of-Date plug entries are already created, you have an option to cancel the latest run and exit without creating any plug entries.

You can append to existing entries for same As-of-Date. This case is possible if different reconciliation definitions are being executed for different instrument tables.

You can delete all the existing plug entries for concerned As-of-Date and create all fresh entries. This case is possible if the intermediate day runs took place locally and finally at night a global run took place.

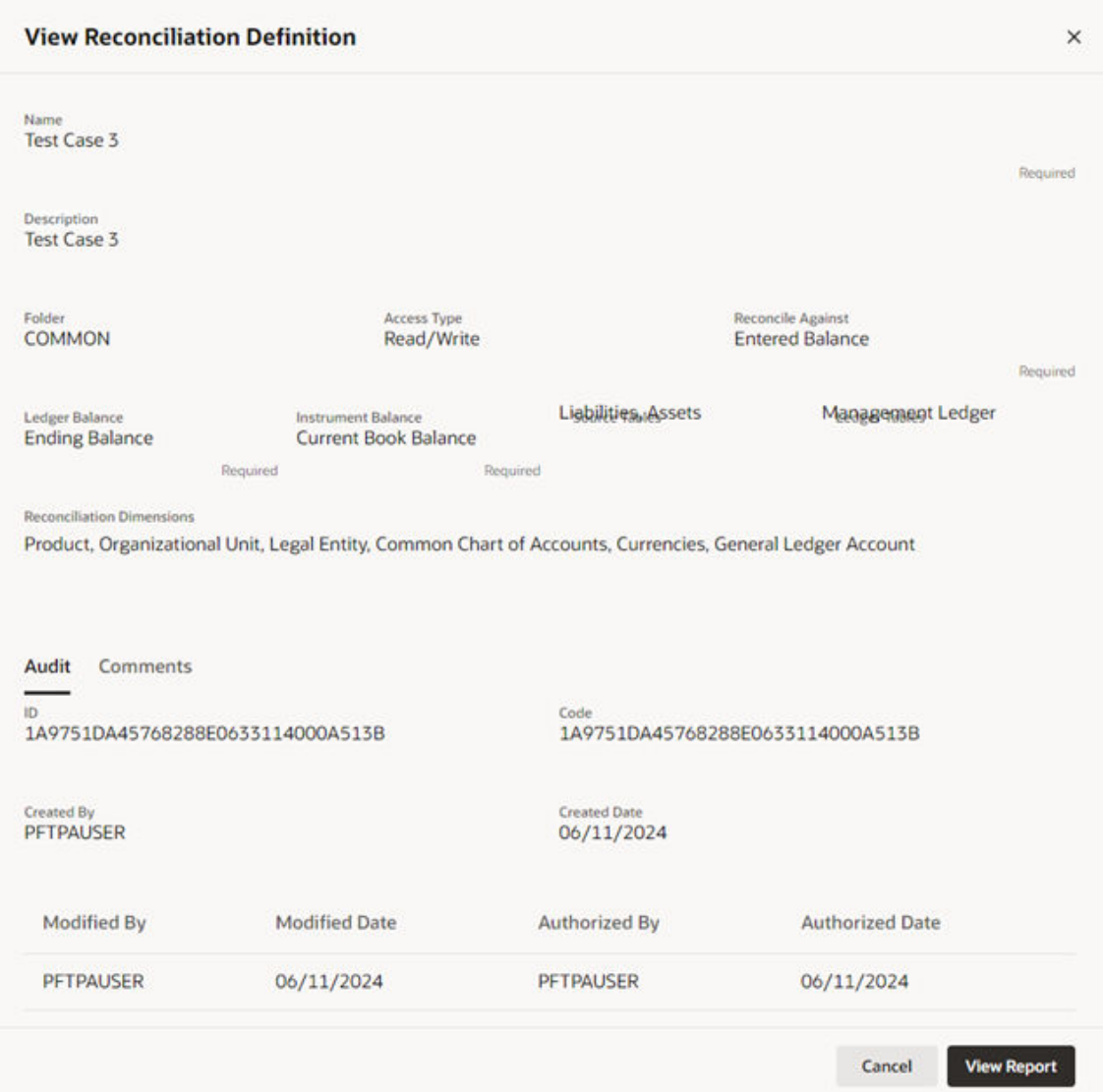
Figure 3-54 Confirm Plug Entry Creation



3.7.3 Historical Difference Report

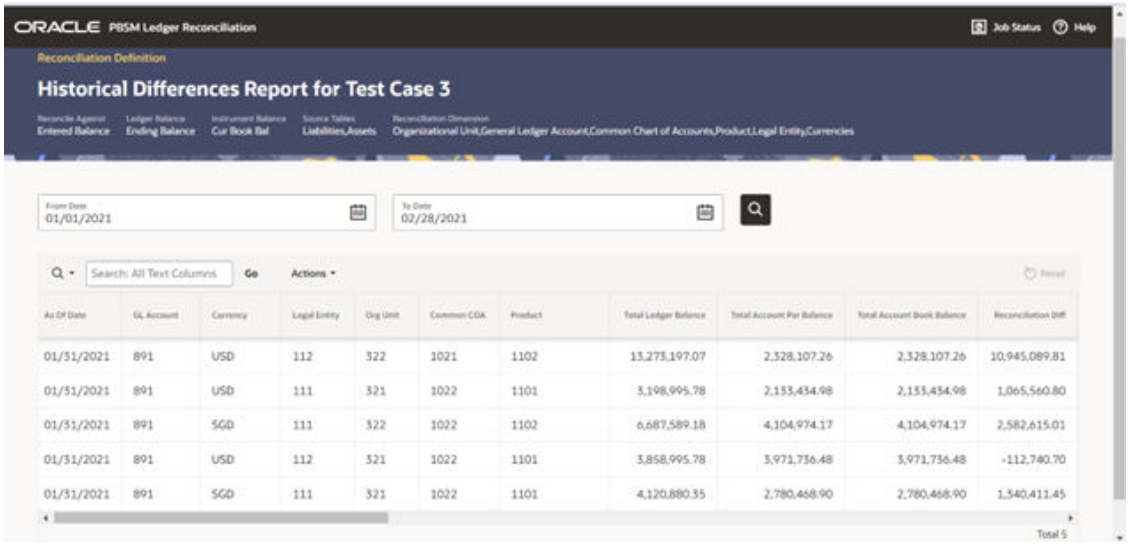
You can open the Reconciliation Definition in **View** mode and get the Historical Difference Report using the **View Report** button.

Figure 3-55 View Reconciliation Report



Here you can give a historical period by selecting the **From Date**, **To Date** and fetch all the reconciliation difference records along with the user comments to get the justification for plug entries creation.

Figure 3-56 Historical Differences Report for FUNCT

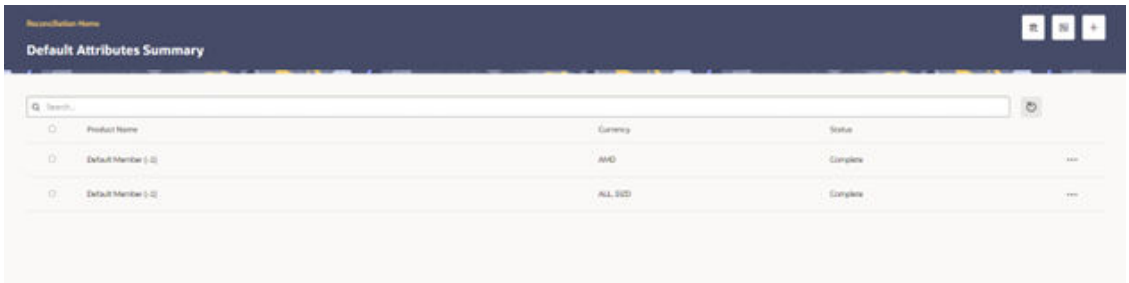


3.7.4 Default Attributes

The following is the Default Attribute Summary screen, where you can find all the default attributes defined for various Product-Currency combinations.

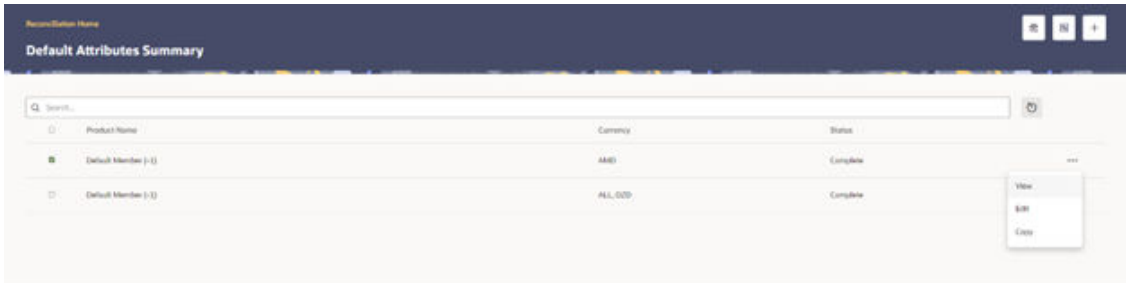
You can select one or multiple Product-Currency combinations and delete at once, by clicking the **Delete** button.

Figure 3-57 Default Attributes Summary



You can view/edit/copy an existing default attribute using respective button inn the Actions icon as follows.

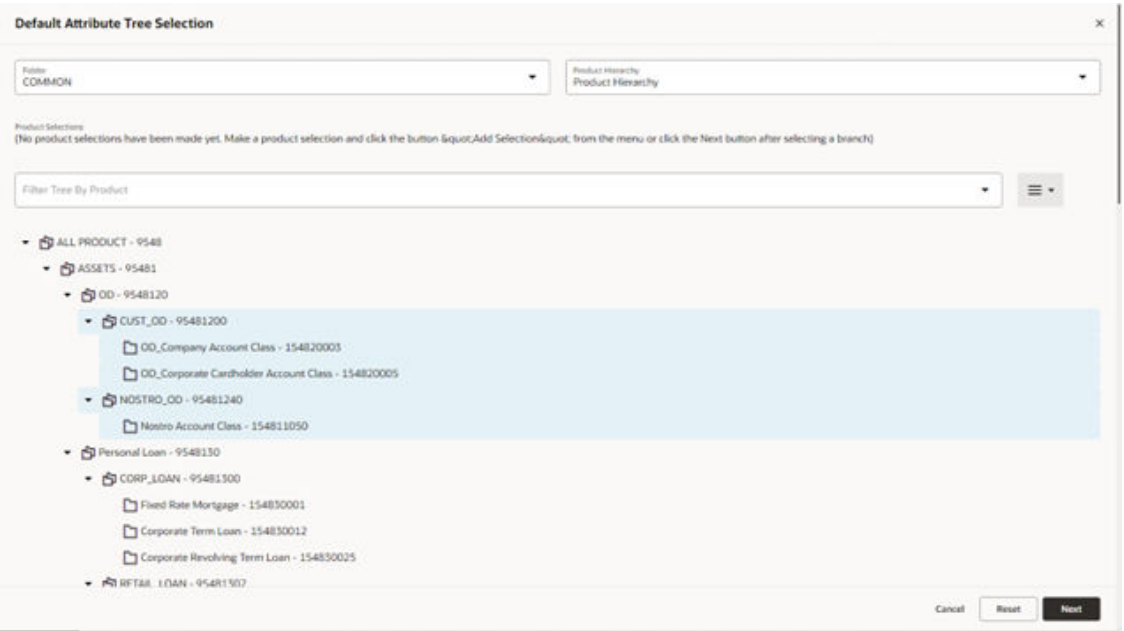
Figure 3-58 Default Attributes Summary – Actions Column



3.7.4.1 Creating a New Product-Currency Combination and Default Attributes

To create a new Product-Currency combination and default attributes for that. You can click the **Add** button, and a slide in pop-up will appear with three tabs:

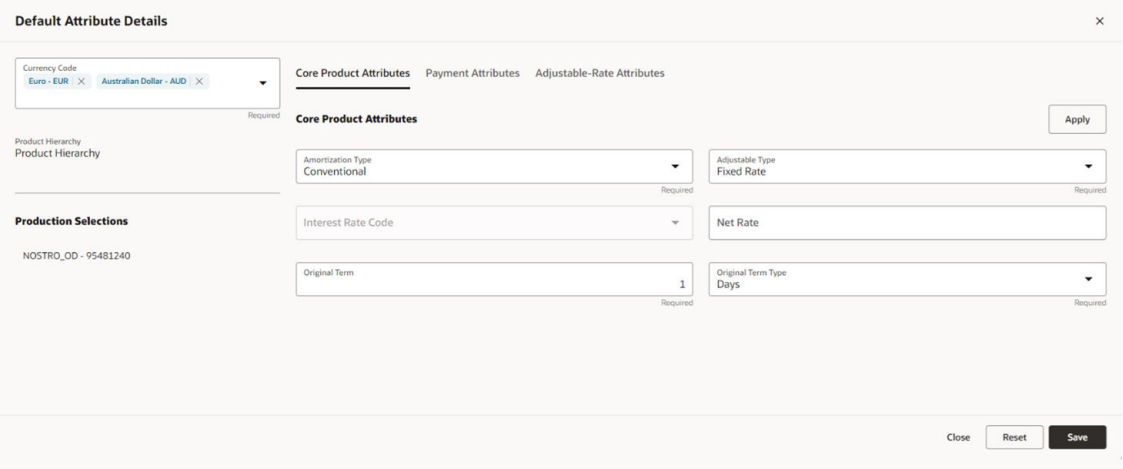
Figure 3-59 Default Attribute Tree Selection



Core Product Attributes Tab: Here you can select one or multiple products and one or multiple currencies and start defining core product attributes as follows:

- Amortization Type
- Adjustable Type
- Interest Rate Code
- Net Interest Rate
- Original Term
- Original Term Type

Figure 3-60 Core Product Attributes

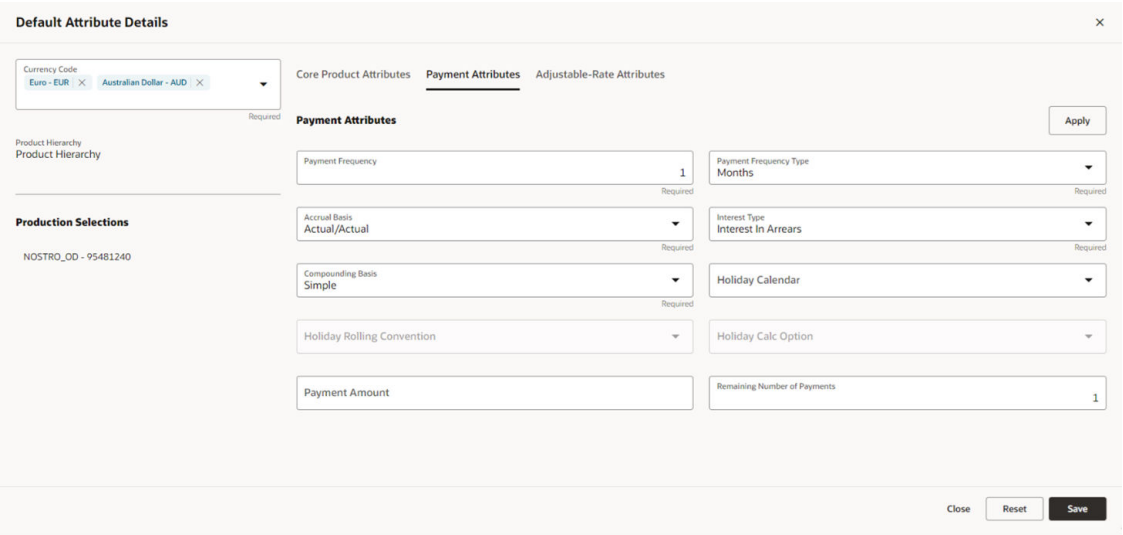


Click **Apply** and move to the Payment Attributes tab.

Payment Attributes Tab: To Define payment attributes, you can select this tab and start filling the following details:

- Payment Frequency
- Payment Frequency Type
- Accrual Basis
- Interest Type
- Compounding Basis
- Payment Amount
- Remaining Number of Payments

Figure 3-61 Payment Attributes



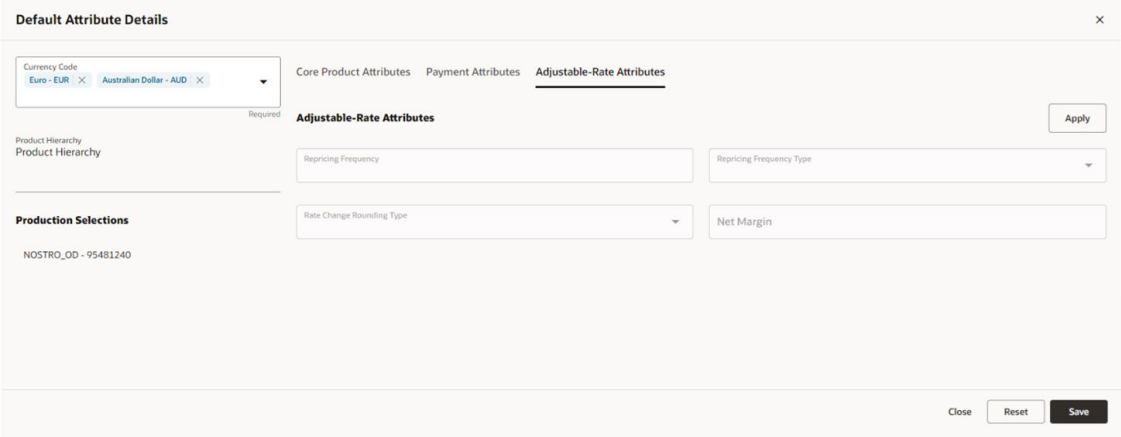
Click **Apply** and move to the Adjustable-Rate Attributes tab, which is applicable only for adjustable rate instruments:

Adjustable-Rate Attributes Tab: Here you can define following attributes:

- Repricing Frequency
- Repricing Frequency Type
- Rate Change Rounding Type
- Net Margin

Click **Apply** and then click **Save**. The Default Product Attribute for the selected Product-Currency combination is saved.

Figure 3-62 Adjustable-Rate Attributes



3.7.5 Reconciliation using Batch Process

You can do Reconciliation using the Scheduler Services.

To run the Reconciliation using Batch Process, follow these steps:

1. With the Define Batch feature, it is possible to create new batches and review existing ones.
2. Click **+** to create a new batch.
3. In the **Create Batch** screen, enter the following values:
   a. Code (spaces are not allowed in the code section).
   b. Batch Name
   c. Select the Service URL name as **RUN_CMD_SERVICE**.
   d. Click **Save**.
4. In the **Define Task** screen, you can define the tasks related to a specific batch.
   a. Navigate to Define Task.
   b. Select the name of the batch that has been created for this task.
5. Click **+** to create a new task.

6. In the **Create Task** screen, enter the following values:
   a. Task Code (Spaces are not allowed in the code section). b.
   b. Task Name.
   c. Select the task type as **REST**.
   d. Select the component as **RUNCMD**.
   e. Select Batch Service URL as **RUN_CMD_SERVICE**.
   f. Click **Save**.
7. In the **Task Parameter** section, enter the following values:
   a. Select the Code as **RUN CMD RECONCILIATION**.
   b. Select the Execution Venue as **NATIVE**.
   c. Select the Optional Parameter as **THRESHOLD_OBJECTCODE_OPTION** format.
   d. Select the IP as **localhost**.

   The allowed values for the Option are either 0 or 1.

   - **0**: Truncate all existing data for concerned AS_OF_DATE/MIS_DATE for which reconciliation batch is getting executed and insert new data.
   - **1**: Append data on top of existing data for concerned AS_OF_DATE/MIS_DATE to ledger instrument and reconciliation difference Audit table (Table to retain comments for each plug entry).

   Threshold values must be greater than or equal to zero (0), negative values are not supported. Threshold values should be expressed as “threshold >= 0” The threshold will accommodate null values, allowing all data to be inserted into the ledger instrument and reconciliation difference audit tables.

   When a threshold is applied, plug entries will be created only for filtered data into the ledger instrument and reconciliation difference audit tables.

   > **Note:**
   >
   > Select the appropriate object code/reconciliation definition to avoid errors in the batch process.

   The optional values should be passed in the following format:
   “THRESHOLD_OBJECTCODE_OPTION”

   Example 1: ‘’_F405734331FD795BE053D71A000AD329_0

   (Threshold is null, and object code is: F405734331FD795BE053D71A000AD329, option value is 0)

   Example1: 12_F405734331FD795BE053D71A000AD329_1

   (Threshold is 12, and object code is: F405734331FD795BE053D71A000AD329, option value is 1)
8. Schedule the batch using the **Schedule Batch** screen.
   Select the **Name** of the batch that has been created.

   You can use the **Edit Parameters** option to review the batch parameters and make any necessary changes to initializing the batch process.

9. The following tasks should be performed in a manner similar to what was outlined in point number 7.
    a. The **MIS Date** is used as the **As of Date** in the Reconciliation UI. Select the appropriate **MIS Date**.
    b. The values in point 6 are the default values for a specific environment.
    c. After completing the changes, click **Execute** or **Save**.
        i. By clicking **Save**, the definition of the batch will be saved, however, the batch will not be executed.
        ii. By clicking **Execute**, the batch will be executed.

    After the batch is executed, an **Execute Status** dialog is displayed, providing information about the executed batch.

    After the batch is executed, the information about the executed batch will be available in the **Monitor Batch** screen. Select the following options and check the Batch Status.

Sometimes, a batch may fail. The reason for the batch failure could be as follows:

- Entering an incorrect object code.
- Entering an incorrect option value. Only values of 0 or 1 are supported.
- Entering an incorrect threshold value. Only null or a value >= 0 are supported.

> **Note:**
>
> Following roles mapping to the SKU User group should be present to enable RUNCMD listing and execution.
>
> - RCMDREAD
> - RCMDADVND

For detailed instructions for defining, executing, and monitoring a Batch, see the Scheduler Service documentation.

3.8 Data Redaction

OFSAAI is enhanced to enable masking of sensitive data and Personal Identification Information (PII) to adhere to Regulations and Privacy Policies.

Oracle Data Redaction provides selective, on-the-fly redaction of sensitive data in database query results prior to display by applications so that unauthorized users cannot view the sensitive data.

The stored data remains unaltered, while displayed data is transformed to a pattern that does not contain any identifiable information.

> **Note:**
>
> Redaction is supported only on Oracle database.

3.8.1 Redaction Functions

Use functions to define the type of redaction to be applied.

To define a redaction function:

1. Click **Data Management Tools** > **Redaction Framework** and select **Redaction Functions**. The **Redaction Functions Summary** screen appears.
2. Click **Add** and provide the following details:
3. **Redact Function Name**: Specify a name for the function. Example: Email_ID.
4. **Description**: Provide a description for the function. Example: Function to redact email IDs.
5. **Redact Type**: Select the redaction type to be applied.
   - **Full**: You can redact all of the contents of the column data. The redacted value returned to the querying application user depends on the data type of the column. For example, columns of the NUMBER data type are redacted with a zero (0), and character data types are redacted with a single space.
   - **Partial Trailing**: You can hide or obscure a part of the data at the end of a column value. For example, you can redact a Social Security number with asterisks (*), except for the initial 4 digits.

     > **Note:**
     >
     > Only VARCHAR and VARCHAR2 are supported.

   - **Partial Leading**: You can hide or obscure a part of the data at the beginning of a column value. For example, you can redact a Social Security number with asterisks (*), except for the last 4 digits.

     > **Note:**
     >
     > Only VARCHAR and VARCHAR2 are supported.

     – **No of characters**: (Available only if partial redaction is applied). Specify the number of characters to be redacted.

     > **Note:**
     >
     > You can't apply partial redaction to date type columns. Only full redaction is applicable to date type columns.

6. Click **Apply**.

3.8.2 Redaction Policies

You can use policies to map redaction functions to classification codes.

A classification code is a logical abstraction for a table column. Example: Social Security Number. These codes are pre-seeded.

By mapping classification codes to redaction functions, you can redact the underlying table column.

3.8.2.1 View redaction policies

You can view the defined redaction policies using the Redaction Policies Summary screen.

To view the redaction policies:

1. Click **Data Management Tools** > **Redaction Framework** and select **Redaction Policies**.

   The **Redaction Policies Summary** screen appears.
2. Enter the text of the second step here.

   See the table below for fields and their description.

Table 3-21 Redaction Policies Summary

Field	Description
Classification Name	Pre-seeded classification code name.
Redact Functions	Redact function name
Version	The latest version of the classification.
Request Type	Types of request: • Refresh: Map redaction as per latest addition of table columns. • Unmap: Remove redaction. • Map: Apply redaction
Status	Policy status
Policy Applied On	Date on which the policy was applied.
Created By	The user who created the policy.
Created Date	Date of creation of the policy.
Actions	You can perform the following actions: a. Edit b. Drop c. Refresh d. View

3. Click the **Actions** menu corresponding to the policy you want to view and select **View**.

The Redaction Policies Preview screen appears containing details of the policy.

3.8.2.2 Create redaction policies

Perform the following steps to create a redaction policy:

1. Click **Data Management Tools** > **Redaction Framework** and select **Redaction Policies**.

   The **Redaction Policies Summary** screen appears.
2. Click **Add**.
3. Select the classification from the **Classification Name** drop-down list.
4. Select the function to be mapped to the classification name, from the **Redact Function Name** drop-down list.

5. Click **Map**.

   The affected table and columns are displayed as a result of this mapping.

6. Click **Submit for Approval** or click **Reject** to cancel the mapping.

3.8.2.3 Modify a redaction policy

Perform the following steps to modify a redaction policy.

1. Click **Data Management Tools** > **Redaction Framework** and select **Redaction Policies**.

   The **Redaction Policies Summary** screen appears.

2. Click the **Actions** menu corresponding to the policy you want to modify and select **Edit**.
3. Select the required function from the **Redact Function Name** drop-down list.
4. Click **Update Map**.

   The screen displays the affected table and columns as a result of this modification.

5. Verify the details and click **Submit for Approval**.

3.8.2.4 Drop a redaction policy

Perform the following steps to drop a redaction policy.

1. Click **Data Management Tools** > **Redaction Framework** and select **Redaction Policies**.

   The **Redaction Policies Summary** screen appears.

2. Click the **Actions** menu corresponding to the policy you want to drop and select **Drop**.

   The screen displays the affected table and columns as a result of this drop action.

3. Verify the details and click **Submit for Approval**.

3.8.2.5 Refresh a redaction policy

Use the Refresh feature to extend redaction to newly added columns within an existing policy, preserving previous redactions.

To refresh a redaction policy:

1. Click **Data Management Tools** > **Redaction Framework** and select **Redaction Policies**.

   The **Redaction Policies Summary** screen appears.

2. Click the **Actions** menu corresponding to the policy you want to refresh and select **Refresh**.

   The **Refresh Dialog** appears.

3. Click **Run Refresh**.

3.8.3 Redaction Approval

You can approve or reject the redaction policies, using the Redaction Policies Authorization screen.

You must have the REDACT_AUTH role to approve/reject the policies.

Perform the following steps:

1. Click **Data Management Tools** > **Redaction Framework** and select **Redaction Approval**. The **Redaction Policies Authorization Summary** screen appears listing the policies awaiting approval/rejection.
2. Click the **Actions** menu corresponding to the policy you want to approve/reject. The screen displays the affected tables and columns as a result of approving/rejecting this policy.
3. Verify the details and click **Approve & Execute** to approve the policy. Or, click **Reject** to cancel the policy.
4. Depending on the selection, provide the Approver Comments/Rejected Comments and click the **Approve & Execute**/**Reject** button once again to complete the action.

4
Administrative Tools

This topic covers the following sub-topics:

- PLSQL Starter Kit

4.1 PLSQL Starter Kit

This topic covers the following sub-topics:

- Custom Extensions PLSQL Installation
- User Extension Support

4.1.1 Support for PLSQL Extension Installation

Users who wish to install StarterKit should download the StarterKit installer. For more information, see the StarterKit UI in the User Guide.

The following steps guide you to install the PLSQL Entension StarterKit.

> **Note:**
>
> The installer supports both fresh and upgrade installations.

Installation Tasks	Description
Verify the system requirements	This will entail the prerequisites required to start with the installation of StaterKit.
Configure and create a Database Schema	StarterKit installation requires a Database Schema. For more information, see the Create and Configure Database Schema Creation.
Configure Environment Variables	For more information. see the .profile Changes.
Install StarterKit	For instructions to install the StarterKit, see Installation of StarterKit.
Create User Extensions	For instructions, see Create User Extensions

4.1.1.1 Verify the System Requirements

The following tables list the pre-installation checklist items.

Client Machine Requirements

Operating System	Linux Server 8.6+
Software to be installed	• Oracle Client Version 19.17.0.0.0 and above

	• ksh • jq version 1.6 • Zip 3.0 • UnZip 6.00 • rsync version 3.1.3 • dos2unix

Server Requirements

Database Name	Oracle Database 19c Enterprise Edition Release 19.26.0.1.0 – Production or above
Oracle Database Instance Settings	Ensure that the following database instance settings are configured: • NLS_CHARACTERSET to AL32UTF8 • NLS_LENGTH_SEMANTICS to BYTE • OPEN CURSORS limit to greater than 1000

4.1.1.2 Configure and Create a Database Schema

Creation of a Database Schema requires sysdba access.

Log in as sys user and create an Oracle schema. This schema will be used by the Starter Kit during installation to deploy the Starter Kit objects.

Sample syntax to create a database schema:

```
create user <username> identified by <password>
```

> **Note:**
>
> - `<username>` refers to the actual schema user name.
> - `<password>` refers to the actual schema password.

Example:

```
create user skituser identified by password123
```

Assign Tablespace and Quota to the Schema created.

DEFAULT TABLESPACE	Default Users tables or Assign any permissible existing valid tablespace.
TEMPTABLESPACE	Default TEMP or Any Permissible existing valid temporary tablespace name.

QUOTA	Enter the quota to be set on the DEFAULTTABLESPACE attribute for the schema/ user. By default, the quota size is set to 500M. Minimum: 500M or Unlimited on default Tablespace.

Sample syntax to assign tablespace and quota to a database schema:

```
alter user <<username>> DEFAULT TABLESPACE <<USERS>> quota unlimited on
<<USERS>>;
```

> **Note:**
>
> - `<username>` refers to the actual schema user name.
> - `<USERS>` refers to the actual default tablespace.

Example:

```
alter user skituser DEFAULT TABLESPACE USERS quota unlimited on USERS;
```

4.1.1.2.1 Assign Grants for Schema

Provide the following grants:

- grant create SESSION to <<username>>;
- grant create PROCEDURE to <<username>>;
- grant create SEQUENCE to <<username>>;
- grant create TABLE to <<username>>;
- grant create VIEW to <<username>>;
- grant create SYNONYM to <<username>>;
- grant create TYPE to <<username>>;

4.1.1.3 Configure Environment Variables

Do the following changes in the .profile file.

Table 4-1 .profile File Changes

Description	Example Value
set ORACLE_HOME pointing to the appropriate Oracle Client installation.	export ORACLE_HOME=/scratch/oraofss/ app_client19c/product/ 19.0.0/client_1
Set the PATH	export PATH=/scratch/oraofss/app/product/19.0.0/ dbhome_1/bin:$PATH
Set the STARTER_KIT_HOME	export STARTER_KIT_HOME=/scratch/iutusrext/ shome
Set TNS_ADMIN pointing to the folder where tnsnames.ora file exists.	TNS_ADMIN=$HOME/tns

Example (.profile)

```
#!/bin/bash
export ORACLE_HOME=/scratch/oraofss/app/product/19.0.0/dbhome_1
export PATH=/scratch/oraofss/app/product/19.0.0/dbhome_1/bin:$PATH
echo "PATH $PATH"
export STARTER_KIT_HOME=/scratch/iutusrext/shome
export TNS_ADMIN=$HOME/tns
```

Login to the Linux terminal and execute the .profile.

```
. ./.profile
```

4.1.1.4 Install StarterKit

To install the starterkit:

1. Create a directory and copy the generated starterkit zip file and unzip it.
2. mkdir -p <dir_name>
   Example:

   ```
   mkdir -p starterKit
   ```

3. Copy the downloaded starterkit zip file into the created directory.
4. cd <dir_name>

   ```
   cd starterKit
   ```

5. unzip <starterKitzipfilename>
   Example:

   ```
   unzip starterKit_cappsalm10dec-prd_20.zip
   ```

6. Assign EXECUTE permission installer script using the command:

   ```
   chmod 755 *
   ```

7. rm <starterKitzipfilename>
   Example:

   ```
   rm starterKit_cappsalm10dec-prd_20.zip
   ```

Ensure that the path specified in $STARTER_KIT_HOME exists.If it doesn't exist create the STARTER_KIT_HOME directory.STARTER_KIT_HOME is the same as what is mentioned in .profile in the Pre-installation Checklist section.

mkdir -p <starterkithome>

Example:mkdir -p shome

Edit the initParam.props file present inside starterKit/attributes folder.

Table 4-2 initParam.props file

Parameter Name	Parameter Desc
HOST	Schema name where starterkit is installed.Same schema which was created in section *Assign Grants for Schema*
DB_HOST	Database Host name
DB_PORT	Database Port number
DB_SERVICE_NAME	Database Service Name or SID
LOG_PATH	ABSOLUTE Log path where log files should reside
EXTRACTOR_DUMP_HOME	ABSOLUTE Extractor Dump Home Folder path where export dump and import dump resides
EXP_DUMP	Extractor Export Dump Folder name Where extracted scripts reside. **Note:** Values are defaulted and should not be changed.
PAR_HOME	ABSOLUTE PAR Home path
MANIFEST_FSAPPS_CREATE_SCRIPTS	Name of manifest file create scripts deployment **Note:** Values are defaulted and should not be changed.
MANIFEST_FSAPPS_INSERT_SCRIPTS	Name of manifest file insert scripts deployment **Note:** Values are defaulted and should not be changed.

Table 4-2 (Cont.) initParam.props file

IMP_DUMP	Extractor Import Dump Folder name

> **Note:**
>
> Values are defaulted and should not be changed.

Sample initParam.props file

```
#Enter HOME Schema name
HOST=custom
#Enter DB Host name
DB_HOST=<DB HOST IP ADDRESS>
#Enter DB Port number
DB_PORT=<DB PORT NUMBER>
#Enter DB Service Name or SID
DB_SERVICE_NAME=NXG19PDB
#Provide ABSOLUTE Log path
LOG_PATH=/scratch/iutusrext/shome/logs
#Sleep param value
SLEEP_VAL=sleep 3
#Provide ABSOLUTE Extractor Dump Home Folder path
EXTRACTOR_DUMP_HOME=/scratch/iutusrext/objExtDump
#Extractor Export Dump Folder name
EXP_DUMP=expDump
#Extractor Import Dump Folder name
IMP_DUMP=impDump
#Provide ABSOLUTE PAR Home path
PAR_HOME=/scratch/iutusrext/parDump
#Manifest fsapps for create scripts deployment
MANIFEST_FSAPPS_CREATE_SCRIPTS=manifest_fsapps_create.sql
#Manifest fsapps for insert DML scripts deployment
MANIFEST_FSAPPS_INSERT_SCRIPTS=manifest_fsapps_insert.sql
```

Installation of starter kit

Go to the starterKit directory.

1. In case of upgrade installation of starterkit of version 25.03.01 or above on top of version 25.02.02 or below. Run the following script: `F_CEXTN_ARCHIVE_HANDLE_ERRORS.sql` in the paths `/objectExtractor/scripts/create` and `/objectExtractor/scripts/insert` in the upgrade version of starterkit has to be executed before applying the upgrade.

   You can ignore this step in case of fresh installation.

2. Run the command to invoke setup.sh as follows:
   `. ./setup.sh`

During its run this shell prompts you to enter the username, password, etc. of the database in which the Starter Kit files are to be deployed. Please provide them carefully.

3. Verify the execution status by running the following query:
   `select * from setup_info`

   Check the column F_STATUS for value S (Success).

   In case of failure, this column will be updated with value F (Failed).

   Additionally, verify the `starterkit.log` file. The log path is mentioned in the properties file against the LOG_PATH parameter.

4.1.1.5 Create User Extensions

In the current version of Starter kit, the following object types are whitelisted and can be used while developing User-Extensions:

- Sequence
- Procedure
- Function
- Package
- Type

Follow the naming convention and usage instruction mentioned in the User Guide while developing the User Extensions.

Generate an Archive of Created User Extensions

Create a par File

The par file list the object that need to be extracted during archival process. The par file is a newline delimited file. The par file path is passed a parameter during archive.

```
FN_UPD_FSI_D_ASSETS_CUSTOM

FN_UPD_FSI_D_LIABILITY_CUSTOM

CUSTOM_NO_SEQ_CUSTOM
```

To execute the archive, execute the following command:

```
cd $STARTER_KIT_HOME/bin
 . ./archive.sh SILENT "par file absolute path" "project_name"
```

Example:

```
. ./archive.sh SILENT "/scratch/devextusr/sampleobjects.par" "project_1"
```

The archived file will be present under path mentioned against the parameter `EXTRACTOR_DUMP_HOME` and `EXP_DUMP` in the init.props file.

For Example given the below values in the init.props file

```
EXTRACTOR_DUMP_HOME=/scratch/iutusrext/objExtDump

EXP_DUMP=expDump
```

<EXTRACTION_ID>: This generated by the Archive.

The path will be created as follows:

/scratch/iutusrext/objExtDump/expDump/8/OFS_ALMCS_USER_EXT_2000_29.10.01_1.tar.gz

4.1.2 User Extension Support

User Extension Support (or otherwise also called as Support for Custom PLSQL) is a new capability under Profitability and Balance Sheet Management Cloud Service (PBSMCS). This feature allows customers to extend the functionality of the cloud service via custom PL/SQLs. This new service will allow customers to introduce custom PL/SQLs (with appropriate restrictions and controls) into the cloud service, to complement/extend current calculation capabilities, in order to cater to various regulatory, central bank and management requirements.

Financial Institutions are required to meet various statutory, regulatory and management reporting requirements that are released by the central banks of the geographies in which they operate. Quite often, these requirements are specific to the given region, and more importantly, compliance with these regulations are time bound. PBSM intends to allow customers to introduce custom PL/SQL code into the cloud services that helps them meet these statutory, regulatory or even internal compliance requirements.

4.1.2.1 Key Features

The Key Features in the User Extension Support are as follows:

PLSQL Starter Kit

The PLSQL Starter Kit can be generated using the PLSQL Starter Kit User Interface.

The Starter Kit is bundled with pre-packaged set of artefacts which will assist in the following:

- Creation of application specific factory bundled database objects for example – Tables, Synonyms, Functions, Procedures, etc.
- Bundles sample data which the Customers can choose to deploy.
- Bundles pre-packaged archival scripts along with basic validations.

Pre-requisite: Customers should have a database schema created (referred to as Sandbox Database Schema in this document) in one of their local on-premises Data Center. Please refer Starter Kit Installation Guide for details.

Generating the PLSQL Starter Kit

PLSQL Starter Kit can be generated using PLSQL Starter Kit User Interface located under the LHS menu Admin Tools. UI has options to Include Custom tables & Include data for all Custom tables as optional selections while generating a Starter Kit. The UI will display the current Status and previously generated Starter Kit Status details. The UI has a Download button using which Users can download the generated Starter Kit.

4.1.2.2 Steps to introduce Custom PLSQLs

Support for Custom PLSQL is a workflow-based capability.

The different stages involved are:

- Generate, Download and Install the Starter Kit

- Develop Custom PLSQL Extensions
- Extract and Submit the Custom PLSQLs for Oracle Due Diligence
- Request for Archive Deployment of the Custom PLSQLs on the preferred PBSM SaaS Instance
- Access User Extension through Scheduler

4.1.2.2.1 Generate, Download and Install the Starter Kit

Starter Kit can be generated using the PLSQL Starter Kit User Interface. Starter Kit will assist the Customers to set up a sandbox database schema on their preferred on-premises database. Requires a Linux Shell operating environment to run the Starter Kit installation and deployment.

Refer Installation Guide for more details on system requirements and installation and deployment steps.

Starter Kit Components:

- Installation Guide - to assist users on how to Install Starter Kit artefacts.
- Deploys pre-packaged create table DDLs, insert DMLs & archive validation scripts.
- Archival scripts - for generating Custom PLSQL archives.

4.1.2.2.2 Develop Custom PLSQL Extensions

Customers to develop Custom PLSQL extensions as per their business / functional requirements on the sandbox database schema which was created by using the Starter Kit. Customers to test the developed extensions in their sandbox database schema with test data. Generate Custom PLSQL Archives using the Starter Kit bundled archival scripts. Custom PLSQL extensions are validated by the Archive Validation Scripts during the archival process.

Archives are generated with a Project ID or Project name, which is accepted as an input parameter during the archival script execution. The Project ID or name will be used while baselining the scripts by Oracle.

Customers should submit the full archive, including all earlier Custom extensions, every time against a project ID; Oracle will not merge one archive with previous archive submissions (if any) for a project ID.

Rules to be followed while developing custom PL/SQL extension objects are listed below:

- Naming Conventions to be followed while developing Custom PLSQL Extensions.
- Tables should not be altered or dropped.
- Seeded Data that should not be altered or deleted.

See the following table for more details.

Table 4-3 Rules

SL No.	Rules	Details
1	Naming Conventions to be used while creating Custom Extensions	Please use a suffix while naming the PLSQL objects with “_CUSTOM” Example: FN_UPD_FSI_D_ASSETS_**CUSTOM**
2	Operations Allowed on Starter Kit Objects	Refer Appendix Section B

Table 4-3 (Cont.) Rules

SL No.	Rules	Details
6	Creation of Global Temporary Tables (Dynamic Tables within Custom PLSQLs using execute immediate)	Allowed
7	Creation of Views	Allowed
8	Creation of Synonyms	Allowed
9	Creation of Functions	Allowed
10	Creation of Procedures	Allowed
11	Creation of Packages	Allowed
12	Creation of Materialized Views	Not Allowed

For more details on the process of submitting the archive, see Appendix 5.1.1.

4.1.2.2.3 Extract and Submit the Custom PLSQLs for Oracle Due Diligence

Oracle Due Diligence is an Oracle process to validate the submitted archives and confirm that the archives are ready for deployment on a target PBMS SaaS Instance.

4.1.2.2.4 Request for Archive Deployment of the Custom PLSQLs on the preferred PBSM SaaS Instance

In this stage the Custom PLSQL extension deployment pipeline will be executed to deploy the extensions on the Customer preferred SaaS Instance. Customers will be notified on the readiness of the Custom PLSQL extensions on their SaaS instance.

For more details on how to request for archive deployment of the custom PLSQLs on the preferred PBSM SaaS instance. see Appendix 5.1.2.

4.1.2.2.5 Access User Extension through Scheduler

You can access the User Extension using the Scheduler service.

To access User Extension using the scheduler service:

1. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Batch**. For more details, see Define Batch.
2. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Task**. For more details, see Define Tasks.
    a. Task Type: REST
    b. Component: Select Execute Custom PLSQL.
    c. Under Task Parameters, select/enter the following:
        i. CustomPLSQL Definition: Select the relevant user extension function.
        ii. CustomPLSQL Params: Enter the required parameters with comma separator. For example, USD,200.
        When executing this function the parameter will be assigned to the selected function as show below. Its mandatory to develop user-extensions with BatchID and MisDate as the first 2 parameter.

For example: Given the below function signature

```
create or replace FUNCTION FNUPDATERECORD (BatchID Varchar2,
                                                                    MisDate
Varchar2,

vCurrency varchar2,

vBalance number) return number is
```

The wrapper will be created in the following fashion:

```
DECLARE
                batchid     VARCHAR2(32767) :=
'user_extension_2024-09-30_16';
                misdate     VARCHAR2(32767) := '20240930';
                vCurrency    VARCHAR2(32767) := 'USD';
                vBalance     number := '100';
                vreturn     NUMBER(30);
BEGIN
                vreturn := fnupdaterecord(
                batchid     => batchid,
                misdate     => misdate,
                vCurrency    => vCurrency,
                vBalance    => vBalance);
END;
```

3. Save the Task.
4. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.
5. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**. For more information, see Monitor Batch.
6. Select the Batch and then select the **MISDATE** and the **Batch name**. Select the latest execution and click **Start Monitor**.
   The UI displays the Status of the batch.

4.1.2.3 PLSQL Starter Kit UI

The PLSQL Starter Kit UI will allow users to generate a Starter Kit. UI has options to Include Custom tables & Include data for all Custom tables. The UI will display the current Status and previously generated Starter Kit Status. The UI has a Download button using which Users can download the generated Starter Kit.

To access PLSQL Starter Kit UI, create the user groups UG_GEN_STARTER_KIT_ADMIN and UG_GEN_STARTER_KIT_ANALYST in the IAM console. For more details on creating user groups, refer to Creating a New User Group.

After you create the user groups, map them to the user. For more details on mapping user groups, refer to Admin Console.

From the LHS menu, select **Admin Tools**, and then select **PLSQL Starter Kit**.

The PLSQL Starter Kit UI displays the following details:

- **Last Generated on**: Stores the Starter Kit Generation.

- **Last Version**: Stores the Version.
- **Status**: Stores the Status of Starter Kit Generation.
- **File Name**: Stores the Starter Kit File Name.
- **File Size**: Stores the Starter Kit File Size.
- **Include Custom tables**: Check box indicates whether to include Custom Tables added as part of the Data Model Extensions User Interface. When Checked Starter Kit Generation will include Custom Tables added as part of the DME UI.
- **Include data for all Custom tables**: Check box indicates whether to include data of the Custom Tables. When Checked Starter Kit Generation will include Custom Tables data.
- **Include Key-dimension members/attributes/hierarchies**: Check box defaults to select key-dimensions if there are any included for Starter Kit Generation.
- **Previous Execution Status** shows the details of a previously generated Starter Kit version, date, and status.
- **Generate Starter Kit** button can be used to Generate a Starter Kit.
- **Refresh** button can be used to refresh the page to view the latest Status.
- **Download** button can be used to download the latest generated Starter Kit.

4.1.2.4 Appendix

This appendix covers the following topics:

- Process for Submitting of Custom PLSQL Archives to Oracle
- Frequently Asked Questions
- Custom PLSQL Master Tables List

4.1.2.4.1 Process for Submitting of Custom PLSQL Archives to Oracle

This section briefly explains the process to be followed for submitting the customer developed Custom PLSQL extensions to Oracle.

The process is a workflow-based approach and is broadly categorized as follows:

- Uploading the Custom PLSQL Extensions as an Archive
- SaaS Deployment of Custom PLSQL Extensions
- Summary Checklist

4.1.2.4.1.1 Uploading the Custom PLSQL Extensions as an Archive

This section explains the following questions on Custom PLSQL Extensions – what, how to generate an archive and where to upload the archive.

Custom PLSQL Extensions

Custom PLSQL Extensions here refers to the database objects that users may have created in their On-premises data center on a database schema containing of application objects which were created using the Starter Kit generated using Oracle's PLSQL Starter Kit User Interface.

Custom database Object Types are limited to the following:

Table 4-4 Database Object Types

Functions
Procedures
Packages
Views (Materialized Views not Supported)
Global Temporary Tables
Synonyms

Generating an Archive

Users are required to use the archive scripts bundled as part of the Starter Kit utility to generate Custom PLSQL extension archive.

For more details on How to Generate Custom PLSQL Extension Archive, see the Installation Guide.

Upload the Archive

Customers are required to use My Oracle Support (MOS) portal and create a Service Request (SR) and upload the Custom PLSQL extension archive.

Table 4-5 SR Details

Product ID	The Project Name / ID used while generating the Archive using Starter Kit Archive scripts

Project Name is a argument passed when executing the `archive.sh` shell. The project name should be a valid alpha numeric string.

- Project name can contain alphabets (A-Z, a-z).
- Project name can contain numbers (0-9).
- Spaces are NOT allowed.
- Underscore is allowed. Other special character (other than underscore) are not allowed.

Examples:

Valid project name sample: **Project_ALMCS_01**

Invalid project name sample: **Project ALMCS 01 $@**

The project name is an identifier used to tag and logical groups objects for given submission. User can use the same project name when executing the archival process. When the same name is used all objects that are previously submitted using this project name will also be archived.

Archive Submission Service Request Status

SR status to be monitored by the Customers using MOS portal for the archive submitted.

4.1.2.4.1.2 SaaS Deployment of the Custom PLSQL Extensions

The prerequisite for SaaS Deployment of the Custom PLSQL Extensions would be a Successful Resolution of SR #1 and readiness of the deployment pipeline. These details will be published as part of the SR #1 status update.

Deployment of Archive

Customers are required to use My Oracle Support (MOS) portal and create a Service Request (SR) # 2 for requesting to deploy the Custom PLSQL extensions on their preferred SaaS instance.

Service Request #2 – for deploying the Custom PLSQL extension archive.

The following details must be used while raising an SR:

Project Name / ID	The Project Name / ID used while generating the Archive using Starter Kit Archive scripts
SaaS Instance Details	SaaS Instance tenancy details
Reference SR#	Reference to the SR# containing the successfully verified archives

Archive Deployment Service Request Status

SR status to be monitored by the Customers using MOS portal for the archive deployment updates.

> **Note:**
>
> ** Separate SRs are required for deployment of archives into different SaaS Instances. For example: SR#1 = Test, SR#2 = Pre-Prod, SR#3 = Prod etc.

4.1.2.4.1.3 Summary Checklist

The following table lists the summary checklist.

Table 4-6 Summary Checklist

Stage	Checklist	Dependency
Archive Submission	A. Custom PLSQL extensions archive uploaded against the SR (SR# 1) with the details mentioned in Table 4.1.1.3.	Archives containing Custom PLSQL objects.
SaaS Deployment Service Request	B. Service request (SR# 2) raised for SaaS deployment of the submitted Custom PLSQL extensions as part of SR# 1 and should contain the details mentioned in Table 4.1.2.1.	Successful Resolution of SR# 1

> **Note:**
>
> Separate SRs are required for deployment of archives submitted as part of SR# 1 into different SaaS Instances.
> For example: SR#2 = Test, SR#3 = Pre-Prod, SR#4 = Prod and so on.

4.1.2.4.2 Frequently Asked Questions

This topic covers the frequently asked questions.

1. **What to expect during custom PLSQL archive deployment request?**
   Answer:
   a. Submitted archives should always be cumulative of all earlier submissions. If a custom artefact is no longer required, it should be excluded from the archive.
      i. Sequence value will not be reset during a subsequent archive-deploy request.
   b. If the archive omits database functions that were included in the earlier version of the archive and such functions are referred within one or more batches the archive deployment will be aborted.
      i. Such batches need to be modified to remove dependency tasks or tasks which are no longer required and then request for deployment.
   c. All database functions will be available for inclusion into a batch under the batch component name “Custom PLSQL Definition”.
2. **What is the signature for database Functions?**
   Answer:

   On-prem and SaaS signature comparison of Data Transformation parameters

   ICC - On-Prem Parameters

Parameter Name	Data type
BatchID	Varchar2
MisDate	Varchar2

   ICC - SaaS Parameters

Parameter Name	Data type
BatchID	Varchar2
MisDate	Varchar2

   Batch Id: This is a mandatory parameter expected in the custom PLSQL function. Value will be submitted by the application during runtime.

   MisDate: This is a mandatory parameter expected in the custom PLSQL function. Value will be submitted by the application during runtime.

   Sample PLSQL Function with expected parameters in the Custom PLSQL Extension is mentioned below for reference:

```
create or replace FUNCTION FNUPDATERECORD_CUSTOM (BatchID Varchar2, MisDate
Varchar2, custom_param1 varchar2)
```

   return number is

```
vstatus number;

/*
```

Batch Id: This is a mandatory parameter expected in the custom PLSQL function. Value will be submitted by the application.

Misstate: This is a mandatory parameter expected in the custom PLSQL function. Value will be submitted by the application.

custom_param1: Optional parameters which custom PLSQL functions can have to meet their requirements. You have to provide the parameter value during Batch definition under the Custom PLSQL Parameter field. This field is available in the UI at the time of defining the Task.

```
*/

begin
```

/* Functional requirement based DML operations */

/* Calling Logger */

```
PKG_CUSTEXT_LOGGER.PR_LOG_MESSAGE(Piv_message => Message ',
Piv_msg_severity_cd => 20);

commit;

return 1;
```

Exception

```
PKG_CUSTEXT_LOGGER.PR_LOG_MESSAGE(Piv_message => 'ERROR IN FUNCTION ',
Piv_msg_severity_cd => 75);

return 0;

end;
```

3. **How will the custom database functions or procedures or packages access parameters?**
Answer:

The parameters are batch run ID, Task ID, component ID, MisDate, tenant ID, workspace ID, service ID, process ID, etc.

These parameters are generally used for logging by the Logger functions. The application passes these parameter values into the logger table during runtime and custom PLSQL functions need not have to pass these parameters explicitly.

However, if the custom procedures still want to include these parameter they can do so by using the below parameter names in the custom procedures

Parameter Name	Description	Data type
Gv_workspace_id	Workspace Id	Varchar2
Gv_tenant_id	Tenant Id	Varchar2
Gv_service_id	Service Id	Varchar2
Gv_process_id	Process id	Varchar2
Gv_batch_run_id	Batch Run Id	Varchar2
Gv_misdate	Misdate	Varchar2

4. **How to perform Logging?**
Answer:

To perform Logging, use below Package:

Package Name	Parameter No	Parameter Name	Data Type	Details
PKG_CUSTEXT_LOGGER.PR_LOG_MESSAGE	1	Piv_message	VARCHAR2	
	2	Piv_msg_severity_cd	VARCHAR2 DEFAULT 20	20 for Info 75 for Error

Logger function can be called within a custom PLSQL function or procedure or packages using the following steps:

a. Add your message in the **Piv_message** field.

b. The **Piv_msg_severity_cd** should be fixed to 20 for Information type messages and 75 for Error messages.

For more details on sample PLSQL function, see Question 2.

Other Examples:

/* Calling Logger */

```
PKG_CUSTEXT_LOGGER.PR_LOG_MESSAGE(Piv_message => 'My Custom message here' ',
Piv_msg_severity_cd => 20);

PKG_CUSTEXT_LOGGER.PR_LOG_MESSAGE(Piv_message => SQLCODE ',
Piv_msg_severity_cd => 20);

PKG_CUSTEXT_LOGGER.PR_LOG_MESSAGE(Piv_message => SQLERRM ',
Piv_msg_severity_cd => 20);
```

5. **How to view the view the logs in the starter kit schema?**
Answer: To view the logs in Starter Kit Schema, use below query:

```
SELECT * FROM AAICL_MESSAGE_LOG
```

4.1.2.4.3 Custom PLSQL Master Tables List

For downloading the Custom PLSQL Master Tables list (Custom_PLSQL_Master_Table_List.xls), refer to the Doc ID: 2869409..

4.1.3 Setup Parameters

The Custom PLSQL Properties (Setup Parameters) user interface is used to capture placeholder configuration which might be required during the development of custom PLSQL extensions.

1. To access Custom PLSQL Properties user interface, select **Admin Tools**, and then select **Setup Parameters**.
The Custom PLSQL Properties – Setup Parameters window is displayed.

Figure 4-1 Setup Parameter

2. Click **Add** to define a new custom parameter and enter the following details:

- **Name**: Configuration parameter key or name. Name can accept up to 200 characters.
- **Value**: Configuration parameter value. Value can accept up to 1000 characters.
- **Description** (not mandatory): Provide a description for the parameter and value added. Description can accept up to 1000 characters.

3. Click **Save**.
4. If you want to edit an already defined parameter, select the checkbox against the Name and change the **Name** or **Value**.
   If the Name is already defined, then the system displays a message *Parameter name already exists*.

Example

The following is an example of how to consume the Custom PLSQL Properties parameter and its value:

- Declare a local variable (lv) in the Custom PLSQL extension definition for parameter SQL_PARALLEL_16_HINT for eg: lv_sql_parallel_16_hint
- Using a SELECT statement fetch the value of the SQL_PARALLEL_16_HINT parameter and assign it to the local variable defined.
  Example:

```
lv_sql_parallel_16_hint setup_master.parameter_value%TYPE;
select parameter_value into lv_sql_parallel_16_hint from setup_master
where parameter_name=” SQL_PARALLEL_16_HINT”;
```

5

On-prem to SaaS Migration

You can migrate data and metadata from a Source on-premise instance to a Target Profitability and Balance Sheet Management Cloud Service.

Topics:

- Introduction to On-prem to SaaS Migration
- Part 1 - Metadata Migration
- Part 2 - Data Migration
- Pre-mapped Dimensions for Migration
- Deprecated Columns in Data Tables

5.1 Introduction

Introduction to On-Premise to SaaS migration

You can migrate data and metadata from a Source on-premise instance to a Target Profitability and Balance Sheet Management Cloud Service.

This migration comprises :

- Metadata Migration - to migrate the supported metadata (Configuration, Rules and Processes).
- Data Migration - to Migrate Data from Supported tables.

5.1.1 Supported Applications

List of Supported Applications

Currently, this migration utility supports Oracle Financial Services Profitability Management and Funds Transfer Pricing.

In future, Oracle will support Oracle Financial Services Asset Liability Management.

5.1.2 Supported Data Tables

List of Supported Data Tables

Table 5-1 Supported Data Tables

Table Type	Source Name	Target Table Name
Instrument	FSI_D_BORROWINGS	FSI_D_LIABILITY
Instrument	FSI_D_LOAN_CONTRACTS	FSI_D_ASSET
Instrument	FSI_D_OTHER_SERVICES	FSI_D_FEE_BASED_SERVICE
Instrument	FSI_D_TERM_DEPOSITS	FSI_D_LIABILITY
Instrument	FSI_D_TRUSTS	FSI_D_FEE_BASED_SERVICE

Table 5-1 (Cont.) Supported Data Tables

Table Type	Source Name	Target Table Name
Instrument	FSI_D_INVESTMENTS	FSI_D_ASSET
Instrument	FSI_D_MUTUAL_FUNDS	FSI_D_FEE_BASED_SERVICE
Instrument	FSI_D_ANNUITY_CONTRACTS	FSI_D_LIABILITY
Instrument	FSI_D_CREDIT_CARDS	FSI_D_ASSET
Instrument	FSI_D_MM_CONTRACTS	FSI_D_ASSET
Instrument	FSI_D_ASSET_BACK_SEC	FSI_D_ASSET
Instrument	FSI_D_CREDIT_LINES	FSI_D_ASSET
Instrument	FSI_D_LEDGER_STAT_INSTRUMENT	FSI_D_LEDGER_INSTRUMENT
Instrument	FSI_D_MORTGAGES	FSI_D_ASSET
Instrument	FSI_D_RETIREMENT_ACCOUNTS	FSI_D_LIABILITY
Instrument	FSI_D_GUARANTEES	FSI_D_OFF_BALANCE_SHEET
Instrument	FSI_D_MERCHANT_CARDS	FSI_D_FEE_BASED_SERVICE
Instrument	FSI_D_ACCOUNT_RATE_TIERS	FSI_D_ACCOUNT_RATE_TIERS
Instrument	FSI_D_BREAK_FUNDING_CHARGES	FSI_D_BREAK_FUNDING_CHARGES
Instrument	FSI_D_LEASES	FSI_D_ASSET
Transaction Profitability	FSI_D_OTHER_SERVICES_TXNS	FSI_D_FEE_BASED_SERVICE_TXNS
Transaction Profitability	FSI_D_MERCHANT_CARDS_TXNS	FSI_D_FEE_BASED_SERVICE_TXNS
Transaction Profitability	FSI_D_MUTUAL_FUNDS_TXNS	FSI_D_FEE_BASED_SERVICE_TXNS
Transaction Profitability	FSI_D_RETIREMENT_ACCTS_TXNS	FSI_D_LIABILITY_TXNS
Transaction Profitability	FSI_D_INVESTMENTS_TXNS	FSI_D_ASSET_TXNS
Transaction Profitability	FSI_D_BORROWINGS_TXNS	FSI_D_LIABILITY_TXNS
Transaction Profitability	FSI_D_GUARANTEES_TXNS	FSI_D_OFF_BALANCE_SHEET_TXNS
Transaction Profitability	FSI_D_LEASES_TXNS	FSI_D_ASSET_TXNS
Transaction Profitability	FSI_D_ANNUITY_TXNS	FSI_D_LIABILITY_TXNS
Transaction Profitability	FSI_D_MORTGAGES_TXNS	FSI_D_ASSET_TXNS
Transaction Profitability	FSI_D_CASA_TXNS	FSI_D_LIABILITY_TXNS
Transaction Profitability	FSI_D_LOAN_CONTRACTS_TXNS	FSI_D_ASSET_TXNS
Transaction Profitability	FSI_D_MORTGAGE_BACK_SEC_TXNS	FSI_D_ASSET_TXNS
Transaction Profitability	FSI_D_TRUSTS_TXNS	FSI_D_FEE_BASED_SERVICE_TXNS
Transaction Profitability	FSI_D_TERM_DEPOSITS_TXNS	FSI_D_LIABILITY_TXNS
Transaction Profitability	FSI_D_CREDIT_LINES_TXNS	FSI_D_ASSET_TXNS
Transaction Profitability	FSI_D_CREDIT_CARDS_TXNS	FSI_D_ASSET_TXNS
Transaction Profitability	FSI_D_MM_CONTRACTS_TXNS	FSI_D_ASSET_TXNS
Derivative Instruments	FSI_D_FORWARD_RATE_AGMTS	FSI_D_DERIVATIVE
Derivative Instruments	FSI_D_FX_SWAPS	FSI_D_DERIVATIVE
Derivative Instruments	FSI_D_SWAPS	FSI_D_DERIVATIVE

Table 5-1 (Cont.) Supported Data Tables

Table Type	Source Name	Target Table Name
Derivative Instruments	FSI_D_FUTURES	FSI_D_DERIVATIVE
Derivative Instruments	FSI_D_CAPFLOORS	FSI_D_DERIVATIVE
Derivative Instruments	FSI_D_FX_CONTRACTS	FSI_D_DERIVATIVE
Rate Card Products	FSI_D_PM_GENERATED_INSTRMTS	FSI_D_PM_GENERATED_INSTRMTS
Commitments	FSI_D_LOAN_COMMITMENTS	FSI_D_LOAN_COMMITMENTS
Interest rate curve	FSI_IRC_RATE_HIST	FSI_IRC_RATE_HIST
Payment Schedule	FSI_D_PAYMENT_SCHEDULE	FSI_D_PAYMENT_SCHEDULE
Exchange Rate	FSI_EXCHANGE_RATE_HIST	FSI_EXCHANGE_RATE_HIST
Volatility Curves	FSI_IRC_VOLATILITY_RATE_HIST	FSI_IRC_VOLATILITY_RATE_HIST
Economic Indicators	FSI_ECO_IND_HIST_RATES	FSI_ECO_IND_HIST_RATES
Ledger Class	FSI_D_MANAGEMENT_LEDGER	FSI_D_MANAGEMENT_LEDGER

5.1.3 Supported Migration Object Types

List of Supported Migration Object Types

The supported Migration object types are:

Common Objects

- Attribute Filter
- Currency
- Currency Rates
- Data Filter
- Dimensions - Members and Attributes
- Expressions
- Group Filter
- Hierarchies
- Hierarchy Filter
- Holiday Calendar
- Interest Rate Curve

PFT

- Allocation Model
- Allocation Specification
- Static table Driver

FTP

- Add-on Rate Rule
- Rate lock Volatility curve

> **Note:**
>
> This will be migrated along with the interest rate curves.

- Standard Process

> **Note:**
>
> Prepayment Rule and Alternate Rule must be migrated manually.

- Transfer Pricing Rule

> **Note:**
>
> Replicating Portfolio must be migrated manually.

5.2 Metadata Migration

Introduction about Metadata Migration

Metadata migration utility helps to migrate business configurations, rules and assumptions from an on-premise OFSAA environment to SaaS environment. This helps to reduce the migration time and also complete the migration efficiently.

5.2.1 On-Premise Tasks

On-Premise to SaaS Migration involves configuring Map Dimensions and Map tables, and creating and exporting metadata and data objects in the Source/On-Premise setup.

Complete the following tasks in the sequential order, in the On-Premise/Source setup:

1. Prerequisites
2. SaaS Migration Planner Configuration Tasks
3. SaaS Migration Planner Export Tasks

5.2.1.1 Prerequisites

Prerequisites for On-Premise environment

User Groups

Ensure that the users are assigned to the following appropriate user groups:

- **Object Export Administrator**-View, edit and delete Map Dimensions, Map Tables and Object definitions.
- **Object Export Analyst**-View the details of Map Dimensions, Map tables and Object definitions.

On-Premise Environment Specific Prerequisites

- The source/On-Premise environment hosting the licensed and supported OFSAA Applications, must be on v8.0.7.8.0 or later.
- Optional (Recommended). If the Licensed Applications are installed on different OFSAA Instances, merge all the instances existing in the same information domain into a single OFSAA Instance. This will ensure that there are no duplicate Object IDs across various source instances, during migration. For assistance, contact Oracle Support.
- Apply the patch **36768686**.

5.2.1.2 Accessing Map Dimensions and Map Tables

Use the Configuration window to define and manage the Map Dimensions and Map tables.

To access the **Configuration window**:

1. Login to the On-Premise setup with valid credentials. Ensure that you have the User Groups assigned to perform On-Premise to SaaS Migration.
2. In the LHS Navigation list, click **Common Object Maintainance** > **Object Administration** > **SaaS Migration Planner** > **Configuration**.

   The list of pre-existing (seeded and manually created) Dimension Mappings and Instrument Mappings, are displayed. Access the following tabs to create and manage Dimension Mappings and Instrument Mappings.

   - Map Dimensions Tab
   - Map tables Tab

5.2.1.2.1 Map Dimensions

Map Dimensions tab includes the list of existing Dimension Mappings.

Ensure that you have the User Groups assigned to perform On-Premise to SaaS Migration.

To access the Map Dimensions tab from the Configuration window :

1. Click **Map Dimensions**.

   All the Dimension Mappings created in the specific environment are displayed with the following details:

   - **Source Dimension**-The dimension present in the Source/On-Premise setup.
   - **Target Dimension**-The Target dimension mapped to a specific Source dimension.
   - **Key Dimensions**-Indicates if the selected Target Dimension is a key dimension.
   - **Export Dimension**-Indicates the Export Status of the specific Dimension.
   - **Mapping Type**-Indicates if the selected Dimension Mapping is a SystemDimension Mapping or a Custom Dimension Mapping.
     - **System** - Pre-seeded Dimension Mappings.
     - **Custom**-Created by the user. For more information, refer to Adding a new Dimension Mapping.
   - **Action**
     - **View**-View the details of a specific Dimension Mapping.

  - **Edit**-Modify the Source and Target Dimension and also the Export Dimension status. For a system Dimension Mapping, you can only change the Export Dimension status. The Source and the Target dimensions are non-editable.
  - **Delete**-Delete the selected Dimension Mapping. You cannot delete a System Dimension Mapping.

2. To search for a specific entry, enter a keyword in the **Search box**.

   Click **Search Settings**, to filter the search columns. The specified search criteria are displayed in the Search box, based on the set filter.

5.2.1.2.1.1 Adding a New Dimension Mapping

Create a Dimension mapping to link a source dimension present in the On-Premise setup, to a target dimension in the SaaS setup.

Ensure that you have the User Groups assigned to perform On-Premise to SaaS Migration.

To add a new Dimension mapping:

1. Click **Add**, in the Configuration window.
2. Select the following Details, in the **Add Dimension Mapping** pop-up window:
   - **Source Dimension**-Select the Source Dimension in the On-Premise environment.
   - **Target Dimension**-Select the Target Dimension in the SaaS environment.
   - **Export Flag**-Select **Yes** to export the Mapped Dimension.

   > **Note:**
   >
   > For a complete list of exportable Pre-seeded Dimensions, refer Pre-mapped Dimensions for Migration.

3. Click **Save**.

   The new mapping is added to the Dimension Mappings Summary.

5.2.1.2.2 Map Tables

Map tables tab includes the list of existing Instrument Mappings.

Ensure that you have the User Groups assigned to perform On-Premise to SaaS Migration.

To access the Map tables tab from the Configuration window:

1. Click **Map tables**.

   All the Instrument Mappings created in that environment are displayed with the following details:
   - **Table Type**-The table type.
   - **Source Table**-The table present in the Source/On-Premise setup.
   - **Target Table**-The Target table mapped to a specific Source Dimension.
   - **Mapping Type**-Indicates if the selected table is a System or a Custom table.
     - **System**-Pre-seeded table.
     - **Custom**-Created by the user. For more information, refer to Adding new Instrument Mapping .

- **Mapped Columns Count**-The number of columns mapped in the selected table and the total number of columns.
- **Action**
  - **View**-View the details of a specific Instrument Mapping.
  - **Edit**-Modify the Source and Target table. For a System Instrument Mapping, the Source and the Target tables are non-editable.
  - **Delete**-Delete the selected Instrument Mapping. You cannot delete a Pre-seeded Instrument Mapping

2. To search for a specific entry, enter a keyword in the **Search box**.

   Click **Search Settings**, to filter the search columns. The specified search criteria are displayed in the Search box, based on the set filter.

5.2.1.2.2.1 Adding a New Instrument Mapping

To migrate the tables from On-Premise to SaaS environment, map the source's table and columns to the respective table and columns of the destination.

Ensure that you have the User Groups assigned to perform On-Premise to SaaS Migration.

To add a new Instrument mapping,

1. Click **Add**.
2. Select the following details, in the **Table Mapping** pane.
   - **Table Type** - Table classification.
   - **Source Table** - Instrument and ledger tables in the On-Premise setup.
   - **Target Table** - Instrument and ledger tables in the SaaS setup.

   > **Note:**
   >
   > The seeded tables are already mapped and can't be changed.

3. Select the Source and Target columns, in the **Column Mapping** pane.

   > **Note:**
   >
   > You can modify the source and column mapping only for custom table mappings.

   Click **Search Settings**, to filter the search columns. The specified search criteria are displayed in the Search box, based on the set filter.

   Click **Show Unmapped Rows**, to view the rows that require mapping.

4. Click **Save** to create a new Instrument Mapping.

   The new mapping is added to the Instrument Mappings Summary.

5.2.1.3 Export Definitions

Create and configure Export Definitions from Export screen.

To access the Export Definition Summary:

1. Log in to the On-Premise setup with valid credentials. Ensure that you have the User Groups assigned to perform On-Premise to SaaS Migration.
2. In the LHS Navigation list, click **Common Object Maintenance** > **Object Administration** > **SaaS Migration Planner** > **Export**, to access the **SaaS Migration Planner-Export** window.

   The **Export Object Summary** screen includes the export object definitions, with the following details:

   - **Name**-The Export Definition name.
   - **Application**-The application associated with the Export Definition.
   - **Export Status**-The migration status of the Export Definition.
     - **Export Completed**
     - **Archive to be refreshed**
     - **Export has not started**
   - **Created By**-The login name of the user who created this object migration.
   - **Creation Date**-Export Definition creation date.
   - **Last Exported On**-The Last Exported Date.
   - **Action**
     - **View**-View the details of a specific Export Definition.
     - **Edit**-Modify the Name and the Object types.
     - **Create/Refresh Archive**-Refresh the archived file for a Exported Object.
     - **Download Archive**-Download the archive file for an ExportedDefinition to a Local Directory. Import this archive file to your SaaS environment, for importing the Metadata objects.
     - **View Log**-View the Export log details.
     - **Delete** - Delete the selected Export Definition.

5.2.1.3.1 Creating a New Export Definition

An Export definition includes multiple objects of different object types that you can migrate from the On-Premise to SaaS environment.

Ensure that you have the User Groups assigned to perform On-Premise to SaaS Migration.

To create a new export definition:

1. Click **Add**.
2. Select/enter the following **Export Definition** details.
   - **Name** - The unique identifier for the Export definition.

     > **Note:**
     >
     > The special characters - **~`!@#%^*()+=|:;\"<>'?/** are not allowed.

   - **Application** - The application for adding the object types to the definition.
     The object types included in the application are listed in the **Object Types** pane.
   - **Description** - The detailed description of the export definition.

3. Include the required Object Types to the export definition.

   When you add an object type, all the dependent objects in the hierarchy are also included. But, when you remove an object type, you must remove the dependent objects manually.

   You can add/remove all the objects associated with the listed object types.
   To add/remove objects for a specific object type, click **Action** and select the required option.

   - **Add all Objects**
   - **View and Select Objects**
   - **Remove all Objects**

4. Click **Save** to create a new Export definition.

   The new definition is added to the Export definition Summary.

5.2.2 SaaS Tasks

Add the archived file from the Local Directory and import the metadata objects to the SaaS environment.

To download the Archive Files to Target (SaaS) environment:

1. Prerequisites
2. Accessing Import Summary page
3. Import Archive file
4. Import Meta data Objects
5. Verify import status

5.2.2.1 Prerequisites

Prerequisites for Target (SaaS) environment

User Groups

Ensure that the users are assigned to **Onprem Migration Admin** Group.

5.2.2.2 Accessing Import Summary

All the archive files added to the SaaS environment are displayed.

To access the Import Summary:

1. Login to the SaaS environment with valid credentials. Ensure that you are assigned to **Onprem Migration Admin** group, to trigger the On-Premise to SaaS Migration.
2. In the LHS Navigation list, click **Operation and Processes** > **Object Administration** > **Import Legacy Object**.

   All the archives created in the specific environment are displayed with the following details:

   - **Name**-The Export Definition Name.
   - **Version**-The version of a specific export definition. When the same archive file is downloaded more than once a new version is created and added to the Import Summary page.
   - **Status**-The import status of a export definition.

  - **Ready to Import**
  - **Ongoing**
  - **Completed**
  - **Cancelled**
- **Import Initiated On**-The date and time at which the import began.
- **Import Completed On**-The date and time at which the import was completed.
- **Action**
  - **Details**-View the details of a specific Export Definition archive.

3. To search for a specific entry, enter a keyword in the **Search box**.

   Click **Search Settings**, to filter the search columns. The specified search criteria are displayed in the Search box, based on the set filter.

5.2.2.3 Importing Archive File

Import the archive file from the Local Directory, to import the Metadata objects to the SaaS environment.

Ensure that you are assigned to **Onprem Migration Admin** group, to trigger the On-Premise to SaaS Migration..

To download archive file, from the Import Summary page:

1. Click **Import New Archive**, to access the **Import New** pane.
2. Click **Browse** and select the archive file required for Metadata Import, from theLocal Directory.
3. Click **Upload**.

   The archive file is included to the list of archives, in the Import Summary page.

5.2.2.4 Importing Metadata Objects

Import Metadata Objects, using the archive files added to the SaaS environment.

To import the Metadata Objects, from the **Import Summary**.

1. Click **Action** and **Details**, adjacent to the archive, to access the **Object Details**.

   The list of Object Types included are listed with the following information:

   - **Object Type**
   - **# of Objects**
   - **# of Imported**
   - **# of Failed**
   - **# of Skipped**
   - **Status**
   - **Details**
2. You can perform the following tasks in the Object Details pane:
   - Click **Details**, to view the Import Status of a specific Object Type.
   - Click **Cancel All** in the **Object Details** pane, to abort the import of all the objects.

3. After importing all the objects, click **Complete**, to update the status of the specific Object Type in the Import Summary.

5.2.2.5 Import Status

All the Metadata Objects included in archive, under a specific object type are displayed.

To view the import status of the Metadata Objects:

1. In the Object Details pane, click **Details**, to view the Import Status of a specific Object Type.

   All the objects included in the archive, under a specific object type are listed.

   - Source Definition Code
   - Source Definition Name
   - Import Status
   - Destination Definition Code
   - Retry
   - Skip
2. To filter and view the objects based on the Import status, select one of the following **Filter** options:
   - Not Started
   - Ongoing
   - Completed
   - Failed
   - Skipped
3. Enable **Overwrite object if already Exist**, to replace an object with the same Source Definition Name.
4. You can perform the following tasks:
   - To import all the objects, click **Start Import**.
   - To restart the import of an object with **Failed**status, click **Retry** adjacent to that object.
   - To retry the import of all the objects, click **Restart all Import**.
   - To skip the import of an object with **Failed**status, click **Skip** adjacent to that object.
   - To skip the import of all the objects, click **Skip all Import**.

5.3 Data Migration

Data Object Migration involves moving all the user details, seeded and custom tables, from On-premise to SaaS environment.

Complete the following tasks sequentially, for a successful Data Migration:

1. Complete the Prerequisites
2. Update the Properties file with the required user, table and column details, and filter conditions.
3. Export/re-export the data from On-premise environment.

4. Import the data to SaaS environment.

5.3.1 Prerequisites

Prerequisites for exporting and importing Data Objects.

Prerequisites for Export

Complete the following tasks before exporting the Data Objects from the On-Premise environment:

- Create a Physical Directory in the Database Server with sufficiently large disk space to hold the exported data files (.CSV files), in the UNIX environment.
  Example: `mkdir '/home/ofsa_export_dir'`

  > **Note:**
  >
  > Using `CHMOD` command, give Write permission to Oracle Processes , for the new physical directory.
  > Example : `chmod -R 777 /home/ofsa_export_dir`

- Log in to the Database with SYS Privileges and execute the following tasks in SQLPLUS command.
  - Create a Database Directory pointing to the Physical Directory.
    Example: `create or replace directory OFSA_EXPORT_DIR as '/home/ofsa_export_dir'.`
  - Grant the `INFODOM-SCHEMA-USER` write permissions to `OFSA_EXPORT_DIR`.
    Example `GRANT READ, WRITE ON DIRECTORY OFSA_EXPORT_DIR TO <INFODOM-SCHEMA-USER>;`

Prerequisites for Import

After exporting the data from the On-Premise environment, complete the following tasks:

> **Note:**
>
> The following steps are required only if the physical directory is not a shared mount.

- Archive all the generated `CTL` and `CSV` files and the archive file name should be **`ofsa_export_dir.zip`**.
  Example - `zip -r ofsa_export_dir.zip ofsa_export_dir`
- Move generated `ofsa_export_dir.zip` from Database Server to `$FIC_HOME/utility/Data_Export_to_SaaS/data_dumps` directory in the On-Premise environment.

5.3.2 Properties Files

Properties file used in the On-Premise to SaaS migration contain the user input details. You can also configure the tables to be exported.

The OFSAA Administrator must update all the required details in the following properties file, before initiating the migration.

1. user-input.properties
2. pbsm_export_table.properties
3. pbsm_export_table_filter.properties

5.3.2.1 User-input.properties

The User-input.properties file is located in `<$FIC_HOME>/utility/Data_Export_to_SaaS/conf` directory. The properties details are:

Table 5-2 Properties File Details

Field Name	Details
INFODOM	Information domain name of the On-premise environment.
DB_SERVER_DIRECTORY_NAME	Database server directory created using the SQLPLUS command. For more information refer to , Prerequisites.
IDCS_URL	Identity Cloud Service URL. Contact your IDCS administrator for details.
SAAS_USERNAME	SaaS UI Login user name
SAAS_ENCODED_PASSWORD	SaaS UI login user password encoded in base-64.
ENCODED_CLIENT_ID_AND_SECRET	Client ID:Client Secret encoded in base-64. Contact your IDCS administrator for details.
SAAS_APPLICATION_HOST_URL	URL to access SaaS UI
TENANT_ID	SaaS tenant ID. Contact your IDCS administrator for details.
SERVICE_ID	One of the following SaaS Service IDs: • OFS_PFT - Profitability Management Cloud Service • OFS_FTP - Fund Transfer Price Cloud Service
EXPORT_DIRECTORY_PATH	(Optional). The mount point location detail available in APP server. If EXPORT_DIRECTORY_PATH is not used, comment the option.
ENABLE_CONCURRENCY	Export and import multiple tables, simultaneously.

Note:

Ensure that the export and import are not performed, simultaneously.

5.3.2.2 pbsm_export_table.properties

The `pbsm_export_table.properties` includes all the Seeded tables to be exported. You can add the Custom table to be exported to the SaaS environment.

The `pbsm_export_table.properties` file is located in `<$FIC_HOME>//utility/Data_Export_to_SaaS/conf` directory.

Modify the following details:

- **Custom tables**-Add the custom tables to be exported.
- **Export Flag**-Set to **Y**, to export the table. The Export Flag for all the Seeded tables are set to **Y**, by default.
  Example
  - `FSI_D_BORROWINGS = Y`
  - `FSI_D_ANNUITY_CONTRACTS = Y`
  - `FSI_D_CASA = N`

5.3.2.3 pbsm_export_table_filter.properties

The pbsm_export_table_filter.properties enables to configure the Filter Criteria required for data export.

Using the Properties file, you can configure the Filter Criteria for both Seeded and Custom tables.

This file is located in `<$FIC_HOME>//utility/Data_Export_to_SaaS/conf` directory.

Modify the required filter criteria, before exporting the data.

Example

- `FSI_D_BORROWINGS = AS_OF_DATE = TO_DATE('21-Jun-2022','DD-MON-YYYY')`
- `FSI_D_ANNUITY_CONTRACTS = AS_OF_DATE = TO_DATE('21-Jun-2022','DD-MON-YYYY') AND LEGAL_ENTITY_ID = 1`

5.3.3 Migration Execution Scripts

Execute the specific Shell Scripts, to migrate the data objects from On-Premise to SaaS environment.

Execute the following scripts, for Data Migration:

1. Export-data.sh
2. Re-export-data.sh
3. Import-data.sh
4. finalize.sh
5. generate-report.sh

5.3.3.1 Export-data.sh

Execute `export-data.sh` script, to validate and generate the data export `.csv` and `.ctl` files.

`export-data.sh` is located in `<$FIC_HOME>/utility/Data_Export_to_SaaS/bin` directory. Using export-data.sh script, you can migrate the data only once. To export a particular combination multiple times, execute re-export-data.sh.

Example : `./export-data.sh`

5.3.3.2 Re-export-data.sh

Execute `re-export-data.sh` script, to validate and regenerate the data export `.csv` and `.ctl` files.

`re-export-data.sh` is located in `<$FIC_HOME>/utility/Data_Export_to_SaaS/bin` directory. Using re-export-data.sh script, you can migrate the data, multiple times.

Example : `./re-export-data.sh`

5.3.3.3 Import-data.sh

Execute `import-data.sh` script, to move data into the Target SaaS environment.

`import-data.sh` is located in `<$FIC_HOME>/utility/Data_Export_to_SaaS/bin` directory.

Example : `./import-data.sh`

5.3.3.4 finalize.sh

Execute `finalize.sh` script, to apply the transformations to the data loaded into the Target SaaS environment.

`finalize.sh` is located in `<$FIC_HOME>/utility/Data_Export_to_SaaS/bin` directory.

Syntax: `./finalize.sh <Start_Date DDMMYYYY> <End_Date DDMMYYYY>`

> **Note:**
>
> - The start date and end date are optional parameters.
> - To transform the data for a specific time period, ensure to enter both the start and end date.
> - If you provide only one date, it is considered as the start date.
> - The `finalize.sh` script can be executed any number of times, but it is recommended to execute after all the data migration is complete.

Example: `./finalize.sh 01122023 31122023`

Transformations Post Data Migration

Executing `finalize.sh` triggers the following data transformations.

Table 5-3 Transformations post data migration

SaaS/Target Table	SaaS-Column	Transformations Post Data Migration
FSI_D_ASSET, FSI_D_LIABILITY, FSI_D_FEE_BASED_SERVICE, FSI_D_DERIVATIVE, FSI_D_LEDGER_INSTRUMENT, FSI_D_LOAN_COMMITMENTS, FSI_D_OFF_BALANCE_SHEET, FSI_D_ACCOUNT_RATE_TIERS, FSI_D_BREAK_FUNDING_CHARGES, FSI_D_PM_GENERATED_INSTRMTS	**AMRT_TYPE_CD**	• If **AMRT_TYPE_CD** is between 1000 and 69999, the corresponding value is set to 20 • If **AMRT_TYPE_CD** is between 70000 and 99999, the corresponding value is set to 10 • If **AMRT_TYPE_CD** is either 400 or 500, the corresponding value is set to 100 • In all other scenarios, the **AMRT_TYPE_CD** value is retained
FSI_D_ASSET, FSI_D_LIABILITY, FSI_D_FEE_BASED_SERVICE, FSI_D_DERIVATIVE, FSI_D_LEDGER_INSTRUMENT, FSI_D_LOAN_COMMITMENTS, FSI_D_OFF_BALANCE_SHEET, FSI_D_ACCOUNT_RATE_TIERS, FSI_D_BREAK_FUNDING_CHARGES, FSI_D_PM_GENERATED_INSTRMTS	**PMT_PATTERN_CD**	If **AMRT_TYPE_CD** is between 1000 and 69999, the **PMT_PATTERN_CD** value is set to the **AMRT_TYPE_CD** value. In all other scenarios, it is set to NULL.
FSI_D_ASSET, FSI_D_LIABILITY, FSI_D_FEE_BASED_SERVICE, FSI_D_DERIVATIVE, FSI_D_LEDGER_INSTRUMENT, FSI_D_LOAN_COMMITMENTS, FSI_D_OFF_BALANCE_SHEET, FSI_D_ACCOUNT_RATE_TIERS, FSI_D_BREAK_FUNDING_CHARGES, FSI_D_PM_GENERATED_INSTRMTS	**BEHAVIOUR_PATTERN_CD**	If **AMRT_TYPE_CD** is between 70000 and 99999, the **BEHAVIOUR_PATTERN_CD** is set to the **AMRT_TYPE_CD** value. Otherwise, it is set to NULL.

Table 5-3 (Cont.) Transformations post data migration

SaaS/Target Table	SaaS-Column	Transformations Post Data Migration
FSI_D_ASSET, FSI_D_LIABILITY, FSI_D_FEE_BASED_SERVICE, FSI_D_DERIVATIVE, FSI_D_LEDGER_INSTRUMENT, FSI_D_LOAN_COMMITMENTS, FSI_D_OFF_BALANCE_SHEET, FSI_D_ACCOUNT_RATE_TIERS, FSI_D_BREAK_FUNDING_CHARGES, FSI_D_PM_GENERATED_INSTRMTS	**ADJUSTABLE_TYPE_CD**	• If **ADJUSTABLE_TYPE_CD** is 30, the corresponding value is set to 50 • If **ADJUSTABLE_TYPE_CD** >= 500, the corresponding value is set to 10 • In all other cases, the value of **ADJUSTABLE_TYPE_CD** is retained
FSI_D_ASSET, FSI_D_LIABILITY, FSI_D_FEE_BASED_SERVICE, FSI_D_DERIVATIVE, FSI_D_LEDGER_INSTRUMENT, FSI_D_LOAN_COMMITMENTS, FSI_D_OFF_BALANCE_SHEET, FSI_D_ACCOUNT_RATE_TIERS, FSI_D_BREAK_FUNDING_CHARGES, FSI_D_PM_GENERATED_INSTRMTS	**REPRICE_PATTERN_CD**	If **ADJUSTABLE_TYPE_CD** is >= 500, then the **REPRICE_PATTERN_CD** is set to the **ADJUSTABLE_TYPE_CD** value. In all other cases, it is set to NULL.
FSI_D_ASSET, FSI_D_LIABILITY, FSI_D_FEE_BASED_SERVICE, FSI_D_DERIVATIVE, FSI_D_LEDGER_INSTRUMENT, FSI_D_LOAN_COMMITMENTS, FSI_D_OFF_BALANCE_SHEET, FSI_D_ACCOUNT_RATE_TIERS, FSI_D_BREAK_FUNDING_CHARGES, FSI_D_PM_GENERATED_INSTRMTS	**COMPOUNDING_BASIS_CD**	If **COMPOUNDING_BASIS_CD** is either 200 or 999, the corresponding value is set to 160. Otherwise, the value of **COMPOUNDING_BASIS_CD** is retained.
FSI_D_ASSET, FSI_D_LIABILITY	**OPTION_EXPIRY_DATE**	The **OPTION_EXPIRY_DATE** column in the target table is updated with the values from the **OPTION_EXPIRY_DATE** column in the FSI_D_EMBEDDED_OPTIONS_SCH table.

Table 5-3 (Cont.) Transformations post data migration

SaaS/Target Table	SaaS-Column	Transformations Post Data Migration
FSI_D_ASSET, FSI_D_LIABILITY	**STRIKE_VALUE**	The **STRIKE_VALUE** column in the target table is updated with the values from the **STRIKE_VALUE** column in the FSI_D_EMBEDDED_OPTIONS_SCH table.
FSI_D_ASSET, FSI_D_LIABILITY	**STRIKE_IRC_CD**	The **STRIKE_IRC_CD** column in the target table is updated with the values from the **STRIKE_IRC_CD** column in the FSI_D_EMBEDDED_OPTIONS table.
FSI_D_ASSET, FSI_D_LIABILITY	**EXERCISE_TYPE_CD**	The **EXERCISE_TYPE_CD** column in the target table is updated with the values from the **EXERCISE_TYPE_CD** column in the FSI_D_EMBEDDED_OPTIONS table.
FSI_D_ASSET, FSI_D_LIABILITY	**RATE_LOOKUP_CD**	The **RATE_LOOKUP_CD** column in the target table is updated with the values from the **RATE_LOOKUP_CD** column in the FSI_D_EMBEDDED_OPTIONS table.
FSI_D_ASSET, FSI_D_LIABILITY	**STRIKE_TYPE_CD**	The **STRIKE_TYPE_CD** column in the target table is updated with the values from the **STRIKE_TYPE_CD** column in the FSI_D_EMBEDDED_OPTIONS table.
FSI_D_ASSET, FSI_D_LIABILITY	**OPTION_TYPE_CD**	The **OPTION_TYPE_CD** column in the target table is updated with the values from the **OPTION_TYPE_CD** column in the FSI_D_EMBEDDED_OPTIONS table.
FSI_D_ASSET, FSI_D_LIABILITY	**OPTION_START_DATE**	The **OPTION_START_DATE** column in the target table is updated with the values from the **OPTION_START_DATE** column in the FSI_D_EMBEDDED_OPTIONS table.
FSI_D_ASSET, FSI_D_FEE_BASED_SERVICE, FSI_D_LEDGER_INSTRUMENT, FSI_D_LOAN_COMMITMENTS, FSI_D_OFF_BALANCE_SHEET	**ACCOUNT_TYPE**	**ACCOUNT_TYPE** is searched sequentially in the following tables and the value is updated. 1. Product 2. Common COA 3. General Ledger If **ACCOUNT_TYPE** is not present in any of the above mentioned tables, it is set to 100.
FSI_D_LIABILITY	**ACCOUNT_TYPE**	**ACCOUNT_TYPE** is searched sequentially in the following tables and the value is updated. 1. Product 2. Common COA 3. General Ledger If **ACCOUNT_TYPE** is not present in any of the above mentioned tables, it is set to 300.

Table 5-3 (Cont.) Transformations post data migration

SaaS/Target Table	SaaS-Column	Transformations Post Data Migration
FSI_D_DERIVATIVE	**ACCOUNT_TYPE**	For the given **LEG_TYPE** values, the following **ACCOUNT_TYPE** values are configured. • If **LEG_TYPE** is 1, set **ACCOUNT_TYPE** as 310 • If **LEG_TYPE** is 2, set **ACCOUNT_TYPE** as 110 • In all other cases, set **ACCOUNT_TYPE** as 800

5.3.3.5 generate-report.sh

Execute `generate-report.sh` script, to to generate a HTML report containing list of all the exported and imported table details.

`generate-report.sh` is located in `<$FIC_HOME>/utility/Data_Export_to_SaaS/bin` directory.

The final HTML reports are saved to `<FIC_HOME>/utility/Data_Export_to_SaaS/report` directory.

Example : `./generate-report.sh`

5.4 Pre-Mapped Dimensions for Migration

Pre-mapped dimensions with associated On-Premise and SaaS Dimension tables.

Table 5-4 Migratable Pre-Seeded Dimensions

Dimension	On-Premise Dimension Table	SaaS Dimension Table
Accidental Health Insurance Company	FSI_ACCID_HEALTH_INS_CO_CD	FSI_ACCID_HEALTH_INS_CO_CD
Account Group	FSI_ACCOUNT_GROUP_CD	FSI_ACCOUNT_GROUP_CD
Account Officer	FSI_ACCOUNT_OFFICER_CD	FSI_ACCOUNT_OFFICER_CD
Account Type	FSI_ACCOUNT_TYPE_CD	FSI_ACCOUNT_TYPE_CD
Accrual Basis	FSI_ACCRUAL_BASIS_CD	FSI_ACCRUAL_BASIS_CD
Adjustable Type	FSI_ADJUSTABLE_TYPE_CD_V	FSI_ADJUSTABLE_TYPE_CD_V
Adjustment Type Code	FSI_ADJUSTMENT_TYPE_CD	FSI_ADJUSTMENT_TYPE_CD
Advice Type	FSI_ADVICE_TYPE_CD	FSI_ADVICE_TYPE_CD
Agent Bank	FSI_AGENT_BANK_CD	FSI_AGENT_BANK_CD
Aggregate Method	FSI_AGGREGATE_METHOD_CD	FSI_AGGREGATE_METHOD_CD
Amortization Method	FSI_AMORT_METHOD_CD	FSI_AMORT_METHOD_CD
Amortization Type	FSI_AMORTIZATION_TYPE_CD_V	FSI_AMORTIZATION_TYPE_CD_V
Annual Fee	FSI_ANNUAL_FEE_CD	FSI_ANNUAL_FEE_CD
Application Analyst	FSI_APPLICATION_ANALYST_CD	FSI_APPLICATION_ANALYST_CD
Authorization Device Type	FSI_AUTH_DEVICE_TYPE_CD	FSI_AUTH_DEVICE_TYPE_CD
Autopay Instruction Type	FSI_AUTOPAY_INSTR_TYPE_CD	FSI_AUTOPAY_INSTR_TYPE_CD
Balance Type	FSI_BALANCE_TYPE_CD	FSI_BALANCE_TYPE_CD
Bank	FSI_BANK_CD	FSI_BANK_CD

Table 5-4 (Cont.) Migratable Pre-Seeded Dimensions

Dimension	On-Premise Dimension Table	SaaS Dimension Table
Branch	FSI_BRANCH_CD	DIM_BRANCH_B
Behavior Subtype Code	FSI_BEHAVIOUR_SUB_TYPE_CD	FSI_BEHAVIOUR_SUB_TYPE_CD
Behavior Type Code	FSI_BEHAVIOUR_TYPE_CD	FSI_BEHAVIOUR_TYPE_CD
Billing Method	FSI_BILLING_METHOD_CD	FSI_BILLING_METHOD_CD
Break Identification Code	FSI_BREAKAGE_TYPE_CD	FSI_BREAKAGE_TYPE_CD
Calendar Rolling Convention Code	FSI_CAL_ROLLING_CONVENTION_CD	FSI_CAL_ROLLING_CONVENTION_CD
Cash Flow Code	FSI_CASH_FLOW_TYPE_CD	FSI_CASH_FLOW_TYPE_CD
Channel	FSI_DISTRIBUTION_CHANNEL_CD	FSI_CHANNEL_CD
Chargeoff Reason	FSI_CHARGE_OFF_REASON_CD	FSI_CHARGE_OFF_REASON_CD
Collateral	FSI_COLLATERAL_CD	FSI_COLLATERAL_CD
Commit Option Type	FSI_COMMIT_OPTION_TYPE_CD	FSI_COMMIT_OPTION_TYPE_CD
Commitment Type	FSI_COMMITMENT_TYPE_CD	FSI_COMMITMENT_TYPE_CD
Common Chart of Accounts	DIM_COMMON_COA_B	DIM_COMMON_COA_B
Compounding Basis Code	FSI_COMPOUND_BASIS_CD	FSI_COMPOUND_BASIS_CD
Consolidation Code	FSI_CONSOLIDATION_CD	FSI_CONSOLIDATION_CD
Corporate Agreement	FSI_CORPORATE_AGREEMENT_CD	FSI_CORPORATE_AGREEMENT_CD
Country	DIM_COUNTRY_B	FSI_COUNTRY_CD
Credit Life Insurance Company	FSI_CREDIT_LIFE_INS_CO_CD	FSI_CREDIT_LIFE_INS_CO_CD
Credit Rating	FSI_CREDIT_RATING_CD	FSI_CREDIT_RATING_CD
Credit Status	FSI_CREDIT_STATUS_CD	FSI_CREDIT_STATUS_CD
CWB Status	FSI_CWB_STATUS_CD	FSI_CWB_STATUS_CD
Data Source	FSI_INSTRUMENT_DATA_SOURCE_CD	FSI_INSTRUMENT_DATA_SOURCE_CD
Data Source Code	FSI_DATA_SOURCE_CD	FSI_DATA_SOURCE_CD
Direct Deposit Account Type	FSI_DIR_DEPOS_ACCT_TYPE_CD	FSI_DIR_DEPOS_ACCT_TYPE_CD
Direct Indicator Code	FSI_DIRECT_IND_CD	FSI_DIRECT_IND_CD
Disbursement Method	FSI_DISBURS_METHOD_CD	FSI_DISBURS_METHOD_CD
Delinquency Status	FSI_DELINQUENCY_STATUS_CD	FSI_DELINQUENCY_STATUS_CD
Deposit Type	FSI_DEPOSIT_TYPE_CD	FSI_DEPOSIT_TYPE_CD
Documentation	FSI_DOCUMENTATION_CD	FSI_DOCUMENTATION_CD
Exception	FSI_EXCEPTION_CD	FSI_EXCEPTION_CD
Existing Borrower Code Dimension	FSI_EXIST_BORROWER_CD	FSI_EXIST_BORROWER_CD
Fiduciary Agreement	FSI_FIDUCIARY_AGREEMENT_CD	FSI_FIDUCIARY_AGREEMENT_CD
Financial Element	DIM_FINANCIAL_ELEMENTS_B	DIM_FINANCIAL_ELEMENTS_B
Funding Status	FSI_FUNDING_STATUS_CD	FSI_FUNDING_STATUS_CD
Funding Type	FSI_FUNDING_TYPE_CD	FSI_FUNDING_TYPE_CD
Futures Subtype Code	FSI_FUTURES_SUBTYPE_CD	FSI_FUTURES_SUBTYPE_CD
Futures Type Code	FSI_FUTURES_TYPE_CD	FSI_FUTURES_TYPE_CD

Table 5-4 (Cont.) Migratable Pre-Seeded Dimensions

Dimension	On-Premise Dimension Table	SaaS Dimension Table
General Ledger Account	DIM_GENERAL_LEDGER_B	DIM_GENERAL_LEDGER_B
Geographic Location	FSI_GEOGRAPHIC_LOC_CD	DIM_GEOGRAPHIC_LOC_B
Geographic State	FSI_GEOGRAPHIC_LOC_STATE_CD	FSI_GEOGRAPHIC_LOC_STATE_CD
Holiday Calc	FSI_HOLIDAY_CALC_OPTION_CD	FSI_HOLIDAY_CALC_OPTION_CD
Instrument Type	FSI_INSTRUMENT_TYPE_CD	FSI_INSTRUMENT_TYPE_CD
Interest Dividends Option	FSI_INT_DIVIDENDS_OPTION_CD	FSI_INT_DIVIDENDS_OPTION_CD
Interest Payment Method	FSI_INT_PAYMENT_METHOD_CD	FSI_INT_PAYMENT_METHOD_CD
Interest Timing Type Code	FSI_INTEREST_TIMING_TYPE_CD	FSI_INTEREST_TIMING_TYPE_CD
Investor Type	FSI_INVESTOR_TYPE_CD	FSI_INVESTOR_TYPE_CD
IR Option Type	FSI_IR_OPTION_TYPE_CD	FSI_IR_OPTION_TYPE_CD
IRA Funding Status Code Dimension	FSI_IRA_FUNDING_STATUS_CD	FSI_IRA_FUNDING_STATUS_CD
Issuer	FSI_ISSUER_CD	FSI_ISSUER_CD
Joint Agreement	FSI_JOINT_AGREEMENT_CD	FSI_JOINT_AGREEMENT_CD
Lien Position	FSI_LIEN_POSITION_CD	FSI_LIEN_POSITION_CD
Liquidity Class	FSI_LIQUIDITY_CLASS_CD	FSI_LIQUIDITY_CLASS_CD
Leg Type	FSI_LEG_TYPE_CD	FSI_LEG_TYPE_CD
Legal Entity	DIM_LEGAL_ENTITY_B	DIM_LEGAL_ENTITY_B
Loan Type	FSI_LOAN_TYPE_CD	FSI_LOAN_TYPE_CD
Margin Agreement	FSI_MARGIN_AGREEMENT_CD	FSI_MARGIN_AGREEMENT_CD
Market Segment Code	FSI_MARKET_SEGMENT_CD	FSI_MARKET_SEGMENT_CD
Merchant Class	FSI_MERCHANT_CLASS_CD	FSI_MERCHANT_CLASS_CD
Merchant Chain	FSI_MERCHANT_CHAIN_CD	FSI_MERCHANT_CHAIN_CD
Multiplier Code	FSI_MULTIPLIER_CD	FSI_MULTIPLIER_CD
Net Margin	FSI_NET_MARGIN_CD	FSI_NET_MARGIN_CD
Occupancy	FSI_OCCUPANCY_CD	FSI_OCCUPANCY_CD
Option Decision Type	FSI_OPTION_DECISION_TYPE_CD	FSI_OPTION_DECISION_TYPE_CD
Option Exercise Code	FSI_OPTION_EXERCISE_CD	FSI_OPTION_EXERCISE_CD
Option Strike Type	FSI_OPTION_STRIKE_TYPE_CD	FSI_OPTION_STRIKE_TYPE_CD
Option Rate Lookup Type	FSI_OPTION_RATE_LOOKUP_CD	FSI_OPTION_RATE_LOOKUP_CD
Option Type Code	FSI_OPTION_TYPE_CD	FSI_OPTION_TYPE_CD
Organizational Unit	DIM_ORG_UNIT_B	DIM_ORG_UNIT_B
Overdraft Protection	FSI_OVERDRAFT_PROTECTION_CD	FSI_OVERDRAFT_PROTECTION_CD
Outside Info Source	FSI_OUTSIDE_INFO_SOURCE_CD	FSI_OUTSIDE_INFO_SOURCE_CD
Ownership Type	FSI_OWNERSHIP_TYPE_CD	FSI_OWNERSHIP_TYPE_CD
Parent Service	FSI_PARENT_SERVICE_CD	FSI_PARENT_SERVICE_CD
Pay Ahead	FSI_PAY_AHEAD_CD	FSI_PAY_AHEAD_CD

Table 5-4 (Cont.) Migratable Pre-Seeded Dimensions

Dimension	On-Premise Dimension Table	SaaS Dimension Table
Pay Equivalent Compounding Convention Code	FSI_PAY_EQUI_COMPOUND_CONV_CD	FSI_PAY_EQUI_COMPOUND_CONV_CD
Payment Type	FSI_PAYMENT_TYPE_CD	FSI_PAYMENT_TYPE_CD
Plan	FSI_PLAN_CD	FSI_PLAN_CD
Pledged Status	FSI_PLEDGED_STATUS_CD	FSI_PLEDGED_STATUS_CD
Prev Delq Statu	FSI_PREV_DELQ_STATUS_CD	FSI_PREV_DELQ_STATUS_CD
Product	DIM_PRODUCTS_B	DIM_PRODUCTS_B
Product Type Code	FSI_PRODUCT_TYPE_CD	FSI_PRODUCT_TYPE_CD
Property Purpose	FSI_PROPERTY_PURPOSE_CD	FSI_PROPERTY_PURPOSE_CD
Property Sub Type	FSI_PROPERTY_SUB_TYPE_CD	FSI_PROPERTY_SUB_TYPE_CD
Purpose	FSI_PURPOSE_CD	FSI_PURPOSE_CD
Rate Change Rounding Code	FSI_RATE_CHG_ROUNDING_CD	FSI_RATE_CHG_ROUNDING_CD
Rate Data Source	FSI_RATE_DATA_SOURCE_CD	FSI_RATE_DATA_SOURCE_CD
Reason Closed	FSI_REASON_CLOSED_CD	FSI_REASON_CLOSED_CD
Relationship Type	FSI_RELATIONSHIP_TYPE_CD	FSI_RELATIONSHIP_TYPE_CD
Roll Facility	FSI_ROLL_FACILITY_CD	FSI_ROLL_FACILITY_CD
Rollup Signage	FSI_ROLLUP_SIGNAGE_CD	FSI_ROLLUP_SIGNAGE_CD
School Code	FSI_SCHOOL_ID_CD	FSI_SCHOOL_ID_CD
Service Option	FSI_SERVICE_OPTION_CD	FSI_SERVICE_OPTION_CD
Service Source	FSI_SERVICE_SOURCE_CD	FSI_SERVICE_SOURCE_CD
Servicing Agent	FSI_SERVICING_AGENT_CD	FSI_SERVICING_AGENT_CD
Settlement Account Service Code	FSI_SETTLEMENT_ACCT_SERV_CD	FSI_SETTLEMENT_ACCT_SERV_CD
Solicit Source	FSI_SOLICIT_SOURCE_CD	FSI_SOLICIT_SOURCE_CD
Standard Industrial Classification Code	FSI_SIC_CD	FSI_SIC_CD
Student Year in School	FSI_STUDENT_YR_IN_SCHOOL_CD	FSI_STUDENT_YR_IN_SCHOOL_CD
Swap Class	FSI_SWAP_CLASS_CD	FSI_SWAP_CLASS_CD

5.5 Deprecated Columns in Data Tables

List of deprecated columns in Data tables

1. FSI_D_ANNUITY_CONTRACTS
2. FSI_D_BORROWINGS
3. FSI_D_BREAK_FUNDING_CHARGES
4. FSI_D_CASA
5. FSI_D_CREDIT_CARDS
6. FSI_D_CREDIT_LINES
7. FSI_D_FUTURES
8. FSI_D_FX_CONTRACTS

9. FSI_D_GUARANTEES
10. FSI_D_INVESTMENTS
11. FSI_D_LEASES
12. FSI_D_LEDGER_STAT_INSTRUMENT
13. FSI_D_LOAN_COMMITMENTS
14. FSI_D_LOAN_CONTRACTS
15. FSI_D_MERCHANT_CARDS
16. FSI_D_MM_CONTRACTS
17. FSI_D_MORTGAGES
18. FSI_D_MUTUAL_FUNDS
19. FSI_D_OTHER_SERVICES
20. FSI_D_RETIREMENT_ACCOUNTS
21. FSI_D_SWAPS
22. FSI_D_TERM_DEPOSITS
23. FSI_D_TRUSTS

5.5.1 FSI_D_ANNUITY_CONTRACTS

List of deprecated Columns in FSI_D_ANNUITY_CONTRACTS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_NET_BOOK_BAL_C
10. COMMISSION_ON_COLLECTION
11. CONVEXITY_C
12. CUR_NET_BOOK_BAL_C
13. CUR_NET_PAR_BAL_C
14. CUR_YIELD DURATION_C
15. DV01_C
16. EBANKING_EXP
17. MARGIN_T_RATE
18. MARKET_VALUE_CLEAN_C
19. MODIFIED_DURATION_C

20. ORG_NET_BOOK_BAL_C
21. ORG_NET_PAR_BAL_C
22. RATE_DECR_YEAR
23. RATE_INCR_YEAR
24. TAX_EXEMPT_PCT

5.5.2 FSI_D_BORROWINGS

List of deprecated Columns in FSI_D_BORROWINGS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_NET_BOOK_BAL_C
10. BACKUP_LIQUID_COST
11. CALL_PRICE
12. COLLATERAL_MKT_VALUE
13. COLLATERAL_NOMINAL_VALUE
14. COMMISSION_ON_COLLECTION
15. CONTRIB_AFTER_CAPITAL_CHG
16. CONVEXITY_C
17. CUR_NET_BOOK_BAL_C
18. CUR_NET_PAR_BAL_C
19. CUR_YIELD
20. DEPOSIT_FLOAT
21. DIST_FR_LIFE_CAP_C
22. DRAWN_AMT
23. DURATION_C
24. DV01_C
25. EBANKING_EXP
26. GROSS_FEE_INCOME
27. MARGIN_T_RATE
28. MARKET_RISK_CAPITAL
29. MARKET_VALUE_CLEAN_C

30. MISC_ASSET_CHG
31. MISC_LIABILITY_CR
32. MODIFIED_DURATION_C
33. NET_FEE_INCOME
34. NET_INT_MARGIN
35. OP_RISK_CAPITALORG_NET_BOOK_BAL_C
36. ORG_NET_PAR_BAL_C
37. RATE_DECR_YEAR
38. RATE_INCR_YEAR
39. RETURN_ITEMS
40. RETURN_ON_EQUITY
41. RISK_ADJ_AVG_BAL
42. TAX_EXEMPT_PCT
43. TOTAL_FEES
44. TOTAL_TRANSACTIONS
45. UNDRAWN_AMT

5.5.3 FSI_D_BREAK_FUNDING_CHARGES

List of deprecated Columns in FSI_D_BREAK_FUNDING_CHARGES table.

1. ACTUAL_HOLDING_PERIOD
2. AGENCY_FEES
3. ALLOC_EQUITY
4. ALLOC_MISC_1
5. ALLOC_MISC_2
6. ALLOC_MISC_3
7. ALLOC_MISC_4
8. ALLOC_MISC_5
9. APPROVED_AMT
10. ARM_BASE_RATE
11. AVERAGE_LIFE_C
12. AVG_NET_BOOK_BAL_C
13. COMMISSION_ON_COLLECTION
14. CONTRACT_AMT
15. CONTRIB_AFTER_CAPITAL_CHG
16. CONVEXITY_C
17. CUR_NET_BOOK_BAL_C
18. CUR_NET_PAR_BAL_C

19. CUR_YIELD
20. CURRENT_FEES
21. DEL_LIFE_TIMES
22. DEL_YEAR_TIMES
23. DIST_FR_LIFE_CAP_C
24. DURATION_C
25. DV01_C
26. EBANKING_EXP
27. GROSS_FEE_INCOME
28. MARGIN_T_RATE
29. MARKET_VALUE_CLEAN_C
30. MODIFIED_DURATION_C
31. NET_FEE_INCOME
32. NET_INT_MARGIN
33. ORG_LOAN_TO_VALUE
34. ORG_NET_BOOK_BAL_C
35. ORG_NET_PAR_BAL_C
36. ORG_PAR_BAL_C
37. PARTICIPATION_AMT_SOLD
38. RATE_DECR_YEAR
39. RATE_INCR_YEAR
40. RESERVE_CHARGE_CREDIT
41. RETURN_ITEMS
42. RETURN_ON_EQUITY
43. TAX_EXEMPT_PCT
44. TOTAL_FEES
45. TOTAL_FEES_AT_ORG
46. TOTAL_TRANSACTIONS

5.5.4 FSI_D_CASA

List of deprecated Columns in FSI_D_ANNUITY_CONTRACTS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4

7. ALLOC_MISC_5
8. ANNUAL_ACCT_FEE
9. AVERAGE_LIFE_C
10. AVG_COLLECT_BAL
11. AVG_NET_BOOK_BAL_C
12. CARDS_ISSUED
13. COMMISSION_ON_COLLECTION
14. CONTRIB_AFTER_CAPITAL_CHG
15. CONVEXITY_C
16. CUR_NET_BOOK_BAL_C
17. CUR_NET_PAR_BAL_C
18. CUR_OVERDRAFT_BAL
19. CUR_YIELD
20. CURRENT_FEES
21. DAILY_LIMIT
22. DAILY_LIMIT_ATM
23. DAILY_LIMIT_POS
24. DEPOSIT_FLOAT
25. DEPOSIT_RESERVES_CHARGE
26. DURATION_C
27. DV01_C
28. EBANKING_EXP
29. GROSS_FEE_INCOME
30. HIGH_BAL
31. INTEREST_CHARGE_CREDIT
32. LAST_DEPOSIT_AMT
33. LAST_WITHDRAW_AMT
34. LOW_BAL
35. MARGIN_T_RATE
36. MARKET_RISK_CAPITAL
37. MARKET_VALUE_CLEAN_C
38. MAX_AMT_GUARANTEED
39. MISC_ASSET_CHG
40. MISC_LIABILITY_CR
41. MODIFIED_DURATION_C
42. NET_FEE_INCOME
43. NET_INT_MARGIN
44. NOT_ON_US_CREDITS

45. NOT_ON_US_DEBITS
46. OD_CUR_DAYS
47. OD_LIFE_TIMES
48. OD_YEAR_TIMES
49. OP_RISK_CAPITAL
50. ORG_NET_BOOK_BAL_C
51. ORG_NET_PAR_BAL_C
52. PHONE_TRANSACTIONS
53. RATE_DECR_YEAR
54. RATE_INCR_YEAR
55. REQ_VS_COLL_BAL_C
56. REQUIRED_BAL
57. RESIDUAL_AMT_OF_GUARANTEE
58. RETURN_ITEMS
59. RETURN_ON_EQUITY
60. RISK_ADJ_AVG_BAL
61. TAX_EXEMPT_PCT
62. TOTAL_FEES
63. TOTAL_TRANSACTIONS

5.5.5 FSI_D_CREDIT_CARDS

List of deprecated Columns in FSI_D_CREDIT_CARDS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_LLR
4. ALLOC_LLR_CR
5. ALLOC_MISC_1
6. ALLOC_MISC_2
7. ALLOC_MISC_3
8. ALLOC_MISC_4
9. ALLOC_MISC_5
10. ANNUAL_ACCT_FEE
11. AVAILABLE_CREDIT
12. AVERAGE_LIFE_C
13. AVG_NET_BOOK_BAL_C
14. BONUS_AMT
15. CARDS_ISSUED

16. CASH_BALANCE
17. CASH_RATE
18. CHARGE_OFF_BAL
19. COMMISSION_ON_COLLECTION
20. CONTRIB_AFTER_CAPITAL_CHG
21. CONVEXITY_C
22. CREDIT_BAL_INT_RATE
23. CREDIT_LINE
24. CREDIT_RISK_CAPITAL
25. CUR_CREDIT_LIMIT
26. CUR_NET_BOOK_BAL_C
27. CUR_NET_PAR_BAL_C
28. CUR_YIELD
29. CURRENT_FEES
30. CYCLE_DAY_OF_MONTH
31. DEL_LIFE_TIMES
32. DEL_YEAR_TIMES
33. DISPUTED_TRANSFER_BAL
34. DRAWN_AMT
35. DURATION_C
36. DV01_C
37. EBANKING_EXP
38. FINANCE_CHARGE_BAL
39. GROSS_FEE_INCOME
40. HIGH_BAL
41. LARGEST_OUTST_BAL
42. LAST_PAYMENT_AMT
43. LIMIT_USE_RATIO_C
44. MARGIN_T_RATE
45. MARKET_RISK_CAPITAL
46. MARKET_VALUE_CLEAN_C
47. MERCHANDISE_BAL
48. MERCHANDISE_RATE
49. MERCHANT_INT_RATE
50. MISC_ASSET_CHG
51. MISC_LIABILITY_CR
52. MODIFIED_DURATION_C
53. NET_FEE_INCOME

54. NET_INT_MARGIN
55. OP_RISK_CAPITAL
56. ORG_NET_BOOK_BAL_C
57. ORG_NET_PAR_BAL_C
58. ORIGINAL_CREDIT_LINE
59. OVER_LIMIT_BAL
60. OVER_LIMIT_CURRENT_CYCLE
61. OVER_LIMIT_LF_TIME
62. PURCH_SPECIAL_SERV_CHARGES
63. RATE_DECR_YEAR
64. RATE_INCR_YEAR
65. RESERVE_CHARGE_CREDIT
66. RETURN_ITEMS
67. RETURN_ON_EQUITY
68. RISK_ADJ_AVG_BAL
69. SPECIAL_PAYMENT_AMT
70. TAX_EXEMPT_PCT
71. TOTAL_CHARGES
72. TOTAL_FEES
73. TOTAL_TRANSACTIONS
74. UNDRAWN_AMT

5.5.6 FSI_D_CREDIT_LINES

List of deprecated Columns in FSI_D_CREDIT_LINES table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. ANNUAL_ACCT_FEE
9. AVAILABLE_CREDIT
10. AVERAGE_LIFE_C
11. AVG_NET_BOOK_BAL_C
12. CASH_BALANCE
13. CHARGE_OFF_BAL

14. COLLATERAL_MKT_VALUE
15. COLLATERAL_NOMINAL_VALUE
16. COMMISSION_ON_COLLECTION
17. CONTRIB_AFTER_CAPITAL_CHG
18. CONVEXITY_C
19. CREDIT_LINE
20. CUR_CREDIT_LIMIT
21. CUR_NET_BOOK_BAL_C
22. CUR_NET_PAR_BAL_C
23. CUR_YIELD
24. CURRENT_FEES
25. CYCLE_DAY_OF_MONTH
26. DEALER_RES_ORG
27. DEALER_RES_UNEARN
28. DEL_LIFE_TIMES
29. DEL_YEAR_TIMES
30. DISPUTED_TRANSFER_BAL
31. DRAWN_AMT
32. DURATION_C
33. DV01_C
34. EBANKING_EXP
35. FINANCE_CHARGE_BAL
36. GROSS_FEE_INCOME
37. HIGH_BAL
38. INITIAL_DIRCT_COST
39. LARGEST_OUTST_BAL
40. LAST_PAYMENT_AMT
41. LIMIT_USE_RATIO_C
42. LOW_BAL
43. MARGIN_T_RATE
44. MARKET_VALUE_CLEAN_C
45. MERCHANDISE_BAL
46. MERCHANDISE_RATE
47. MODIFIED_DURATION_C
48. NET_FEE_INCOME
49. NET_INT_MARGIN
50. NOTCH1_DOWNGRADE_CF_IMPACT
51. NOTCH10_DOWNGRADE_CF_IMPACT

52. NOTCH2_DOWNGRADE_CF_IMPACT
53. NOTCH3_DOWNGRADE_CF_IMPACT
54. NOTCH4_DOWNGRADE_CF_IMPACT
55. NOTCH5_DOWNGRADE_CF_IMPACT
56. NOTCH6_DOWNGRADE_CF_IMPACT
57. NOTCH7_DOWNGRADE_CF_IMPACT
58. NOTCH8_DOWNGRADE_CF_IMPACT
59. NOTCH9_DOWNGRADE_CF_IMPACT
60. NTNL_PRIN_AMT
61. ORG_INTEREST_AMT
62. ORG_LOAN_TO_VALUE
63. ORG_NET_BOOK_BAL_C
64. ORG_NET_PAR_BAL_C
65. ORIGINAL_CREDIT_LINE
66. RATE_DECR_YEAR
67. RATE_INCR_YEAR
68. RESERVE_CHARGE_CREDIT
69. RETURN_ITEMS
70. RETURN_ON_EQUITY
71. TAX_EXEMPT_PCT
72. TOTAL_CHARGES
73. TOTAL_FEES
74. TOTAL_FEES_AT_ORG
75. TOTAL_TRANSACTIONS
76. UNDRAWN_AMT

5.5.7 FSI_D_FUTURES

List of deprecated Columns in FSI_D_FUTURES table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. COMMISSION_ON_COLLECTION

10. CONTRACT_MULTIPLIER
11. CONTRACT_ORG_PRICE
12. CONTRACT_PRICE
13. CONVERSION_FACTOR
14. CONVEXITY_C
15. CUR_YIELD
16. DURATION_C
17. DV01_C
18. EBANKING_EXP
19. MARKET_VALUE_CLEAN_C
20. MODIFIED_DURATION_C
21. NO_OF_CONTRACTS
22. YTM_UNDERLYING_RATE

5.5.8 FSI_D_FX_CONTRACTS

List of deprecated Columns in FSI_D_FX_CONTRACTS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_DAILY_COLL_REQD
10. AVG_NET_BOOK_BAL_C
11. AVG_PEAK_INTRADAY_COLL_USED
12. COLLATERAL_MKT_VALUE
13. COLLATERAL_NOMINAL_VALUE
14. COMMISSION_FEES
15. COMMISSION_ON_COLLECTION
16. CONTRIB_AFTER_CAPITAL_CHG
17. CONVEXITY_C
18. CUR_NET_BOOK_BAL_C
19. CUR_NET_PAR_BAL_C
20. CUR_YIELD
21. DURATION_C

22. DV01_C
23. EBANKING_EXP
24. GROSS_FEE_INCOME
25. MARGIN_T_RATE
26. MARKET_VALUE_CLEAN_C
27. MODIFIED_DURATION_C
28. NET_FEE_INCOME
29. ORG_NET_BOOK_BAL_C
30. ORG_NET_PAR_BAL_C
31. TAX_EXEMPT_PCT
32. TOTAL_FEES
33. TOTAL_TRANSACTIONS

5.5.9 FSI_D_GUARANTEES

List of deprecated Columns in FSI_D_GUARANTEES table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_NET_BOOK_BAL_C
10. COMMISSION_ON_COLLECTION
11. CONVEXITY_C
12. CUR_NET_BOOK_BAL_C
13. CUR_NET_PAR_BAL_C
14. CUR_YIELD
15. DRAWN_AMT
16. DURATION_C
17. DV01_C
18. EBANKING_EXP
19. GUARANTEE_AMT
20. MARGIN_T_RATE
21. MARKET_VALUE_CLEAN_C
22. MODIFIED_DURATION_C

23. ORG_NET_BOOK_BAL_C
24. ORG_NET_PAR_BAL_C
25. RATE_DECR_YEAR
26. RATE_INCR_YEAR
27. TAX_EXEMPT_PCT
28. UNDRAWN_AMT

5.5.10 FSI_D_INVESTMENTS

List of deprecated Columns in FSI_D_INVESTMENTS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_DAILY_COLL_REQD
10. AVG_NET_BOOK_BAL_C
11. AVG_PEAK_INTRADAY_COLL_USED
12. COMMISSION_FEES
13. COMMISSION_ON_COLLECTION
14. COMMISSIONS_RATE
15. CONTRIB_AFTER_CAPITAL_CHG
16. CONVEXITY_C
17. CUR_NET_BOOK_BAL_C
18. CUR_NET_PAR_BAL_C
19. CUR_YIELD
20. DISCOUNT_PCT_BOND_TRANS
21. DISCOUNT_PCT_STOCK_TRANS
22. DURATION_C
23. DV01_C
24. EBANKING_EXP
25. GROSS_FEE_INCOME
26. LOAN_VALUE
27. MARGIN_T_RATE
28. MARKET_PRICE

29. MARKET_VALUE_CLEAN_C
30. MISC_ASSET_CHG
31. MISC_LIABILITY_CR
32. MKT_VS_BOOK_BAL_C
33. MODIFIED_DURATION_C
34. MTM_VALUE
35. NET_FEE_INCOME
36. NET_INT_MARGIN
37. NOMINAL_VALUE
38. OP_RISK_CAPITAL
39. ORG_NET_BOOK_BAL_C
40. ORG_NET_PAR_BAL_C
41. PURCHASE_PRICE
42. RATE_DECR_YEAR
43. RATE_INCR_YEAR
44. RESERVE_CHARGE_CREDIT
45. RETURN_ITEMS
46. RETURN_ON_EQUITY
47. SHARE_VALUE
48. SHARES
49. TAX_EXEMPT_PCT
50. TOTAL_FEES
51. TOTAL_TRANSACTIONS
52. UNENCUMBERED_AMT
53. VOLUME_OF_INSTRUMENTS

5.5.11 FSI_D_LEASES

List of deprecated Columns in FSI_D_LEASES table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_NET_BOOK_BAL_C

10. COLLATERAL_MKT_VALUE
11. COLLATERAL_NOMINAL_VALUE
12. COMMISSION_ON_COLLECTION
13. CONTRACT_AMT
14. CONTRIB_AFTER_CAPITAL_CHG
15. CONVEXITY_C
16. CUR_NET_BOOK_BAL_C
17. CUR_NET_PAR_BAL_C
18. CUR_YIELD
19. CURRENT_FEES
20. DEALER_RES_ORG
21. DEALER_RES_UNEARN
22. DEL_LIFE_TIMES
23. DEL_YEAR_TIMES
24. DISPOSED_ASSSETS
25. DURATION_C
26. DV01_C
27. EBANKING_EXP
28. GROSS_FEE_INCOME
29. INITIAL_DIRCT_COST
30. INVENTORIED_ASSETS
31. MARGIN_T_RATE
32. MARKET_VALUE_CLEAN_C
33. MODIFIED_DURATION_C
34. NET_FEE_INCOME
35. NET_INT_MARGIN
36. NUM_ASSETS
37. ORG_INTEREST_AMT
38. ORG_LOAN_TO_VALUE
39. ORG_NET_BOOK_BAL_C
40. ORG_NET_PAR_BAL_C
41. RATE_DECR_YEAR
42. RATE_INCR_YEAR
43. RESERVE_CHARGE_CREDIT
44. RESIDUAL_VALUE_RISK
45. RETURN_ITEMS
46. RETURN_ON_EQUITY
47. TAX_EXEMPT_PCT

48. TOTAL_FEES
49. TOTAL_FEES_AT_ORG
50. TOTAL_TRANSACTIONS

5.5.12 FSI_D_LEDGER_STAT_INSTRUMENT

List of deprecated Columns in FSI_D_LEDGER_STAT_INSTRUMENT table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_NET_BOOK_BAL_C
10. COMMISSION_ON_COLLECTION
11. CONVEXITY_C
12. CUR_NET_BOOK_BAL_C
13. CUR_NET_PAR_BAL_C
14. CUR_YIELD
15. DURATION_C
16. DV01_C
17. EBANKING_EXP
18. MARGIN_T_RATE
19. MARKET_VALUE_CLEAN_C
20. MODIFIED_DURATION_C
21. ORG_NET_BOOK_BAL_C
22. ORG_NET_PAR_BAL_C
23. RATE_DECR_YEAR
24. RATE_INCR_YEAR
25. TAX_EXEMPT_PCT

5.5.13 FSI_D_LOAN_COMMITMENTS

List of deprecated Columns in FSI_D_LOAN_COMMITMENTS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1

4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. COMMISSION_ON_COLLECTION
10. CONVEXITY_C
11. CUR_NET_PAR_BAL_C
12. CUR_YIELD
13. DURATION_C
14. DV01_C
15. EBANKING_EXP
16. MARGIN_T_RATE
17. MARKET_VALUE_CLEAN_C
18. MODIFIED_DURATION_C

5.5.14 FSI_D_LOAN_CONTRACTS

List of deprecated Columns in FSI_D_LOAN_CONTRACTS table.

1. ACCIDENT_HEALTH_PREMIUM
2. AGENCY_FEES
3. ALLOC_EQUITY
4. ALLOC_LLR
5. ALLOC_LLR_CR
6. ALLOC_MISC_1
7. ALLOC_MISC_2
8. ALLOC_MISC_3
9. ALLOC_MISC_4
10. ALLOC_MISC_5
11. AVERAGE_LIFE_C
12. AVG_NET_BOOK_BAL_C
13. BACKUP_LIQUID_COST
14. CALL_PRICE
15. COLLATERAL_MKT_VALUE
16. COLLATERAL_NOMINAL_VALUE
17. COMMISSION_ON_COLLECTION
18. COMMIT_UTIL_PCT_C
19. CONTRACT_AMT

20. CONTRIB_AFTER_CAPITAL_CHG
21. CONVEXITY_C
22. CREDIT_LIFE_INS_PREM
23. CREDIT_RISK_CAPITAL
24. CUR_NET_BOOK_BAL_C
25. CUR_NET_PAR_BAL_C
26. CUR_YIELD
27. CURRENT_FEES
28. DEALER_RES_ORG
29. DEALER_RES_UNEARN
30. DEL_LIFE_TIMES
31. DEL_YEAR_TIMES
32. DIST_FR_LIFE_CAP_C
33. DRAWN_AMT
34. DURATION_C
35. DV01_C
36. EBANKING_EXP
37. GROSS_FEE_INCOME
38. INITIAL_DIRCT_COST
39. INTEREST_CHARGE_CREDIT
40. INTEREST_OVERDUE
41. MARGIN_T_RATE
42. MARKET_RISK_CAPITAL
43. MARKET_VALUE_CLEAN_C
44. MISC_ASSET_CHG
45. MISC_LIABILITY_CR
46. MODIFIED_DURATION_C
47. NET_FEE_INCOME
48. NET_INT_MARGIN
49. NOTCH1_DOWNGRADE_CF_IMPACT
50. NOTCH10_DOWNGRADE_CF_IMPACT
51. NOTCH2_DOWNGRADE_CF_IMPACT
52. NOTCH3_DOWNGRADE_CF_IMPACT
53. NOTCH4_DOWNGRADE_CF_IMPACT
54. NOTCH5_DOWNGRADE_CF_IMPACT
55. NOTCH6_DOWNGRADE_CF_IMPACT
56. NOTCH7_DOWNGRADE_CF_IMPACT
57. NOTCH8_DOWNGRADE_CF_IMPACT

58. NOTCH9_DOWNGRADE_CF_IMPACT
59. OP_RISK_CAPITAL
60. ORG_INTEREST_AMT
61. ORG_LOAN_TO_VALUE
62. ORG_NET_BOOK_BAL_C
63. ORG_NET_PAR_BAL_C
64. PARTICIPATION_AMT_SOLD
65. PRIME_RATE
66. RATE_DECR_YEAR
67. RATE_INCR_YEAR
68. RESERVE_CHARGE_CREDIT
69. RETURN_ITEMS
70. RETURN_ON_EQUITY
71. RISK_ADJ_AVG_BAL
72. TAX_EXEMPT_PCT
73. TOTAL_FEES
74. TOTAL_FEES_AT_ORG
75. TOTAL_TRANSACTIONS
76. UNDRAWN_AMT

5.5.15 FSI_D_MERCHANT_CARDS

List of deprecated Columns in FSI_D_MERCHANT_CARDS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AUTHORIZATION_FEES
9. AVAILABLE_CREDIT
10. AVERAGE_LIFE_C
11. AVG_NET_BOOK_BAL_C
12. AVG_TICKET_BAL
13. BONUS_AMT
14. CASH_BALANCE
15. CASH_RATE

16. CHARGE_OFF_BAL
17. CHARGEBACK_EXP
18. COMMISSION_ON_COLLECTION
19. CONTRIB_AFTER_CAPITAL_CHG
20. CONVEXITY_C
21. CORRECTION_FEES
22. CREDIT_BAL_INT_RATE
23. CUR_CREDIT_LIMIT
24. CUR_NET_BOOK_BAL_C
25. CUR_NET_PAR_BAL_C
26. CUR_YIELD
27. CURRENT_FEES
28. CYCLE_DAY_OF_MONTH
29. DEL_LIFE_TIMES
30. DEL_YEAR_TIMES
31. DISCOUNT_RATE
32. DISCOUNTED_FEES
33. DURATION_C
34. DV01_C
35. EBANKING_EXP
36. FINANCE_CHARGE_BAL
37. FLOAT_DAYS_YTD
38. FLOAT_MGMT_FEES
39. GROSS_FEE_INCOME
40. LARGEST_OUTST_BAL
41. LAST_PAYMENT_AMT
42. LIMIT_USE_RATIO_C
43. MARGIN_T_RATE
44. MARKET_VALUE_CLEAN_C
45. MEMBER_DUES
46. MERCHANDISE_BAL
47. MERCHANDISE_RATE
48. MERCHANT_CHARGES
49. MODIFIED_DURATION_C
50. NET_FEE_INCOME
51. NET_INT_MARGIN
52. ORG_NET_BOOK_BAL_C
53. ORG_NET_PAR_BAL_C

54. ORIGINAL_CREDIT_LINE
55. OTHER_EXP
56. OVER_LIMIT_BAL
57. OVER_LIMIT_CURRENT_CYCLE
58. OVER_LIMIT_LF_TIME
59. RATE_DECR_YEAR
60. RATE_INCR_YEAR
61. RESERVE_CHARGE_CREDIT
62. RETURN_ITEMS
63. RETURN_ON_EQUITY
64. TAX_EXEMPT_PCT
65. TOTAL_CHARGES
66. TOTAL_FEES
67. TOTAL_TRANSACTIONS
68. VOLUME_REBATE_AMT
69. WARNING_BULLETINS_EXP

5.5.16 FSI_D_MM_CONTRACTS

List of deprecated Columns in FSI_D_MM_CONTRACTS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_DAILY_COLL_REQD
10. AVG_NET_BOOK_BAL_C
11. AVG_PEAK_INTRADAY_COLL_USED
12. COLLATERAL_MKT_VALUE
13. COLLATERAL_NOMINAL_VALUE
14. COMMISSION_FEES
15. COMMISSION_ON_COLLECTION
16. COMMISSIONS_RATE
17. CONTRACT_QUANTITY
18. CONTRIB_AFTER_CAPITAL_CHG

19. CONVEXITY_C
20. CUR_NET_BOOK_BAL_C
21. CUR_NET_PAR_BAL_C
22. CUR_YIELD
23. DISCOUNT_PCT_BOND_TRANS
24. DISCOUNT_PCT_STOCK_TRANS
25. DURATION_C
26. DV01_C
27. EBANKING_EXP
28. GROSS_FEE_INCOME
29. LOAN_VALUE
30. MARGIN_AMOUNT
31. MARGIN_T_RATE
32. MARKET_PRICE
33. MARKET_VALUE_CLEAN_C
34. MKT_VS_BOOK_BAL_C
35. MODIFIED_DURATION_C
36. MTM_VALUE
37. NET_FEE_INCOME
38. NET_INT_MARGIN
39. NOMINAL_VALUE
40. ORG_NET_BOOK_BAL_C
41. ORG_NET_PAR_BAL_C
42. PURCHASE_PRICE
43. RATE_DECR_YEAR
44. RATE_INCR_YEAR
45. RESERVE_CHARGE_CREDIT
46. RETURN_ITEMS
47. RETURN_ON_EQUITY
48. SHARE_VALUE
49. SHARES
50. TAX_EXEMPT_PCT
51. TOTAL_FEES
52. TOTAL_TRANSACTIONS
53. UNENCUMBERED_AMT

5.5.17 FSI_D_MORTGAGES

List of deprecated Columns in FSI_D_MORTGAGES table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_LLR
4. ALLOC_LLR_CR
5. ALLOC_MISC_1
6. ALLOC_MISC_2
7. ALLOC_MISC_3
8. ALLOC_MISC_4
9. ALLOC_MISC_5
10. APPROVED_AMT
11. ARM_BASE_RATE
12. AVERAGE_LIFE_C
13. AVG_NET_BOOK_BAL_C
14. COLLATERAL_MKT_VALUE
15. COLLATERAL_NOMINAL_VALUE
16. COMMISSION_ON_COLLECTION
17. CONTRACT_AMT
18. CONTRIB_AFTER_CAPITAL_CHG
19. CONVEXITY_C
20. CREDIT_RISK_CAPITAL
21. CUR_MIN_PMT
22. CUR_NET_BOOK_BAL_C
23. CUR_NET_PAR_BAL_C
24. CUR_YIELD
25. CURRENT_FEES
26. DEL_LIFE_TIMES
27. DEL_YEAR_TIMES
28. DIST_FR_LIFE_CAP_C
29. DRAWN_AMT
30. DURATION_C
31. DV01_C
32. EBANKING_EXP
33. FIRST_RESET_AGE
34. GROSS_FEE_INCOME
35. MARGIN_T_RATE
36. MARKET_RISK_CAPITAL
37. MARKET_VALUE_CLEAN_C
38. MISC_ASSET_CHG

39. MISC_LIABILITY_CR
40. MODIFIED_DURATION_C
41. MORT_INS_AMT
42. MORT_INS_CUTOFF
43. MORT_INS_PREMIUM
44. NET_FEE_INCOME
45. NET_INT_MARGIN
46. OP_RISK_CAPITAL
47. ORG_CUST_LTV
48. ORG_LOAN_TO_VALUE
49. ORG_NET_BOOK_BAL_C
50. ORG_NET_PAR_BAL_C
51. PARTICIPATION_AMT_SOLD
52. PREPAY_INDEX_TERM
53. RATE_DECR_YEAR
54. RATE_INCR_YEAR
55. RESERVE_CHARGE_CREDIT
56. RETURN_ITEMS
57. RETURN_ON_EQUITY
58. RISK_ADJ_AVG_BAL
59. TAX_EXEMPT_PCT
60. TOTAL_FEES
61. TOTAL_FEES_AT_ORG
62. TOTAL_TRANSACTIONS

5.5.18 FSI_D_MUTUAL_FUNDS

List of deprecated Columns in FSI_D_MUTUAL_FUNDS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_NET_BOOK_BAL_C
10. COMMISSION_FEES

11. COMMISSION_ON_COLLECTION
12. COMMISSIONS_RATE
13. CONTRACT_QUANTITY
14. CONTRIB_AFTER_CAPITAL_CHG
15. CONVEXITY_C
16. CUR_NET_BOOK_BAL_C
17. CUR_NET_PAR_BAL_C
18. CUR_YIELD
19. DISCOUNT_PCT_BOND_TRANS
20. DISCOUNT_PCT_STOCK_TRANS
21. DURATION_C
22. DV01_C
23. EBANKING_EXP
24. GROSS_FEE_INCOME
25. LOAN_VALUE
26. MARGIN_AMOUNT
27. MARGIN_T_RATE
28. MARKET_PRICE
29. MARKET_VALUE_CLEAN_C
30. MKT_VS_BOOK_BAL_C
31. MODIFIED_DURATION_C
32. MTM_VALUE
33. NET_FEE_INCOME
34. NET_INT_MARGIN
35. ORG_NET_BOOK_BAL_C
36. ORG_NET_PAR_BAL_C
37. PURCHASE_PRICE
38. RATE_DECR_YEAR
39. RATE_INCR_YEAR
40. RESERVE_CHARGE_CREDIT
41. RETURN_ITEMS
42. RETURN_ON_EQUITY
43. SHARE_VALUE
44. SHARES
45. TAX_EXEMPT_PCT
46. TOTAL_FEES
47. TOTAL_TRANSACTIONS

5.5.19 FSI_D_OTHER_SERVICES

List of deprecated Columns in FSI_D_OTHER_SERVICES table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_NET_BOOK_BAL_C
10. COMMISSION_ON_COLLECTION
11. CONTRIB_AFTER_CAPITAL_CHG
12. CONVEXITY_C
13. CUR_NET_BOOK_BAL_C
14. CUR_NET_PAR_BAL_C
15. CUR_YIELD
16. CURRENT_FEES
17. DURATION_C
18. DV01_C
19. EBANKING_EXP
20. GROSS_FEE_INCOME
21. MARGIN_T_RATE
22. MARKET_VALUE_CLEAN_C
23. MISC_ASSET_CHG
24. MISC_LIABILITY_CR
25. MODIFIED_DURATION_C
26. NET_FEE_INCOME
27. NET_INT_MARGIN
28. OP_RISK_CAPITAL
29. ORG_NET_BOOK_BAL_C
30. ORG_NET_PAR_BAL_C
31. RATE_DECR_YEAR
32. RATE_INCR_YEAR
33. RETURN_ITEMS
34. RETURN_ON_EQUITY

35. SAFE_DEPOSIT_BOX_FEE
36. TAX_EXEMPT_PCT
37. TOTAL_FEES
38. TOTAL_TRANSACTIONS

5.5.20 FSI_D_RETIREMENT_ACCOUNTS

List of deprecated Columns in FSI_D_RETIREMENT_ACCOUNTS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_NET_BOOK_BAL_C
10. COMMISSION_ON_COLLECTION
11. CONTRIB_AFTER_CAPITAL_CHG
12. CONVEXITY_C
13. CUR_NET_BOOK_BAL_C
14. CUR_NET_PAR_BAL_C
15. CUR_YIELD
16. CURRENT_FEES
17. DEPOSIT_RESERVES_CHARGE
18. DURATION_C
19. DV01_C
20. EBANKING_EXP
21. GROSS_FEE_INCOME
22. HIGH_BAL
23. LAST_DEPOSIT_AMT
24. LAST_WITHDRAW_AMT
25. LOW_BAL
26. MARGIN_T_RATE
27. MARKET_PRICE
28. MARKET_VALUE_CLEAN_C
29. MAX_AMT_GUARANTEED
30. MKT_VS_BOOK_BAL_C

31. MODIFIED_DURATION_C
32. NET_FEE_INCOME
33. NET_INT_MARGIN
34. ORG_NET_BOOK_BAL_C
35. ORG_NET_PAR_BAL_C
36. PURCHASE_PRICE
37. RATE_DECR_YEAR
38. RATE_INCR_YEAR
39. RESIDUAL_AMT_OF_GUARANTEE
40. RETURN_ITEMS
41. RETURN_ON_EQUITY
42. TAX_EXEMPT_PCT
43. TOTAL_FEES
44. TOTAL_TRANSACTIONS

5.5.21 FSI_D_SWAPS

List of deprecated Columns in FSI_D_SWAPS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. COMMISSION_ON_COLLECTION
10. CONVEXITY_C
11. CUR_YIELD
12. DURATION_C
13. DV01_C
14. EBANKING_EXP
15. MARGIN_T_RATE
16. MARKET_VALUE_CLEAN_C
17. MODIFIED_DURATION_C
18. RATE_DECR_YEAR
19. RATE_INCR_YEAR

5.5.22 FSI_D_TERM_DEPOSITS

List of deprecated Columns in FSI_D_TERM_DEPOSITS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_COLLECT_BAL
10. AVG_NET_BOOK_BAL_C
11. COMMISSION_ON_COLLECTION
12. CONTRIB_AFTER_CAPITAL_CHG
13. CONVEXITY_C
14. CUR_NET_BOOK_BAL_C
15. CUR_NET_PAR_BAL_C
16. CUR_YIELD
17. CURRENT_FEES
18. DEPOSIT_FLOAT
19. DEPOSIT_RESERVES_CHARGE
20. DURATION_C
21. DV01_C
22. EBANKING_EXP
23. GROSS_FEE_INCOME
24. HIGH_BAL
25. LAST_DEPOSIT_AMT
26. LAST_WITHDRAW_AMT
27. LOW_BAL
28. MARGIN_T_RATE
29. MARKET_RISK_CAPITAL
30. MARKET_VALUE_CLEAN_C
31. MAX_AMT_GUARANTEED
32. MISC_ASSET_CHG
33. MISC_LIABILITY_CR
34. MODIFIED_DURATION_C

35. NET_FEE_INCOME
36. NET_INT_MARGIN
37. OP_RISK_CAPITAL
38. ORG_NET_BOOK_BAL_C
39. ORG_NET_PAR_BAL_C
40. RATE_DECR_YEAR
41. RATE_INCR_YEAR
42. REQ_VS_COLL_BAL_C
43. REQUIRED_BAL
44. RESIDUAL_AMT_OF_GUARANTEE
45. RETURN_ITEMS
46. RETURN_ON_EQUITY
47. RISK_ADJ_AVG_BAL
48. TAX_EXEMPT_PCT
49. TOTAL_FEES
50. TOTAL_TRANSACTIONS

5.5.23 FSI_D_TRUSTS

List of deprecated Columns in FSI_D_TRUSTS table.

1. AGENCY_FEES
2. ALLOC_EQUITY
3. ALLOC_MISC_1
4. ALLOC_MISC_2
5. ALLOC_MISC_3
6. ALLOC_MISC_4
7. ALLOC_MISC_5
8. AVERAGE_LIFE_C
9. AVG_NET_BOOK_BAL_C
10. BONDS_BAL
11. COMMISSION_FEES
12. COMMISSION_ON_COLLECTION
13. CONTRIB_AFTER_CAPITAL_CHG
14. CONVEXITY_C
15. CUR_NET_BOOK_BAL_C
16. CUR_NET_PAR_BAL_C
17. CUR_YIELD
18. CURRENT_FEES

19. DISCOUNT_PCT_BOND_TRANS
20. DISCOUNT_PCT_STOCK_TRANS
21. DURATION_C
22. DV01_C
23. EBANKING_EXP
24. EXPECTED_BAL
25. EXPECTED_BAL_GROWTH_PCT
26. FUNDS_BAL
27. GROSS_FEE_INCOME
28. LOAN_VALUE
29. MARGIN_T_RATE
30. MARKET_VALUE_CLEAN_C
31. MINIMUM_BALANCE
32. MODIFIED_DURATION_C
33. NET_FEE_INCOME
34. NET_INT_MARGIN
35. ORG_NET_BOOK_BAL_C
36. ORG_NET_PAR_BAL_C
37. OTHER_BAL
38. RATE_DECR_YEAR
39. RATE_INCR_YEAR
40. RETURN_ITEMS
41. RETURN_ON_EQUITY
42. STOCK_BAL
43. TAX_EXEMPT_PCT
44. TOTAL_FEES
45. TOTAL_TRANSACTIONS

6
Business Rules Administration

This chapter covers the following topics.

- Reference Data: This section explains about the baseline configurations like interest rate curves, Currencies set up, Economic indicators on which Various rules/assumptions can be defined. These configurations are referred across various modules.
- Common Rules: This section explains about rules which are common across all multiple applications in Profitability and Balance Sheet Management Cloud Service suite like ALM, PFT, and FTP.
- Profitability Management Specific Rules: This section explains about Profitability Management Cloud Service specific modules.

6.1 Reference Data

This section explains about the baseline configurations like Currencies set up and oarious rules/assumptions can be defined. These configurations are referred across various modules of Profitability Management Cloud Service.

Topics:

1. Currencies: Currencies module allows you to define and maintain the currencies and currency rates.
    - Currencies: Currencies module supports the definitions and maintenance of currencies.
    - Currency Rates: Currency Rates module uses the currencies defined and activated in the Currency module to support the creation and maintenance of Historical Exchange Rates.
2. Dimension Management: Dimension Management facilitates you to categorize data into a single object as a Member; define levels and aggregate data to form the Hierarchies, and distinguish each member by defining the required Attributes.
    - Members: Dimension Members refer to the individual items that constitute a dimension when data is categorized into a single object such as Product, Organization, Time, and so on.
    - Attributes: Attributes refers to the distinguished properties or qualifiers that describes a Dimension Member.
    - Hierarchies: Hierarchies refer to Dimension Members that are arranged in levels, with each level representing the aggregated total of the data from the level below. One dimension type can have multiple hierarchies associated with it.

6.1.1 Currencies Setup

Currencies module supports the definitions and maintenance of currencies. Currency definitions are fundamental to the definition of both interest rate yield curves and currency exchange rates.

6.1.1.1 Currency Setup

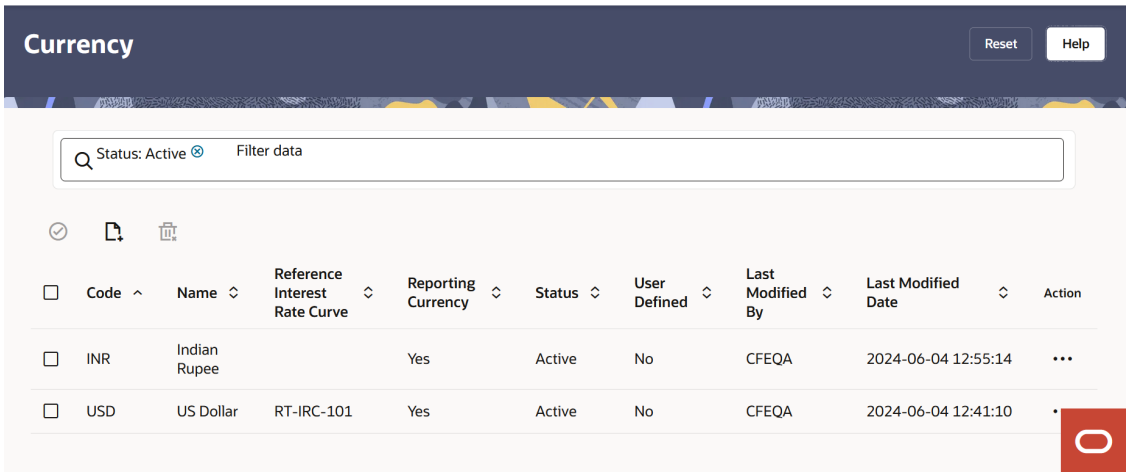
Financial institutions transact business in more than one currency. Transacting business in multiple currencies demands functional capabilities for multi-currency accounting and currency rate management.

Currency module supports the definitions and maintenance of currencies. Currency definitions are fundamental to the definition of both interest rate yield curves and currency exchange rates. A key attribute of every yield curve is the currency with which it is associated, and currency exchange rates can only be established between defined currencies. A comprehensive list of ISO-defined currencies is provided; you can also define and add your user-defined currencies.

Currency Summary

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

Figure 6-1 Currency Summary



Search Currency

Prerequisites: Predefined Currency

To search for a Currency:

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

Or

An alternative method to search a Currency 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 Currency Rule Summary. Enter the **Code, Name, Status, Reporting Currency**, or **User Defined** of the Currency and click **Search** .

The Currency Rule Summary displays the following information:

Add: Click the Add icon on the page header to build a new Currency Rule.

Multiple Delete: Enables you to select and delete one or multiple rules in the table simultaneously.

Activate: Select one or more currency and click Activate icon to change status to active.

- **Code:** The 3-letter ISO code of Currency
- **Name:** The Currency's short name.
- **Reference Interest Rate Curve:** Displays the Reference Interest Rate Curve of Currency
- **Reporting Currency:** Indicates whether currency is marked for use as Reporting Currency
- **Status:** Displays the Active or Inactive status of Currency.
- **User Defined:** Identifies any user-defined currency, that is, a currency not seeded by Cloud Service
- **Action:** Click this icon to view a list of actions that you can perform on the Currency Rule.
  - **View/Edit:** Based on the user privilege assigned, you can either only view or edit existing Currency Rules. To edit a rule, you must have Read/Write privilege.
  - **Delete:** You can delete Currency Rules that you no longer require. Note that only Currency Rule owners and those with Read/Write privileges can delete Currency Rules. A Currency Rule that has a dependency cannot be deleted. A rule cannot be retrieved after deletion.
  - **Dependency Check:** You can perform a dependency check to know where a particular Currency 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 Currency Rules that have dependencies. A report of all rules that utilize the selected Currency Rule is generated.

Also See:

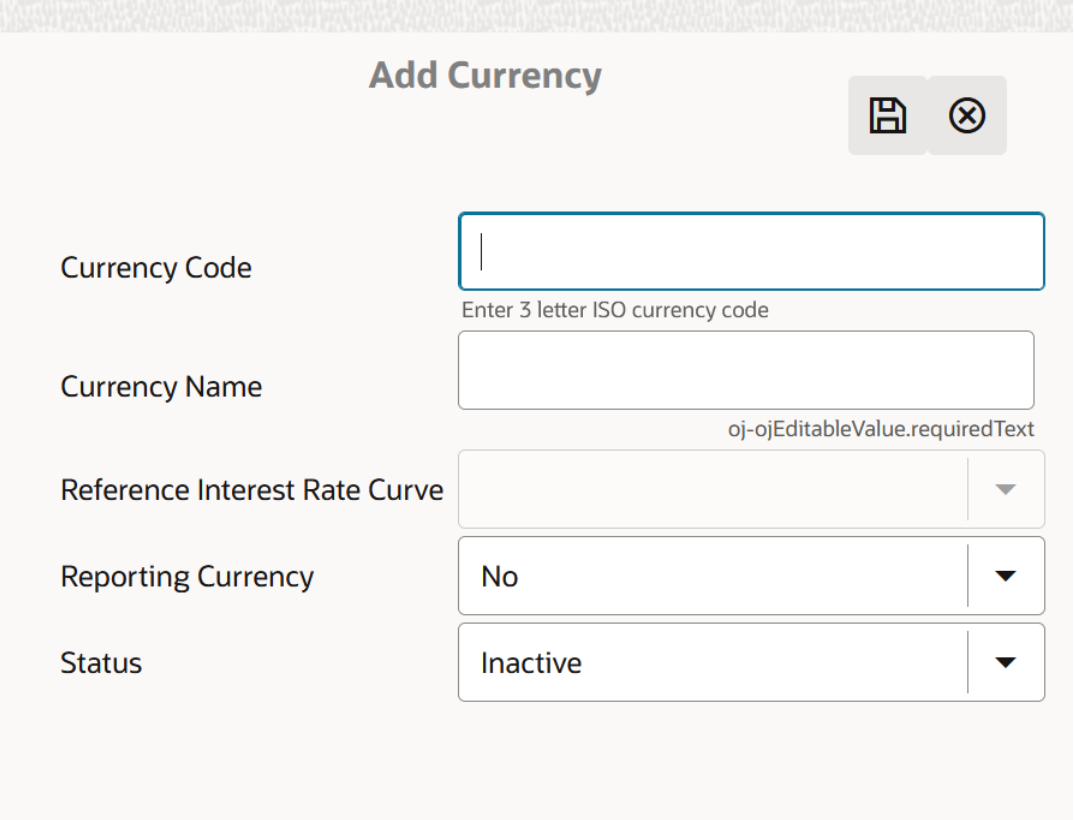
- Add a Currency

6.1.1.1.1 Add Currency

To add a Currency, follow these steps:

1. Navigate to **Reference Data** and select **Currency**.
2. Click **Add** icon on Currency summary page. The **Add Currency** page is displayed.

Figure 6-2 Add Currency Page



3. Enter the following details:

Table 6-1 Adding a Currency – Fields and Descriptions

Fields	Description
Currency Code	For seeded currencies, these are ISO Currency Codes. For user-defined currencies, these can be any pure character string (no numbers) up to a length of 3 characters.
Currency Name	For seeded currencies, these are ISO Currency Codes. For user-defined currencies, these can be any string up to a length of 40 characters.
Reference Interest Rate Curve	Reference Interest Rate Curve is the Interest Rate Curve with which currency is associated for exchange rate forecasting purposes. Define multiple yield curves each of which has the same Reference Currency, but a currency can only have one Reference Interest Rate Curve.

Table 6-1 (Cont.) Adding a Currency – Fields and Descriptions

Fields	Description
Reporting Currency	A reporting currency is an active currency to which balances in other currencies can be consolidated to facilitate reporting. Balances in reporting currencies can be, in turn, consolidated to the functional currency. For example, an American multinational bank might consolidate its holdings in Asian currencies to the Japanese yen (Reporting Currency) and its balances in European currencies to the Euro (Reporting Currency) after which it might consolidate these reporting currencies to the U.S. dollar (Functional Currency).
Status	The status of any currency can be either Active or Inactive. You must Activate a currency before doing the followings: a. Define that currency as a Reference Currency for an Interest Rate curve. b. Enter Exchange Rate data for a currency. c. Define Forecast Rates for that currency. d. Define any other business rule like Prepayment, Transfer Pricing for that currency.

Note:

- For the Oracle Financial Services Climate Change Analytics Cloud Service application, select '*Yes*' for the Reporting Currency. This supports the Exchange Rate Conversion in the Currency Rate feature.
- The Reference Interest Rate Curve is not applicable for processing and analytical purposes in Oracle Financial Services Climate Change Analytics Cloud Service.

4. Click **Save**.

6.1.1.2 Currency Rates

Currency Rates Module uses the currencies defined and activated in the Currency Module to support the creation and maintenance of Historical Exchange Rates. In the Currency Rate Window, you can manage historical Exchange Rates between currencies.

To Currency defaults to the Initial Currency selection from the Assumption Management defaults in the Active Preferences Window. You can select another To Currency from the drop-down list that displays all Active Currencies.

Editing Exchange Rate Data

Select the check box on the left-hand side of any row to enable the **Edit** icon. After clicking Edit, the row becomes active to edit the **Effective Date** and (or) the **Exchange Rate**. Click **Save** to save the changes.

Viewing Exchange Rate Data

By default, both the Floating Currency Rates Pane and the Fixed Currency Rates Pane display the most recent month of historical Exchange Rate Data. You can control the amount of data displayed by selecting a different value from the **Effective Date Range** drop-down list in the **Currency Selection** Window.

From Date and **To Date** can also be modified to view relevant Currency Rates.

Deleting Exchange Rate Data

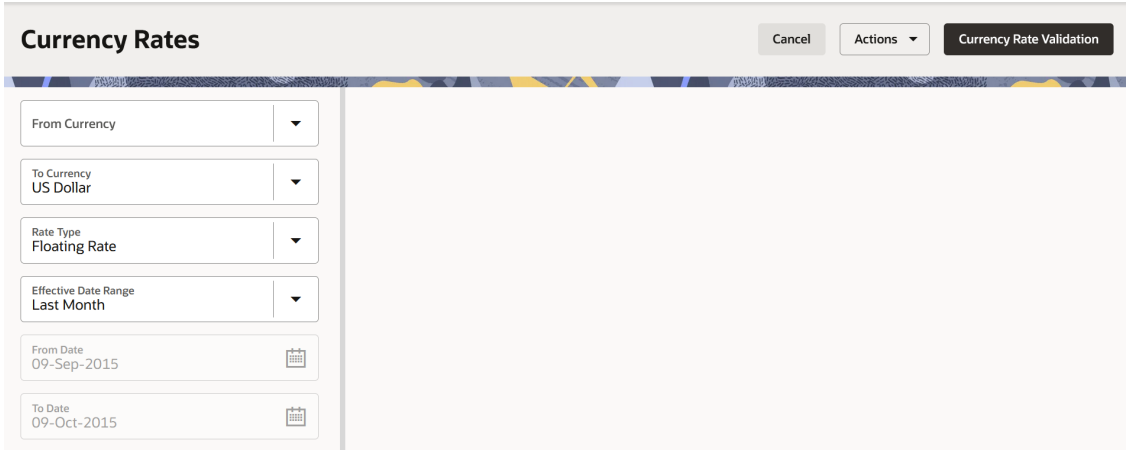
Select one or more check boxes on the left-hand side of any row to enable the **Delete** icon. After clicking Delete, a confirmation message is displayed. Click **Ok**.

6.1.1.2.1 Adding Exchange Rate Data

Based on the Rate Types, you can add the following Exchange Rate Data:

- **Floating Rates**
  Floating Exchange Rates, such as those between the US Dollar (USD), the Pound Sterling (GBP), the Japanese Yen (JPY), and the Euro (EUR), are market-driven and can change from day-to-day, hour-to-hour, or minute-to-minute.
- **Fixed Rates**
  Some countries, especially smaller countries or countries that have experienced significant inflation in the recent past, can wish to “peg” their currency to a larger, more stable currency such as the US Dollar, Japanese Yen, or Euro.

Figure 6-3 Currency Rates



Adding Floating Rate Data

To add the Exchange Rate Data, follow these steps:

1. Select a **From Currency**.
2. Select a **To Currency**.
3. Select **Rate Type** as **Floating Rate** (default selection is Floating Rate).
4. The RHS pane is displayed as Floating Currency Rates.

5. Select **Effective Date Range** to enter the values in From Date and To Date fields.
6. Select the **Rate Provider**.
7. Currency Rate Pane initially displays a single blank row followed by the most recent month's Exchange Rate data (if any such Exchange Rate Data already exists). To enter a single new Exchange Rate Data Point, enter data into the blank row.

Table 6-2 Floating Currency Rates

Fields	Description
Effective Date	Directly enter a date or select the Calendar icon to choose an effective date for your new Exchange Rate data point. Rate Management Stores the Historical Exchange Rate Data. You cannot enter Exchange Rate data for dates greater than the current date.
Exchange Rate	This must be entered as 1 unit of From Currency are converted to n unit of To Currency.
Status	Status is a read-only display that is updated after the Currency Rates Validation has been run.
Data Origin	The Data Origin is displayed read-only and indicates whether the rates were input through the UI or the Data Loader.

8. Click **Save**.
9. Click **Add** to add additional blank rows to enter the additional Effective Dates and Exchange Rates. After adding the multiple new Exchange Rates, click **Save**.

Adding Fixed Rate Data

To add the Exchange Rate Data, follow these steps:

1. Select a **From Currency**.
2. Select a **To Currency**.
3. Select **Rate Type** as **Fixed Rate**.
4. After selecting a **To Currency** value, the RHS pane is displayed as Fixed Currency Rates.
5. Select **Effective Date Range** to enter the values in From Date and To Date fields.
6. Select the **Rate Provider**.
7. Currency Rate Pane initially displays a single blank row followed by the most recent month's Exchange Rate Data (if any such Exchange Rate Data already exists). To enter a single new Exchange Rate Data Point, enter data into the blank row.

Table 6-3 Fixed Currency Rates

Fields	Description
Effective From Date	Directly enter a date or select the Calendar icon to choose a starting effective date for your new Exchange Rate Data Point.
Effective To Date	Directly enter a date or select the Calendar icon to choose a ending effective date for your new Exchange Rate Data Point.

Table 6-3 (Cont.) Fixed Currency Rates

Fields	Description
Currency Exchange Rate	This must be entered as 1 unit of From Currency are converted to n unit of To Currency.
Status	Status is a read-only display that is updated after the Currency Rates Validation has been run.
Data Origin	The Data Origin is displayed read-only and indicates whether the rates were input through the UI or the Data Loader.

8. Click **Save**.
9. Click **Add** to add additional blank rows to enter the additional Effective Start and End Dates and Exchange Rates. After adding the multiple new Exchange Rates, click **Save**.

6.1.1.2.2 Currency Exchange Rate Validation

Exchange Rate Validation has the following features:

- Movement of historical Exchange Rates to the Currency Direct Access Table.
- Calculation of inverse Exchange Rates for Reporting Currencies.
- Calculation of triangulated Exchange Rates where possible.

Features of Exchange Rate Validation

The goal of Exchange Rate Validation is to ensure that Exchange Rates from all active currencies to all reporting currencies are available for processing. Some of these rates can come from the validated direct input, others are calculated based on relationships with other rates. To support triangulation, all fixed Exchange Rates are available for all currencies that make up an exchange that needs to be triangulated. Also, a direct Exchange Rate between each Child Currency and each reporting currency is calculated and supplied to support quick access to Exchange Rates. If a Child currency is a Reporting Currency, then Exchange Rates are calculated for all currencies having an exchange relationship with the Parent Currency.

Validating Exchange Rate Relationships

You must run the Exchange Rate Validation Process after adding or modifying Exchange Rate Data. Run the process immediately or schedule one or more to be run in the future.

Each Exchange Rate has one of the following statuses:

Table 6-4 Details of Exchange Rates

Fields	Description
Not Yet Validated	The Exchange Rate has been input or loaded but not yet validated.
Valid	The Exchange Rate has been validated.
Invalid	The Exchange Rate has violated one or more acceptance rules.

Only Exchange Rates in valid status are available for processing and they are not subject to future validation unless you edit them. The Rate Validation Status is displayed in the Currency Rates Window of the Rate Management.

Exchange Rate Validation Criteria

In the Rate Validation Process, all Exchange Rate relationships in the database are examined for compliance with the following criteria. Error messages and warnings are displayed if one or more criteria are not met.

- If a currency is defined as a Child in a fixed exchange relationship then it must not be in any floating (standard) Exchange Rate Relationship at the same time. Consequently, all floating Exchange Rates to or from the Child Currency must be defined through the Parent Currency. If this criterion is not met then the following message is displayed: Invalid fixed relationship—Child Currency exists in a standard Exchange Rate within the same time period.
- A Child Currency within a fixed relationship must not be a Child Currency in any other Fixed Relationship during the same time period. If this criterion is not met then the following message is displayed: Invalid fixed relationship—Child Currency already exists in a fixed relationship for the same time period.
- A Circular Relationship must not exist. In other words, a Child Currency cannot link back to its Parent in any other fixed rate Relationship within the same time period. If it does, then the following message is displayed: Invalid fixed relationship creates a circular relationship with other fixed Exchange Rates.
- Regarding new Floating (standard) Exchange Rates, from and To currencies must not exist as Child Currencies within any Fixed Exchange Rate Relationships. If this criterion is not met then the following message is displayed: From/To/Both currency(ies) in the new Exchange Rate already exist in a fixed relationship for the same time period.
- If any Exchange Rate is equal to 0, then a warning message is displayed. Generally speaking, 0 is a valid value. You can use it, for example, to designate an Exchange Rate with a currency of a country that no longer exists.

If two Exchange Rate Relationships fail to meet these criteria then both of them will be labeled Invalid. (Exception, if one of the relationships is already in Valid status, then the other one will be labeled Invalid.) For example, if a currency is defined as a Child in a Fixed Rate Relationship and is also defined as being in a Floating Relationship at the same time, then both Fixed and Floating Rates for that currency will be labeled Invalid.

If there are both direct and Inverse Floating Exchange Rates defined for any two currencies (in other words, one currency is both a To and a From Currency in relation to the other), then both relationships will be marked valid.

Running an Exchange Rate Validation

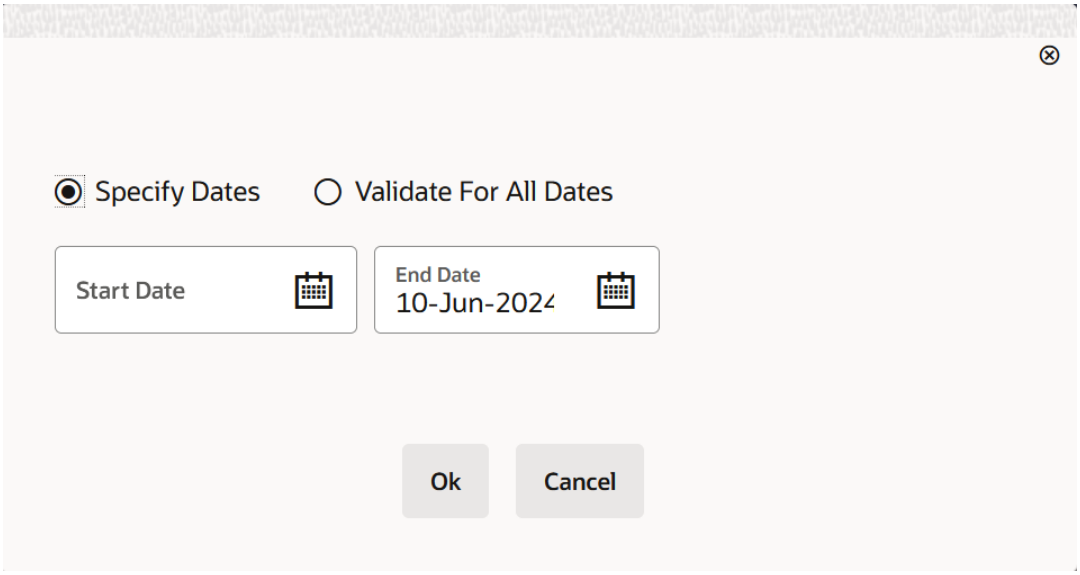
You can run a validation immediately or schedule one or more for later. The Validation Status is displayed in the **Currency Rates** window.

You can execute the Exchange Rate validation using the **Currency Rates Validation** option.

To execute the Exchange Rate Validation, follow these steps:

1. Click **Currency Rates Validation**.

Figure 6-4 Currency Rates Validation



2. To execute Exchange Rate validation from the **Currency Rates** window, the following options are available:
   - **Specify Dates:** After selecting this option, a Select Dates Pane is displayed to enter or verify the Start Date and End parameters. These dates will be passed to the batch for execution.
   - **Validate For All Dates:** Select this option to validate all the rates irrespective of dates.
   - **Start Date:** This defaults to the date of last rate validation.
   - **End Date:** This defaults to the current date.

> **Note:**
>
> This option will replace all of the validated Exchange Rate History and can be a time-consuming process depending on the amount of history available to be processed.

6.1.1.2.3 Download

The Download functionality is used to download the Historical Exchange Rates in **.csv** format.

6.1.1.2.4 Importing Currency Rates

To import the Currency Rate, follow these steps:

1. Navigate to the **Currency Rate** page.
2. Click **Actions** drop-down and select **Upload Data**.
3. Select the type of Rate as **Floating** or **Fixed**.
4. Click the **Drag and Drop** option to select the file.

> **Note:**
>
> The excel file, you are uploading should be in a specific format. You can download the template using the **Download Template** option. The Templates for Fixed and Floating Rate Types.
> Currency rates UI bulk upload supports only **YYYY-MM-DD** date format

5. Click **Upload**.

6.1.2 Dimension Management

Dimension Management facilitates you to categorize data into a single object as a Member; define levels and aggregate data to form the Hierarchies, and distinguish each member by defining the required Attributes.

The roles mapped to Dimension Management are as follows:

- Dimension Advanced
- Dimension Authorization
- Dimension Read Only
- Dimension Write

6.1.2.1 Object Security

Object Security helps to secure data and also to decide what each user can access. You can apply Object Security to various object definitions like Hierarchy definitions, Filters, Expressions and Migration definitions.

You can assign specific user roles and functions to user groups, to implement Object Security. To assign user roles and functions, Seeded User Groups and Seeded User Roles are mapped to the User Groups. If you are using the Seeded User Groups, the security to access objects depends on the associated User Groups.

Map your User Group to the folder in case of public or shared folder, for creating/editing/copying/removing an object in Dimension Management module. You should also be the owner of the folder in case of Private Folder. Additionally, the WRITE role should be mapped to your User Group.

To access the link and the Summary page, map your User Group to ACCESS role. You can view all objects created in Public Folders - Shared Folders to which you are mapped and Private Folders for which you are the owner.

6.1.2.2 Components of Dimension Management

You can create and manage the following Object Definitions using from Dimension Management:

- Members
- Attributes
- Hierarchy

6.1.2.3 Attributes

Attributes refers to the distinguished properties or qualifiers that describes a Dimension Member. Attributes are applicable to key dimensions only.

6.1.2.3.1 Attribute Summary Page

The list of created attribute definitions are displayed in the Attribute Summary.

To access the attribute summary page :

1. From the left menu, click **Reference Data.**
2. Select **Dimension Management** and select **Attribute**, to access the The **Attribute Summary Page** .

   The Attribute Summary Page provides the list of attribute Definitions with the following details:

   - **Code** - The Numeric Code assigned to the Attribute Definition.
   - **Name** - The unique Attribute Definition Name.
   - **Data Type** - The Data Type associated with the attribute. The Data Type is set to Date, Dimension, Number or String.
   - **Required** - Select **Yes** or **No** to make this attribute a mandatory value for the associated dimension.
   - **Seeded** - Select **Yes**, if the attribute is seeded by the service or **No** if the attribute is created by the user.
   - **Action** - Click to view, edit, copy or delete an attribute definition. You can also access the list of objects dependent on this definition.

   To filter the summary based on specific search criteria, select and add the required search criteria to the **Search** field and enter/select the specific values.

> **Note:**
>
> **Dimension** is a default and mandatory search filter. Select the dimension to access the member definitions available in that dimension. By default the first dimension from the **Dimensions** list is added as the search entry.

6.1.2.3.1.1 Navigating Attribute Summary Page

To access records in a Summary page, you can search, sort and navigate to multiple pages.

6.1.2.3.2 Creating Attribute Definition

To create a new Attribute for a dimension, complete the following steps:

1. Click the **Add** in the Attribute Summary Page.

   The **Add Attribute Definition** Page is displayed.
2. Enter the following **Attribute Details** :
   - **Dimension** - Select the Dimension for which the new Attribute is getting created.
   - **Numeric Code** - The Numeric Code to be assigned to the new Attribute Definition.

You can enter any number between 0 and 999,999,999, or click **Generate Code**, to auto-generate a unique code. If you enter the value manually, the system will verify if the value is unique and assigns it.

- **Name** - The unique Attribute Definition Name. You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
- **Alphanumeric Field Value** - The name of physical column name that will be used to store attribute value in the Report Dimension Table. You can enter up to 100 characters. We recommend using only Underscore ("_") as a special character.
- **Description** - A brief description about the Attribute Definition. You can enter up to 100 characters. All characters are allowed except " & ' + @ and ~.

3. Enter the following **Attribute Properties** :
   - **Data Type** - Set the Data Type as Date, Dimension, Number, or String from the drop-down list.

> **Note:**
>
> If the data type is **Number**, enter a Scale value >= 0. If it equal to 0, only Integers are enabled. To enable decimal entries, the maximum Scale Value must be > 0 and <= the scale defined for NUMBER in the dimension's underlying attribute table. The maximum value of the NUMBER is set to 22.

   - **Dimension** - (Enabled only for Dimension data type.) Select the Dimension to be associated with the new Attribute Definition.
   - **Default Value** - The default value is set based on the selected data type. The Maximum characters allowed in Default Value field for String Data Type is 1000. The default value is mandatory if this attribute is set as a required attribute.

Table 6-5 Data Type and Default Values

Data Type	Default Value
Dimension	Select the Default Value from the drop-down list of members mapped to the selected Dimension
Number	Enter a Numeric Value based on the define Scale.
Date	Set a valid date.
String	Enter the Alphanumeric Value

   - **Required Attribute** - Select **Yes**, if this attribute is mandatory for the associated dimension members. To set it as an optional attribute, select **No**.
   - **Seeded Value** - Select **Yes**, only when the attribute is seeded out of box by the Cloud Service. For a new attribute, select **No**.
4. After entering the required information, click **Save**, to create a new attribute.

6.1.2.3.3 Managing Attribute Definitions

You can view, edit, copy and delete the existing Attribute Definitions from the Summary Page.

In the Attribute Summary Page, highlight a specific Attribute Definition and click the **Action**. The following Options are displayed.

- **View**- View the **Attribute Details** for a specific attribute definition.

- **Edit**- Edit the **Attribute Details** for a specific attribute definition.
- **Copy**- Copy the definition details and create another attribute Definition by changing the Alphanumeric Code, Numeric Code and Name.
- **Delete**- Delete the Attribute definition.
- **Check Dependency** - View the list of objects dependent on this definition.

Field	Description
View	View the **details** for a selected Attribute.
Edit	Edit theselected Attribute.
Copy	Copy the Attribute Definition Details and create another Attribute Definition by changing the unique values like Alphanumeric Field Value, Numeric Code and Name.
Delete	Delete the selected Attribute.

6.1.2.3.3.1 Viewing Attribute Definition

You can view individual Attribute Definition Details at any given point. The Read Only role should be mapped to your User Group.

To view the existing Attribute Definition details in the Attribute page:

1. Highlight the Attribute Definition and click **Action**.
2. Click **View** .

   The **Attribute Definition** Page is displayed with the details Code, Name, Data Type, Required and Seeded status.

6.1.2.3.3.2 Modifying Attribute Definition

Modify the Name, Description, or Default Value fields of an Attribute Definition. The Write role should be mapped to your User Group.

To modify an existing Attribute Definition in the Attributes summary:

1. Highlight the Attribute Definition and click **Action**.
2. Click **Edit**, to access the Attribute Definition page.

   Edit the required information and click **Save**.
   You can view the updates in the Attributes summary.

6.1.2.3.3.3 Copying Attribute Definition

The Copy Attribute Definition facilitates you to quickly create a new Attribute Definition based on the existing attributes or by updating the values of the required attributes.

To copy an existing Attribute Definition, the Write role should be mapped to your User Group.

Refer to the following steps, to copy an Attribute Definition.

1. Highlight the Attribute Definition and click **Action**.
2. Click **Copy**.

   The Attribute Definition page is displayed with the details: Code, Name, Data Type, Required and Seeded status.

Edit the unique information such as Name, Alphanumeric Field Value, Numeric Code and click **Save**.

6.1.2.3.3.4 Deleting Attribute Definition

You can remove the Attribute Definitions which are not required in the system by deleting from the Attributes Summary.

To delete an attribute definition, the Write role should be mapped to your User Group.

1. Highlight the Attribute Definition and click the **Menu** button.
2. Click the **Delete** button.

   The Attribute Definition is deleted after confirmation.

> **Note:**
>
> You cannot delete a definition if any dependency like Attribute, Hierarchy or Filter is attached to it. Detach the dependency before deleting the definition.

6.1.2.3.4 Dimensions and Associated Attributes

Dimensions and the associated attributes.

The following tables lists the seeded attributes with the details, associated with each dimension.

Table 6-6 Dimensions and Associated Seeded Attributes

Attribute Name	Data Type	Mandatory
Dimension - **Common Chart of Accounts**		
Account Type	Dimension	Yes
Accrual Basis	Dimension	No
Rollup Signage	Dimension	Yes
Dimension - **Financial Element**		
Weighting Financial Element	Dimension	No
Account Type	Dimension	Yes
Column Property	Dimension	Yes
Rollup Signage	Dimension	Yes
Dimension - **General Ledger Account**		
Accrual Basis	Dimension	No
Common Chart of Accounts	Dimension	Yes
Rollup Signage	Dimension	Yes
Account Type	Dimension	Yes
Reconciliation Product	Dimension	Yes
Dimension - **Legal Entity**		
Rate Data Source	Dimension	Yes
Group Company Party	String	Yes
Dimension - **Organizational Unit**		
Offset Organizational Unit	Dimension	No
Dimension - **Product**		

Table 6-6 (Cont.) Dimensions and Associated Seeded Attributes

Attribute Name	Data Type	Mandatory
Accrual Basis	Dimension	No
Common Chart of Accounts	Dimension	Yes
Rollup Signage	Dimension	Yes
Account Type	Dimension	Yes
Amenability Rate	Dimension	Yes
Interest Rate Sensitivity	Dimension	Yes
Product Time Value	Number	Yes

6.1.2.4 Members

Dimension Members refer to the individual items that constitute a dimension when data is categorized into a single object such as Product, Organization, Time, and so on. Members are available within Dimension Management section.

6.1.2.4.1 Member Summary Page

The list of created member definitions are displayed in the Member Summary.

To access the member summary page:

1. From the left menu, click **Reference Data**.
2. Select **Dimension Management** and select **Members**.

   The **Member Summary page** containing the following details is displayed.

   - **Alphanumeric Code**- The alphanumeric code assigned to a member.
   - **Numeric Code**- The numeric code assigned to a member.
   - **Name**- The unique member name.
   - **Is Leaf**- The leaf node status of the member definition.
     - **Yes**- The member is set as a leaf node in any hierarchy and Child cannot be added to this node.
     - **No**- The member is a not a leaf and can have child nodes.
   - **Enabled** - The status of the member definition (Yes/No).
   - **Action**- Click to view, edit, copy or delete a member definition. You can also access the list of objects dependent on this definition.

   To filter the summary based on specific search criteria, select and add the required search criteria to the **Search** field and enter/select the specific values. Use **More Filters** to add additional search criteria.

> **Note:**
>
> **Dimension** is a default and mandatory search filter. Select the dimension to access the member definitions available in that dimension. By default the first dimension from the **Dimensions** list is added as the search entry.

6.1.2.4.2 Creating Member Definitions

You can add new Member Definitions from the Member Summary page.

To create a member definition :

1. To create a member definition, click the **Add** in the **Member Summary** page, to access the **Member Details** page.
2. Enter the following **Member Details** :
   - **Dimension**- Select the dimension to be associated with the new Member.
   - **Numeric Code**- The numeric code to be assigned to the new member definition. You can enter the value between 0 and 999,999,999 manually or click **Generate Code**, to auto-generate a unique code.
     If you enter the value manually, it is assigned after validation.
   - **Alphanumeric Field Value**- The alphanumeric Code to be assigned to the new Member Definition.
     You can enter up to 100 characters and enter only Underscore (“_”) as a special character.
   - **Name**- The unique member definition name.
     You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
   - **Description**- A brief description about the member definition.
     You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
   - **Is Leaf**- Check this option if the member is a leaf of another member. By default, it is set to **Yes**.
     - **Yes**- The member can be used as a leaf node in any hierarchy and child cannot be added to this node.
     - **No**-The member is not set as a leaf and can have child nodes.

     > **Note:**
     >
     > If a member is set as a non-leaf and is associated with child nodes, it cannot be set as a leaf again.

   - **Enabled**- This field is set to **Yes** by default. You can modify the **Enabled** status, after creating the member. To edit a member, refer Editing Member Definition Details.

     > **Note:**
     >
     > You can change the option to **No** only when the particular member is not used in any hierarchy. The disabled members will not be displayed in Hierarchy Rules, or utilities which are based on Hierarchies, such as Hierarchy Filters and Hierarchical Assumption Browsers used in applications.

3. (Optional). Click **Copy**, to attach an existing attribute to this new member definition.

   You can also set the attribute values for a new member definition, manually. Enter/select the attribute values in the **Member Attributes** pane. All the attributes associated with the selected dimension are displayed in the Member Attributes pane.
4. Locate the Attribute to be copied and click **Move** and select **Copy**, located under **Actions**.

5. Click **Save**, to create the new Member definition and view it the Member Summary.

   Click **Actions** and select **Edit Member Details** to edit the member details or select **Save and Add New**, to create the new member definition and proceed with adding another definition.

6.1.2.4.3 Managing Member Definitions

You can View, Edit, Copy, and Delete the existing Member Definitions from the Member Summary page.

In the members summary page, highlight a specific Member Definition and click the **Action**. The following Options are displayed:

- **View**- View the **Member Details** for a specific Member Definition.
- **Edit**- Edit the **Member Details** for a specific Member Definition.
- **Copy**- Copy the Member Definition Details and create another Member Definition by changing Alphanumeric Code, Numeric Code and Name.
- **Delete**- Delete the member definition.
- **Check Dependency** - View the list of objects dependent on this definition.

6.1.2.4.3.1 Viewing Member Definition Details

You can view the details of an individual Member Definition, from Member Summary page.

To view a Member Definition, the Read Only Role should be mapped to your User Group.

You can view the details of an individual Member Definition, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **View** button.

   The Member Definition page is displayed with the details Dimension, Alphanumeric Code, Numeric Code, Name, Is Leaf and Enabled status.

6.1.2.4.3.2 Editing Member Definition Details

To edit the existing Member Definition details, the Write role should be mapped to your User Group.

You can edit individual Member Definition Details, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **Edit** button.

   The Member Definition page is displayed with the details Dimension, Alphanumeric Code, Numeric Code, Name, Is Leaf and Enabled status.

   Edit the required information and click **Save**.

6.1.2.4.3.3 Copying Member Definition Details

To copy the Member Definition Details, the Write role should be mapped to your User Group.

You can copy individual Member Definition Details, to recreate another new Member Definition, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **Copy** button.

The **Member Definition Page** is displayed with the details Dimension, Alphanumeric Code, Numeric Code, Name, Is Leaf and Enabled status.

Edit the unique information such as Name, Alphanumeric Code, Numeric Code and click **Save**.

6.1.2.4.3.4 Deleting Member Definition Details

To delete a Member Definition, the Write role should be mapped to your User Group.

You can delete individual Member Definition Details, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **Delete** button.

   The Member Definition is deleted after confirmation.

6.1.2.5 Hierarchy

Hierarchies refer to Dimension Members that are arranged in levels, with each level representing the aggregated total of the data from the level below. One dimension type can have multiple hierarchies associated with it. Hierarchies are available within the Dimension Management section.

A Default Hierarchy definition is required to support BI Users to perform multidimensional analysis, in the BI reporting. The hierarchy name of a default hierarchy definitions are suffixed with the term **System Hierarchy**. You can only view the details of the default hierarchy, from the Hierarchy Summary page. All orphan members under their corresponding default hierarchy, are automatically updated, when they are added/deleted to/from the system.

6.1.2.5.1 Hierarchies Summary Page

The list of existing hierarchy definitions is displayed in the Hierarchies Summary page.

To access the hierarchies summary page:

1. From the left menu, click **Reference Data**.
2. Click **Dimension Management** and select **Hierarchies**, to access the Hierarchies Summary page containing a list of existing hierarchies with the following details:
   - **Name** - The unique Hierarchy Name.

     > **Note:**
     >
     > The name of a default hierarchy is always suffixed with the term **System Hierarchy**.

   - **Folder** - Folder in which the hierarchy is stored.
   - **Dimension** - Dimension associated with the hierarchy.
   - **Tags** - Labels to simplify the data search and locate the required details.
   - **Action** - Click to view, edit, copy or delete a hierarchy definition. You can also access the list of objects dependent on this definition.

6.1.2.5.1.1 Navigating Hierarchy Summary Page

To access records in a Summary page, you can search, sort and navigate to multiple pages.

6.1.2.5.2 Creating Hierarchy Definitions

To create a Hierarchy Definition in the Hierarchy Summary page, complete the following steps:

1. Click **Add** in the **Hierarchy Summary** page. The **Hierarchy Details** page is displayed.
2. Enter the **Hierarchy Details** as described in the following table:

Table 6-7 Field Description

Field	Description
Name	The unique Hierarchy Definition Name. **Note:** You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
Description	A brief description about the Hierarchy Definition. **Note:** You can enter up to 100 characters. All characters are allowed except " & ' + @ and ~.
Folder	Select the Folder in which the Hierarchy is to be stored.
Dimensions	Select the Dimension to be associated with the new Hierarchy Definition.
Click **Apply**.	
Hierarchy View	The Members associated with the selected Dimension are displayed. You can sort this list in Ascending/Descending order, expand or collapse the list to view in details and search for a specific Member. You can focus on a Member to view the Member Properties. You can add a Child or add a Sibling to an existing Member in the data grid.
Search View	The search results based on the specific keyword entered to search a Member is populated.

Table 6-8 Viewing interactive options for a Member

Icon	Description
Mouse-over a Member to see the following options. Select the required option to take action such as adding a child, deleting a node, paste as child, paste as sibling	

Table 6-8 (Cont.) Viewing interactive options for a Member

Icon	Description
Figure 6-5 Add child, sibling, and leaf	Add a child, sibling and/or leaf.
Figure 6-6 Create and add	Create and a child, sibling and/or leaf to the Member.
Figure 6-7 Delete/undo delete	Delete a node or undo deletion.
Figure 6-8 Cut and paste child/siblings	Move child/siblings up or down as required.

To Add a Child to the Hierarchy:

a. In the **Hierarchy View** tab, mouse-over the hierarchy to which you want to add a child and click the **Add child, sibling and leaf** icon.

b. Select **Add Child** option. The **Add Members** page is displayed.

c. Select the required Member and click **Move Right**, to move the Member to the Selected Members panel. To select multiple members, press CTRL and select the members.
The selected members are added to the **Selected Members** pane.

- Click **Move All Right** to move all members listed in the Available Members pane, to the Selected Members pane. Click **Fetch from DB** to select all nodes/ members in the server.
- Select a member and click **Move Left** to deselect a Member. To remove multiple members, press CTRL and select the members.
- To remove all the members from the **Selected Members** pane, click **Move All Left**.

- You can click **Search** button for the required member using Alphanumeric Code, Numeric Code, Name, Description, Attribute Name, or Attribute Value. Enter the search criteria and Click **Search**, in the Search Panel.
- You can also click **Search** button to toggle the display of Numeric Code left, right, or name and click button to display Alphanumeric Code left, right, or name.

d. Click **Add**. The selected member is displayed as child under data grid panel in the **Hierarchy View** tab.

3. **To add a Sibling to the Child in the Hierarchy Definition:**

   a. Mouse-over the child to which you want to add a sibling and click the **Add child, sibling and leaf** icon.).

   b. Select the option **Add Sibling**.
   The **Add Sibling** Page is displayed.

   c. Select the required Members and **Move Right**, to move the Member to the Selected Members panel.
   The Member is displayed in the **Selected Members** panel.

   d. Click **Add**. The selected Member is added as **Sibling** below the **Parent** under data grid Panel in the **Hierarchy View** tab.

4. **To add a Leaf under a Parent/Child or Sibling**:

   a. Mouse-over the Parent or Child and click the **Add child, sibling and leaf** icon.

   b. Select **Add Leaf**.
   The Add Member Page is displayed.

   c. Select the required Members and click **Move Right**, to move the Member to the Selected Members panel.
   The Member is displayed in the **Selected Members** panel.

   d. Click **Add**. The selected Member is displayed as Leaf below the Parent or Sibling under **Show Hierarchy** Panel in the **Hierarchy View** tab.

5. **To cut and paste Child or Sibling:**

   a. Right-click on any node and select **Cut**.

   b. Right-click on any node and **Paste as Child** or **Paste as Sibling**.

6. **To Delete/Undelete**

   a. Right-click on the node to be deleted and select **Delete Node**.
   The node deleted is struck out.

   b. Right-click and select **UnDelete** to cancel deletion of the node.

7. To view the Member Properties and Member Attributes of a node in the **Hierarchy View** Panel:

   a. Click on a Member.
   The properties such as Alphanumeric Code, Numeric Code, Name, Description, Enabled, Is Leaf, Created By, Creation Date, Last Modified By, Last Modification Date, Attribute, and Value of the selected Member are displayed in the Member Properties and Member Attributes Grids.

   In the Hierarchies page you can also:

   - Click **Collapse** or Expand, to collapse or expand a branch .
   - Click **Focus** or **Unfocus**, to focus or unfocus a selected node except the Root Node.

- Click **Sort** to sort the list in ascending or descending order.

8. Click **Save**.
   The new Hierarchy Definition is created successfully.

6.1.2.5.2.1 Audit Info

The Audit Info section provides details such as Created By and Modified By Users, Creation and Modification Date, and Authorized By user Details. You can add additional information as comments and tags. Tags are labels that help to simplify the data search and locate the required details.

6.1.2.5.3 Managing Hierarchy Definitions

You can View, Edit, Copy, and Delete the existing Hierarchy Definitions from the Hierarchy Summary page.

In the Hierarchy Summary page, highlight a specific Hierarchy Definition and click **Action**. The following options are displayed:

- **View** - View the hierarchy details for a specific definition.
- **Edit** - Edit the hierarchy details for a specific definition.
- **Copy** - Copy the hierarchy details and create another definition by changing the unique values like name, description and so on.
- **Delete** - Delete the hierarchy definition.
- **Check Dependency** - View the list of objects dependent on this definition.

6.1.2.5.3.1 Viewing Hierarchy Definition Details

You can view the details of an individual Hierarchy Definition, using the following procedure:

1. Highlight the Hierarchy Definition and click **Action (three dots)**.
2. Click **View**.

   The Hierarchy Definition page is displayed with the details Name, Description, Folder, Dimension, Start Date and Hierarchy View details.

6.1.2.5.3.2 Editing Hierarchy Definition Details

You can edit individual Hierarchy Definition Details at any given point.

To edit the existing Hierarchy Definition Details:

1. Highlight the Hierarchy Definition and click the **Action (three dots)**.
2. Click **Edit**.

   The Hierarchy Definition Page is displayed with the details Name, Description, Folder, Dimension, Start Date and Hierarchy View details.

   Edit the required information and click **Save**.

6.1.2.5.3.3 Copying Hierarchy Definition Details

You can copy individual Hierarchy Definition Details, to recreate another new Member Definition. To copy the Member Definition Details:

1. Highlight the Hierarchy Definition and click **Action**.

2. Click **Copy**.

   The Hierarchy Definition page is displayed with the details Name, Description, Folder, Dimension, Start Date and Hierarchy View details.

   Edit the unique information such as Name, Description, Folder, Dimension, Start Date and Hierarchy View details and click **Save**.

6.1.2.5.3.4 Deleting Hierarchy Definition Details

To delete a Hierarchy Definition:

1. Highlight the Hierarchy Definition and click **Action**.
2. Click **Delete**.

   The Hierarchy Definition is deleted after confirmation.

> **Note:**
>
> You cannot delete a definition if any dependency like Attribute, Hierarchy or Filter is attached to it. Detach the dependency before deleting the definition.

6.1.2.6 Viewing Data in a Summary Page

A Summary page will contain a list of definitions associated with a specific Dimension Data, Filters, Batch or Schedules.

You can search, filter and customize the view to access the required data faster.

6.1.2.6.1 Searching Summary

Search for a specific Definition based on the following criteria. Select/Enter one or more unique values/tag or Leaf and Enabled status associated with the definition and click **Search**.

6.1.2.6.2 Sorting a Summary Page

Sort the list of definitions, to view a specific definition, in a definition Summary .

To sort the various Definitions list:

- **Sort By**: Group the based on the following fields:
  - **Member Summary** - Dimension, Name, Alphanumeric Code, Numeric Code, Enabled and Is Leaf Status, Attribute Name (if the selected Dimension has Dimension Type Attribute) and Attribute Value.
  - **Attribute Summary** - Branch, Name, Code and Data Type.
  - **Hierarchy Summary** - Dimension, Name, Tag and Folders.
  - **Filter Summary** - Name, Folder and Filter Type.
- **Sort Order**: Sort the Complete list in Ascending/Descending order.

6.1.2.6.3 Setting Number of Records per Page

Customize the number of records per page, to access the required record easily.

At the bottom of the page, you can enter the number of entries that are available on a single page in the **Records** box. By default, this value is set to 8. You can increase or decrease the number of entries that are displayed using the up and down arrows.

To access a particular page, enter that page number in the Page Box located at the bottom of the page.

To navigate between pages:

- Use **First page** to view the entries in the first page.
- Use the **Previous page**, to view the entries in the previous page.
- Use the **Next page**,to view the entries in the next page.
- Use the **Last page**, to view the entries in the last page.

6.2 Common Rules

This section explains about rules which are common across all multiple applications in Profitability and Balance Sheet Management Cloud Service suite like ALM, PFT, and FTP.

Topics:

1. Preferences: This section covers the procedures to set the Global Preferences, Application Preferences, and User Preferences Settings.
2. Management Ledger Configuration: This section covers the procedure to define the Functional Currency and the Fiscal Year Start Month for each registered Management Ledger Table.
3. Filters: Filters allow you to select data using the defined expressions.
4. Expressions: An Expression is a user-defined tool that supplements other IDs and enables to manipulate data flexibly.

6.2.1 Preferences

This section discusses the procedure to set the Global Preference Settings, Application Preference Setings, and User Preference Settings.

Topics:

- Select Preferences
- User Preferences
- Application Preferences
- Global Preferences

6.2.1.1 Select Preferences

To configure the User Preferences, perform the following steps:

1. From the LHS Menu, navigate to **Maintenance**, and select **Preferences** to display the Application Preference Screen.
2. Select the user from Show Preferences for the drop-down list. This has the following options:

- **All User**: If you have Administrator Privileges, you can define preferences for the All User Group and their individual account, which may be the same or different from the All User Settings. The Administrator can also designate the All User Preferences as Editable or Non-Editable on a row-by-row basis. If the individual preference is selected, as is Editable, then End Users can update or override the Administrator's default value for their own individual account. If the Is Editable box is deselected, then End Users cannot change the default for their individual account.
- **End-User**: If you do not have Administrator Privileges, then certain preference items are pre-set by the Administrator and you may not be allowed to change the value. All Application Preference Settings are displayed, regardless of the access privilege.

6.2.1.2 User Preferences

User Preferences Parameters are used to configure the User Settings.

To update the User Preferences, perform the following steps:

1. From the LHS Menu, navigate to **Maintenance** and select **Preferences**.
2. Click the **User** tab and enter following values in as described in following table.

Table 6-9 User Preference settings for PFT Application

Parameter	Description
Parameters - General	
As of Date	All processes reference this date at Runtime to determine the data to include in the process. The As-of-Date value you set in Application Preferences applies to interactive job execution (that is, when you choose to execute a rule directly from a Summary Window). For Batch Processing, the As-of-Date is derived from the Information Date. The As-of-Date is also referenced by some assumptions UI's to display relevant information therein.
Show Execution Parameters	If this option is selected, a pop-up window is displayed whenever you execute a process interactively from a Summary Screen. Within this pop-up window, you may confirm or modify your Run Execution Parameters (As-of-Date and Legal Entity).
Legal Entity	Similar to As-of-Date, all processes reference Legal Entity at Runtime to determine the data to include in the process. The value of the Legal Entity you set in Application Preferences applies to interactive job execution (that is, when you choose to execute a process directly from a Summary Window) and Batch Processing. NOTE: Legal Entity is designed to support implementations that require multi-entity or multi-tenant functionality. If your implementation does not require this functionality, you may utilize the Default Legal Entity in all your processes. Default implies -1 code. The Default Value for the Legal Entity Dimension Column in the instrument data is -1.
Processing – Application Specific Parameters	

Table 6-9 (Cont.) User Preference settings for PFT Application

Parameter	Description
Enable UNDO for Selected Allocations	Set this value to Yes to enable UNDO functionality for individual allocation rules. For details, see Allocation Execution History.
Enable Mass UNDO	Set this value to Yes to enable Mass UNDO functionality. For details, see Allocation Execution History.
Enable UNDO for Selected Batches	Set this value to Yes to enable UNDO for selected batches. For details, see Allocation Execution History.
Enable UNDO for Selected Allocation Models	Set this value to Yes to enable UNDO for selected allocation models. For details, see Allocation Execution History.
Enable UNDO for Ledger Load	Set this value to Yes to enable UNDO for selected ledger loads. For details, see Ledger Load History.
Scenario Values	The Application Preference setting for the Scenario Dimension allows you to run the same rules for different scenarios, such as Actuals, Budget, and so on. These values are inherited by rules that specify Use Application Preferences in their Sources, Drivers, or Outputs. For more details, see the Allocation Specification chapter. • Scenario for Source: When an Allocation Rule's Source is configured as Use Application Preferences in the Allocation Source Section, the value used by the rule in its Source is the one specified in Application Preferences. • Scenario for Driver: When an Allocation Rule's Driver is configured as Use Application Preferences in the Allocation Source Section, the value used by the Allocation Rule in its Driver is the one specified in Application Preferences. • Scenario for Output: When an Allocation Rule's Output (applicable to both Debit and/or Credit) is configured as Use Application Preferences in the Dimension Section, the value used by the Allocation Rule is the one specified in Application Preferences.
Assumption Management Defaults	
Folder Name	This parameter allows you to define the default folder selection. The folder selection for all rule types is defaulted to this selection within the Summary Page search window and when creating a new rule. This selection acts as the Starting Value for convenience only and users can change to any other available value at their discretion.
Access Type	This parameter allows you to set the default access type. Selections include Read / Write and Read Only. This selection acts as the Starting Value for convenience only and users can change at their discretion.

3. Click **Save** to confirm the changes.
   Or

   Click **Restore to Default** to reset the Custom Configuration.

6.2.1.3 Application Preferences

Application Preferences Parameters are used to configure the Settings at the application level.

To update the Application Preferences, perform the following steps:

1. Navigate to **Profitability Management** and select **Preferences**.
2. Click the **Application** tab and enter following values:
   - **Maximum circular allocation iterations**: This value governs the maximum number of circular iterations within a Circular Allocation Model. Its purpose is to ensure that circular models terminate without going into an infinite loop.
3. Click **Save** to confirm the changes.
   Or

   Click **Reset to Default** to reset the Custom Configuration.

6.2.1.4 Global Preferences

To set the Global Preferences, perform the following steps:

1. From the LHS Menu, navigate to **Maintenance**, select **Preferences**, and **Global Parameters**.
2. Enter following values as described in the following table.
   Is Editable status is disabled since individual users are not expected to modify the following parameters.

Table 6-10 Global Preferences

Parameter	Description
Date Format	Select one value from the following list: • dd-MMM-yy • yyyy/MM/dd • MM/dd/yyyy • dd.MM.yyyy • MM-dd-yyyy • yyyy.MM.dd • yyyy/MMM/dd • dd-MMM-yyyy • dd/MMM/yyyy • yyyy.MMM.dd • dd/MM/yyyy • MM.dd.yyyy • dd-MM-yyyy • yyyy-MM-dd • dd.MMM.yyyy • yyyy-MMM-dd

Table 6-10 (Cont.) Global Preferences

Parameter	Description
Pagination Count	Pagination Records determine how many rows are displayed on summary and other screens. If you select Pagination Records to be 25 records, then any screen displaying results in a tabular format displays a maximum of 25 records.
Group Company Legal Hierarchy	This displays list of Legal Entity hierarchies that are configured in Dimension Management. Select one hierarchy that must be used to identify the internal (part of the same financial group) customers of the institutions.
Currency Rate Provider	This displays list of providers of Currency Exchange Rate. Value “Default” is seeded and selected as default. If you load Exchange Rates from more than one source like Reuters and Bloomberg then select one which you want the engine to use during processing. Members of dimension Rate Data Source are displayed in the drop-down list.

3. Click **Save** to confirm the changes.
   Or

   Click **Restore to Default** to reset the Custom Configuration.

6.2.2 Management Ledger Configuration

This screen enables you to define the Functional Currency and the Fiscal Year Start Month for each registered Management Ledger Table.

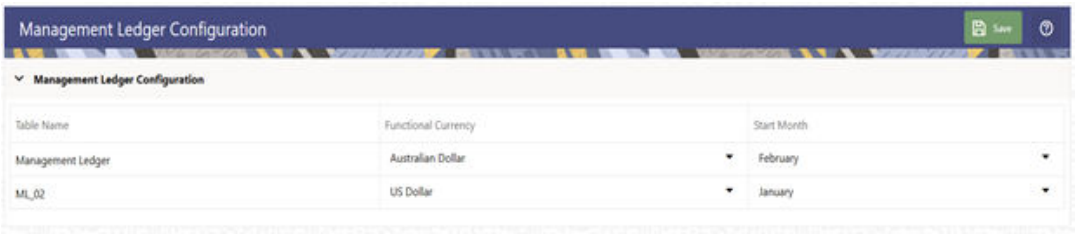
To configure the Management Ledger:

1. From the LHS menu , select **Maintenance**, and then select **Management Ledger Configuration**.

   This UI displays the details for each registered Management Ledger. You can modify the Functional Currency and the Start Month Information for each registered Management Ledger Table, but cannot delete the details for an activated Management Leger Table.

   By default, the UI displays a single row corresponding to the OOTB Regular Management Ledger Table (FSI_D_MANAGEMENT_LEDGER). As and when any Placeholder Management Ledger Table is registered, the UI displays an additional row corresponding to the Registered Management Ledger. On registering and activating of all the Management Ledger Tables, the UI displays six rows pertaining to – one row for the OOTB Management Ledger Table and five rows for the registered five placeholder Management Ledger Tables.

Figure 6-9 Management Ledger Configuration



2. Select the following details:
   - **Functional Currency**: This field allows to select the functional currency that is applicable to the ledger table.
     Accounts and Instruments can be defined across various currencies, but to consolidate the accounts at multiple hierarchy Levels, across units, a common currency is required which you can set here. This currency can be the currency used in the primary economic environment where an entity operates, or in other words, the main currency used by a business unit.

     The default value of Functional Currency for any Management Ledger table is set as 'US Dollar'.
   - **Start Month**: The field is used to select the start month of the fiscal year. The default value of Start Month for any Management Ledger table is set as 'January'.
   - **Table Name**: This field displays the logical name of the Management Ledger table for which you want to input the details. The physical name of the Management Ledger table is displayed in a toolkit on mouse-hover over the logical name of the table.
3. Click **Save**.

6.2.3 Filters

Filters allow you to view and select data using the defined expressions.

6.2.3.1 Filter Definition Types

Filter definitions are created based on the different object types.

The following filter definition types are supported:

- Attribute Filter - filters based on one or more Dimension Type Attributes. For each attribute, you can select one or more values.
- Data element filter -filters the columns based on specific data constraint. These filters are used within other rule types such as Allocation Rules, Transfer Pricing Rules, Asset and Liability Management Rules.
- Group filter - combined filter containing multiple Data element filters logically connected using the **AND** operator.
- Hierarchy filter - filters using Rollup Nodes within a Hierarchy and exclude or include data within an OFSAA Rule.

6.2.3.2 Filter Summary

The **Filters Summary Page** shows the list of available filters.

- To access the Filter Summary page, click **Maintenance** and select **Filter**.

The Filter Summary Page provides the list of already created Filter definitions with the following details.

- **Name** - The unique Filter Name. You can mouse-over the filter name to view more details such as the description of the filter.
- **Folder** - The folder in which the Filter Definition is stored.
- **Filter Type** - One of the following Filter Types associated with the Filter Definition. The filter type is selected based on the type of the object that needs to filtered.
  - Attribute Filter
  - Data element filter
  - Group filter
  - Hierarchy filter
- **Modified By** - The login name of the User who has modified the Filter Definition.
- **Modification Date** - The date of modification.
- **Action** - Using **Action** (**three dots**), you can perform the following tasks on a selected filter definition.
  - View - View the details of selected filter definition.
  - Edit - Edit a filter definition.
  - Copy - Copy a filter definition.
  - Delete - Delete a filter definition.
  - View SQL - View the SQL statement for a filter definition.
  - Check Dependency - Check the dependent objects associated with the filter definition.

To filter the summary based on specific search criteria, select and add the required search criteria to the **Search** field and enter/select the specific values.

6.2.3.2.1 Searching Summary

You can search for a specific Definition based on the following criteria. Select/Enter one or more unique values/tag associated with the definition and click **Search**.

- **Name** - Enter unique filter name, to search for a specific definition based on the entered name,
- **Folder** - Select a specific folder to view the definitions stored in that folder.
- **Filter Type** - Select the Filter type, to view all the definitions associated with it.
- **Description** - Enter one or more keywords, to view the definitions containing those keywords.

6.2.3.2.2 Sorting a Summary Page

Sorting helps to view/group the filter definitions sequentially based on the selected criteria

You can sort/group the Definitions based on the following parameters:

- Filter Type
- Folder
- Name

6.2.3.3 Creating Filter Definitions

To create a Filter definition, complete the following steps:

1. To create a Filter Definition, click the **Add** in the Filter Summary.

   The **Add Filter Definition** Page with the following details is displayed.

   - **Name** - The unique Filter Definition Name.

     > **Note:**
     >
     > You can enter up to 120 characters. All allowed characters are **blank space ( )** , **Underscore (_)**,**comma (,)**, **dot (.)** and " **hyphen (-)** .

   - **Folder** - Select the Folder, to save the Filter definition.
   - **Description** - A brief description about the Filter Definition.

     > **Note:**
     >
     > You can enter up to 250 characters. All characters are allowed except **" & ", "+ ", "@" and "~"**.

   - **Read-Only** - Select this option to give other users the access to only view the Filter Definition.
   - **Filter Type** - Select one of the following filter types, based on the type of the object that needs to filtered. For more information about creating a filter based on the filter type refer, to the respective sections.
     - Attribute Filter
     - Data Element filter
     - Group filter
     - Hierarchy filter
2. After including all the filters, Click **Save**.

   The new Filter Definition is created successfully and added to the Filter Summary.

6.2.3.3.1 Defining an Attribute Filter

Attribute Filters are created using defined Attributes. Attribute filters facilitates you to filter on one or more Dimension Type Attributes.

For each attribute, you can select one or more values.

1. Select the Filter Type as **Attribute**.
2. Select the required **Dimension** from the drop-down list.
3. Select the associated **Attribute** from the drop-down list.

   Only those attributes associated with the selected Dimension are displayed.
4. In the **Attributes Value** pane, click **Search**. The list of attribute values associated with the selected Attribute are displayed.

5. Click the **Action** adjacent to the attribute to be added and click **Copy**.

   The selected Attribute value is added the **Attribute Values** pane.

6. After adding the required filters, click **Save**, to add the Filter definition to the Filter Summary page.

   The filter definition is added and a confirmation message is displayed.

   To Delete a Filter, highlight the filter and click **Delete**.

   To view the SQL Query for a filter, highlight the filter and click **View SQL**.

6.2.3.3.2 Defining a Data Element Filter

Data Element Filter is a stored rule that expresses a set of constraints.

Data Element Filters can access most instrument columns and most columns in the Management Ledger. Data Element Filters are used within other rule types such as Allocation Rules, Transfer Pricing Rules, Asset and Liability Management Rules.

Only columns that match the data type of your Data Element selection are displayed in the drop-down list. For example, Balances between 10,000 and 20,000 Accounts opened in the current month Loans with amortization terms greater than 20 years.

Refer to the following steps, to create a Data Element filter:

1. Select the required database table from the **Table Name** drop-down list.
2. Select one or more columns from the **Column Name** to be included in the filter for viewing specific values.

   The columns that are present in the selected Database table are only listed.

3. Select the **Data Element** from the drop-down list.

   The Data elements are listed as a combination of the selected Database table and the selected column

4. Select one of the following Filter Methods to be applied to each data element, add the filter conditions based on the selected method.

   - Specific Values Filter
   - Ranges Filter
   - Another Element Filter
   - Expressions Filter

5. After adding the required filters, click **Save**, to add the Filter definition to the Filter Summary page.

   The filter definition is added and a confirmation message is displayed.

   To Delete a Filter, highlight the filter and click **Delete**.

   To view the SQL Query for a filter, highlight the filter and click **View SQL**.

6.2.3.3.2.1 Specific Values Filter

You can match a selected database column to a specified value or values, using the Specific Value filter.

You may either include or exclude Specific Values, to view the data.

To create a specific value filter, proceed with the following steps, after selecting the Database table name, column name and the Data element.

1. Select **Specific Values** in the Filter Methods.
2. Enter the required filter value in the **Values** column.
   - When comparing Specific Values for a date type column, select the date using the Calendar control.
   - When comparing Specific Values for a character type column, enter only Character strings.
3. To add another row click **Add** (Plus sign) on the right hand side corner of the **Specific Values** pane. Repeat the previous step, to enter multiple values.
4. To include or exclude the specific values, in the results:
   - To view the results containing the entered specific value, select the value and select **Include**. Click **Add** to add the expression to the filter condition.
   - To view the results without the entered specific value, select the value and select **Exclude**. Click **Add** to add the expression to the filter condition.
5. To delete a value, select the value by clicking the check-box adjacent to the value. Click **Delete**.
6. To view the SQL statement for the specific value, select the value and click **View SQL**.

6.2.3.3.2.2 Ranges Filter

You can match a selected database column to a specified range/ranges of values or to ranges of values.

You may either include or exclude Specific Values, to view the data.

To create a Ranges filter, proceed with the following steps, after selecting the Database table name, column name and the Data element.

1. Select **Ranges** in the Filter Methods.
2. Refer to the following steps, and create a range or multiple ranges, view require data.

   You can use Ranges for data types - Term, Frequency, Leaf, Code, Identity, Date, Numeric and Varchar.

   a. Select the **From Operator** (> or >=), to include the lower limit of the range.
   b. Enter the **Value From** which the Range begins.
   c. Select the **To Operator** (< or <=), to indicate whether to include the specified value in the higher limit of the range.
   d. Enter the **Value To** , to include the higher limit of that range.
3. To include or exclude the specific range, in the results:
   - To view the results containing the entered specific range, select the range and select **Include**. Click **Add** to add the range to the filter condition.
   - To view the results without the entered specific range, select the range and select **Exclude**. Click **Add** to add the range to the filter condition.
4. To delete a range, select the range by clicking the check-box adjacent to the value. Click **Delete**.
5. To view the SQL statement for the specific range, select the range and click **View SQL**.

6.2.3.3.2.3 Creating Another Element Filter

You can match a selected database column to another database column.

When creating an Another Data Element Filter Method, you may only compare a column to other columns that you have already selected (the Data Element drop-down list box will only contain columns that you have already selected).

.

To create an Another Element filter, proceed with the following steps, after selecting the Database table name, column name and the Data element.

1. Select **Another Element** in the Filter Methods.
2. Select a **Table Column**, that needs to be compared with the Data Element Column.
3. Select one of the following mathematical operators for comparison.
   - **=** - Equal to
   - **<>** = Not equal to
   - **<** - Lesser than
   - **>** - Greater than
   - **<=** - Lesser than or equal to
   - **>=** - Greater than or equal to
4. Select a **Data Element**, that needs to be compared with the Table Column.
5. Click **Add** to add the expression to the filter condition.

   To edit an existing Another Element Filter entry, select the entry listed in the **Filter Condition** pane. Modify the expression in the Another Element Pane and click **Update**.

6.2.3.3.2.4 Expressions Filter

Expressions filters help to include calculated conditions in filters.

To create an Expression filter, proceed with the following steps, after selecting the Database table name, column name and the Data element.

Refer to the following steps, to create a Expressions filter:

1. Select **Expressions** in the Filter Methods.
2. Refer to the following steps, to include an expression and filter the data based on the calculated output.
   a. Select one of the **Operator** (> or >=), to process the data in the specific column.
      - **=** - Equal to
      - **<>** - Not equal to
      - **<** - Lesser than
      - **>** - Greater than
      - **<=** - Lesser than or equal to
      - **>=** - Greater than or equal to
   b. Select the **Expression** for comparing the data in the selected table column.
3. Click **Add** to add the expression to the filter condition.

To edit an existing Expression Filter entry, select the entry listed in the **Filter Condition** pane. Modify the expression in the Expressions pane and click **Update**.

4. To delete a range, select the range by clicking the check-box adjacent to the value. Click **Delete**.
5. To view the SQL statement for the specific range, select the range and click **View SQL**.

6.2.3.3.3 Defining Group Filter

Group Filters can be used to combine multiple Data Element Filters with a logical "AND".

For each attribute, you can select one or more values.

1. Select the Filter Type as **Group**.
2. Select the checkbox(s) adjacent to the required Data Element Filters in the **Available Filters** pane, and click **Move Selected Available Filters to Selected Filters**, to move them to **Selected Filters** pane.

   To select all the filters, click **Select All**.

   To search for a specific filter, enter the few letters from the filter name, and click the **Search**
3. To remove a filter from the **Selected Filters** pane, select the filter and click **Move Selected Filters to Available Filters**. Click Select All to move all the selected filters.
4. After adding the required filters, click **Save**, to add the Filter definition to the Filter Summary page.

   The filter definition is added and a confirmation message is displayed.

6.2.3.3.4 Defining Hierarchy Filter

Hierarchy Filter allows you to utilize Rollup Nodes within a Hierarchy to help you exclude (filter out) or include data within an OFSAA Rule.

For each attribute, you can select one or more values.

1. Select the Filter Type as **Hierarchy**.
2. Select the required **Dimension** from the drop-down list.
3. Select the required **Folder** from which you want to select the Hierarchy.
4. Select the **Hierarchy** from the list of Hierarchies displayed based on the selected Folder.
5. Click **Launch Hierarchy Browser**, access the Hierarchy Browser and select/unselect the Child/Sibling Members to be included in the Filter.

   For more information about Hierarchy browser, refer Hierarchy Browser .
6. After adding the required filters, click **Save**, to add the Filter definition to the Filter Summary page.

   The filter definition is added and a confirmation message is displayed.

6.2.3.3.4.1 Hierarchy Browser

The Hierarchy Browser contains the list of available Members associated with the selected Hierarchy.

You can view the list of available members and the child nodes associated with the members, in the **Show Hierarchy** tab.

- To select a Member, click the check-box adjacent to the member.

> **Note:**
>
> When a Member is selected, all the associated child members are also included in the Hierarchy filter. To include only a specific child member, expand the node and selected the required child member.

- To search for a specific member, click **Search**. Enter the keyword in the **Search Value** and click **Search** adjacent to the Search box.
  The searched members are displayed in the **Search Results** tab.
- You can view a selected tree member in a flat list, in the **Show Members** tab.
- To navigate through the list of available members.
  - Click **Expand/Collapse** to expand/collapse all the nodes. You can also click **Node** next to a member, to expand or collapse a Member node.
  - Click **Sort Ascending/Descending**, to view the list Members in alphabetical order.
  - In Search Results tab, click **Focus/Unfocus**, to select/deselect any specific node.

6.2.3.4 Managing Filter Definitions

You can view, edit, copy, delete and view SQL for the existing Filter Definitions from the Filter Summary.

In the Filter Summary Page, highlight a specific Filter Definition and click the **Action** (three dots). The following Options are displayed.

- View - View the details of selected filter definition.
- Edit - Edit a filter definition.
- Copy - Copy a filter definition
- Delete - Delete a filter definition.
- View SQL - View the SQL statement for a filter definition.
- Check Dependency - Check the dependent objects associated with the filter definition.

6.2.3.4.1 Viewing Filter Definition Details

You can view the details of an individual Filter Definition, using the following procedure:

1. Highlight the Filter Definition and click **Action** (three dots).
2. Click **View** .

   The Filter Definition page is displayed with the details such as Name, Description, Folder, Filter Type, Filter Conditions and Audit Info.

6.2.3.4.2 Editing Filter Definition Details

You can edit individual Filter Definition details at any given point. To edit the existing Filter Definition details:

1. Highlight the Filter Definition and click **Action** (three dots).
2. Click **Edit**.

The Filter Definition Page is displayed with the details: Name, Description, Folder, Filter Type, Filter Conditions and Audit Info. Edit the required information and click **Save**.

6.2.3.4.3 Copying Filter Definition Details

You can copy individual Filter Definition Details, to recreate another new Member Definition. To copy the Member Definition Details as follows:

1. Highlight the Filter Definition and click **Action** (three dots).
2. Click **Copy** button.

   The Filter Definition Page is displayed with the details Name, Description, Folder, Filter Type and Filter Conditions.

   Edit the unique information such as Name, Description, Folder, Filter Type and Filter Conditions, and click **Save**.

6.2.3.4.4 Deleting Filter Details

To delete a Filter Definition:

1. Highlight the Filter Definition and click **Action** (three dots).
2. Click **Delete** .

   The Filter Definition is deleted after confirmation.

> **Note:**
>
> You cannot delete a definition if any dependency like Attribute, Hierarchy or Filter is attached to it. Detach the dependency before deleting the definition.

6.2.3.4.5 Checking Dependencies

To check the dependencies of a Filter Definition from the Filters Summary:

1. Click **Action** adjacent to the filter definition.
2. Click the **Check Dependency** .

   The list of Dependent Objects is displayed with Object ID, Name, and ID Type of the dependent Objects.

6.2.3.4.6 View SQL

To view SQL of a Filter Definition, perform the following steps:

1. Highlight the Filter Definition and click **Action** .
2. Click the **View SQL** button.

   The SQL statement of Filter Definition is displayed.

6.2.4 About Expressions

An Expression is a user-defined tool that supplements other IDs and enables to manipulate data flexibly.

Expressions help you to perform the following tasks, easily.

- Specify a calculated column that the Oracle Financial Services Analytical Application derives from other columns in the database.
- Calculate assignments in data correction.
- Create calculated conditions in data and relationship filters.

6.2.4.1 Roles and Functions

The following table lists the role codes and function codes required to use the expressions editor. Based on the role that you are mapped to, you can access read, modify or authorize Expression definitions.

Table 6-11 Roles and Functions

Role Code	Function Code
EXPR_WRITE	EXPR_ADD
EXPR_ADV	EXPR_AUTH
EXPR_MAINT	EXPR_SUMM
EXPR_OPER	EXPR_MOD
EXPR_AUTH	EXPR_VIEW
	EXPR_DEL
	EXPR_COPY

6.2.4.2 Expressions Summary Page

The **Expression Summary** page displays the list of pre-defined Expressions with other details such as the Expression Name, Folder Name, Return Date, Created By and Creation Date.

You can also search for a specific Expression definition based on Folder Name, Expression Name, and Return Type.

6.2.4.3 Adding Expression Definition

This option allows you to add an expression definition using columns, operators, functions and constants.

To create a new Expression from the Expressions Summary page:

1. Click **Actions** and select **Add** in the Expressions summary page.

   The **Add Expression** page is displayed.

2. Enter the unique **Expression Name**.

> **Note:**
>
> The characters &' " are restricted

3. Enter the **Description** for the new expression.

> **Note:**
>
> The characters ~&+' "@ are restricted

4. Enable the **Access Type** if the other users can view and edit the expressions. By default, the Access Type is set to Read Only and the users can only view the expressions.
5. Select the **Folder Name** from the drop-down list.

   The new expression is associated with the selected folder. The folders are displayed based on the role and the access level of the logged in user. The folder names are displayed as sorted in alphabetical order in the dropdown menu.
6. Select the **Table** to process using the new Expression. Tables are limited to Instrument tables, Virtual Portfolio table, Transaction Summary tables and PFT Lookup tables.
7. Enter the expression to process the data based on the selected table. Refer to the following rules while adding/editing an expression.

> **Note:**
>
> - You can edit and navigate within the expression editor only using the keyboard.
> - To select functions, columns and other entries, from the drop-down list, always use the mouse.

   - To add a column, select the **Column** option. Enter **wildcard search** or part of the column name and click **Search Columns**. The columns present in the selected table are displayed in drop-down list. Single click on the column name in the list to include the column in the Expression editor.
   - To add a Function, select the **Function** option. Navigate to the required function using the mouse and click to include it in the expression editor. To include value or arguments within the function, focus your pointer to the required position, using the Keyboard. Select the required value using the mouse. You can include a column or constants as arguments.
   - To include numerical values in the expression, select **Constants** option, enter the number in the textbox and click the + button.
   - To add numerical operators (+, -, * and /), select the **Operator** option. Navigate to the required operator and click to include it in the expression editor.
   - To delete an entry in the Expressions editor, position the pointer at the required entry and press **Backspace key**. You can click **Reset** to clear the expression editor completely.
8. After entering the required expression, click the **Check mark** button to validate the expression add it to the Expression tile.

6.2.4.4 Managing Expressions

You can view, edit, copy, delete and view SQL for the existing expressions Definitions from the Expressions Summary Page.

- In the Expressions Summary Page, highlight a specific Expression Definition and click **Action**. The following Options are displayed.
  - **View** - View the Expression Details for a specific Expression Definition.
  - **Edit** - Edit the Expression Details for a specific Expression Definition.
  - **Copy** - Copy the Expression Definition details and create another Definition by changing the unique values like Name and Description.
  - **Delete** - Delete the selected Expression definition.
  - **View SQL** - View the SQL statement for the selected expression.
  - **Check Dependencies** - View the list of dependencies associated with the selected Expression definition.

6.3 Application Specific Rules

This section explains about the Funds Transfer Pricing Cloud Service specific modules which are particularly referenced for transfer pricing calculations.

Topics:

1. Allocation Specification: This topic covers the Allocation Specification feature of Profitability Management Cloud Service.
2. Allocation Models: An Allocation Model consists of a list of individual allocation rules that can be executed as a single unit.
3. Execution History: The Execution History screen displays the historical executions of Allocation Rules/Models and Management Ledger loads.
4. Ledger Load History: Ledger Load History allows you to review the Runtime History of a Management ledger Load.
5. Static Table Driver: Static Table Drivers are declared as drivers in the Driver process tab for allocation rules of the type Static Driver Table.
6. Lookup Table: Lookup Tables are user-defined database tables that are created to hold user data to match Instrument level measures or attributes and thereby deduce a return factor.
7. Lookup Table Driver: Lookup Table Driver rules are used in conjunction with Allocation rules (of the Lookup Driver Table type) to match Instrument level data with data from user-defined lookup tables.

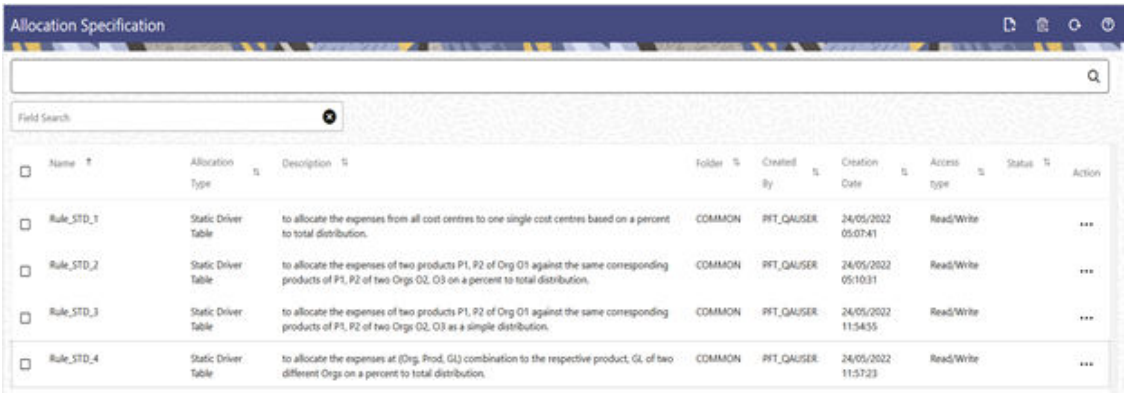
6.3.1 Allocation Specification

Profitability and Balance Sheet Management (PBSM) Cloud Service's Allocation Specification Documentation covers the following topics:

To open the Allocation Specification summary screen, select **Profitability Management** from the LHS menu, select **Rule Specification**, and then select **Allocation Specification**.

When you navigate to the Allocation Specification summary screen for the first time, the Allocations stored within your current default folder are presented in a summary table.

Figure 6-10 Allocation Specification summary screen



The title bar of the summary screen displays several actions for the user. They are:

- **Add**: Click Add to build a new Allocation Rule. The Add icon is disabled if any rows in the table are selected.
- **Multiple Delete**: Select one or more rules in the table and then click Delete 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 Help to view the Allocation Specification help page.

The Allocation Specification summary can be divided under two sections – the Search section and the summary table.

There are two search options provided to search the Allocation Specifications on the summary screen.

To search the Allocation Rules, perform the following steps:

1. Click the **Search** icon on the Search pane to display the Criteria window.
2. Enter the Allocation Rule **Name**, **Description**, **Folder**, or the **Allocation Type** and click **Search** to display the Allocation Rules 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 screen displays the search results that meet the search criteria in a table containing all the Allocation Rules.
5. The other method to search an Allocation Rule is using the **Field Search** option. The field search is an inline wildcard 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.

Allocation Specification Summary Table

In this section of the UI, a table containing all the Allocation Rules are alreadt created or the Rules that meet your search criteria with the following details:

- **Name**: Displays the Allocation Rule's short name. Hovering over an Allocation Name displays the Allocation Rule's Object_ID and the Object_Code.
- **Allocation Type**: Displays an Allocation Rule's Type. The following rule types are supported:
  - Constant

  - Static Driver
  - Leaf
  - Field
  - Dynamic Driver
  - Static Driver Table
  - Lookup Driver Table
- **Description**: Displays the Allocation Rule's long name.
- **Folder**: Displays the folder in which the rule is created.
- **Created By**: Displays the name of the user who created an Allocation Rule.
- **Creation Date**: Displays the date and time at which an Allocation Rule was created.
- **Access Type**: Displays the “Read/Write” or “Read Only” property of an Allocation Rule. The creator of a rule only may change its access type.
- **Status**: Before executing an Allocation Rule for the first time, the status is blank. After executing an Allocation Rule, the appropriate status of the rule is displayed among Ongoing, Success, or Failed.
  For a successful or a failed execution, the Log Viewer screen can be invoked by clicking on the status of a rule. The Log Viewer screen displays the logs/messages for the execution.
- **Action**: Displays the list of the following actions that can be performed on the rule.
  - **View**: Click the View icon to view the contents of an Allocation Specification Rule on a Read-Only basis in the Allocation Specification detail screen in view mode.
  - **Edit**: Click the Edit icon to modify a previously saved Allocation Specification Rule in the Allocation Specification detail screen in edit mode.
  - **Run**: Click Run to execute the selected Allocation Specification Rule. When you **Run**, the Run Execution Parameters window opens up to show the process name being executed and take user input of Run Time Parameters – the As-of-Date and the Legal Entity. The As-of-Date can be reset in the User Preferences for Profitability Management.
  - **Save As**: Click on this option to create a copy of an existing Allocation Specification rule. The Save As pop-up window allows you to enter the Name, Description, Folder, and Access Type Details for the copy rule.
  - **Delete:** Click Delete to delete the rules you have selected.
  - **Check Dependencies**: This button is to check for any dependency of the selected object with other objects in the application. On click of this action, the Dependent Information window is displayed with the Object Name, Object Type, Object Subtype and the Version of the dependent objects. The ‘Higher Order Dependency’ states if the selected object has an upstream objects dependency and is to be treated as the actual dependency of the selected object. While, the ‘Lower Order Dependency’ displays the downstream objects dependency of the selected object. If an object has a Higher Order Dependency then the object cannot be deleted without removing the dependency first.

You may select or de-select all of the Allocation Rules in the summary table by clicking on the check-box in the upper left-hand corner of the summary table directly to the left of the Name Column Header.

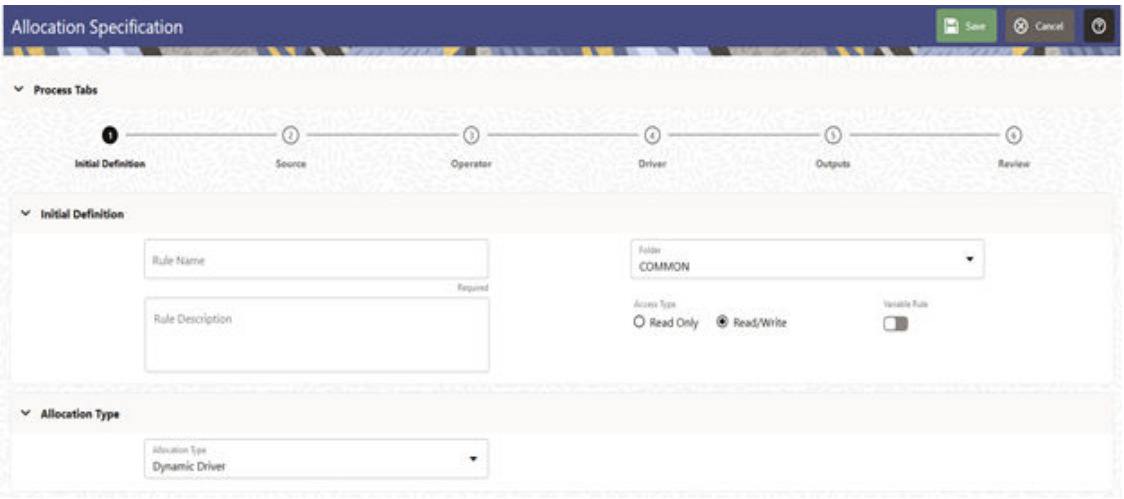
6.3.1.1 Detail Screen

Click on **Add** from the Title bar of Summary Screen or Edit/View an Allocation Rule from Summary to launch into the Allocation Specification Detail Screen.

Navigation in Detail screen

The Allocation Specification Detail Screen is composed of six Process Tabs that are described in the following sections. The appearance of the Detail Screen depends on the Tab that is active, which in turn is dependent on the Allocation Type selected for the Rule.

Figure 6-11 Allocation Specification Detail Screen in New Mode



6.3.1.1.1 Process Tabs Pane

The Process Tabs Pane is arranged in a linear train fashion with each button or step representing one process. The button icon is blank when the tab is not defined and turns green when the definition is complete. A tab that is undergoing modification turns black.

Each of the six Process Tabs is designed to create, edit, or view different components of an Allocation's Specification. You may navigate from one tab to any other tab at any time. The six Process Tabs are as follows:

- Initial Definition
- Source
- Operator
- Driver
- Outputs
- Review

6.3.1.1.2 Initial Definition Process Tab

The Detail Screen launches itself into the first tab called the Initial Definition Process Tab. The Initial Definition Tab is organized under two panes.

The Initial Definition pane allows user to specify the Rule Name, Rule Description, Folder, and the Access Type of an Allocation Rule.

The Allocation Type pane allows you to specify the Allocation Type of the Allocation Rule.

Initial Definition Pane

Specify the Allocation Rule Name and Description, select a Folder in which the Allocation Rule is to be stored, and specify whether you want the Allocation Rule to be **Read/Write** or **Read Only** (Access Type). Naming your Allocation Rule is required before it is saved. Default values for Folder and Access Type are stored in Application Preferences for Profitability Management Cloud Service. It also hosts the toggle button of Variable Rule.

Figure 6-12 Initial Definition Pane

Variable Rule

Legal Entity is an optional Run-time Parameter. If the Disable Legal Entity check box in the Application Preferences Screen is checked, then the Legal Entity will no longer be a Run-time Parameter.

If Legal Entity is disabled, then you must select a value for the Legal Entity Dimension in all applicable tabs while defining a Variable Allocation Rule in the Allocation Specification Screen.

Figure 6-13 Initial Definition Pane with Variable Rule selected

For already defined Variable Allocation Rules, edit the Allocations, and modify the value of the Legal Entity Dimension in all applicable tabs in the Allocation Specification Screen. The value of Legal Entity is used when your Rule Execution is specified within your Batch Definition (for Batch Processes) or is obtained from your Profitability Management Cloud Service Application Preferences (for interactive executions launched from a Summary Screen). If this check-box is not selected on the Initial Definition Process Tab, then you must specify a value for Legal Entity in your Allocation Rule's Source, Driver, and Outputs.

> **Note:**
>
> Legal Entity is designed to support implementations that require Multi-Entity or Multi-Tenant functionality. If your implementation does not require this functionality, you may utilize the Default Legal Entity in all your processes and you may declare all your Allocation Rules to be Variable.

Allocation Type Pane

When you initially build an Allocation Rule, you must select its Allocation Type. After an Allocation Rule is saved, you may no longer change its type. After you have chosen an Allocation Type on the Initial Definition Process Tab, the appearance of subsequent Process Tabs depends upon the Allocation Type you have chosen.

The available rule types are as follows:

- Constant
- Static Driver
- Leaf
- Field
- Dynamic Driver
- Static Driver Table

Allocation Types

The following list describes the Allocation Types:

- **Constant**: A Constant Allocation Rule creates a simple balanced transaction consisting of one debit and one credit. You may optionally specify either one debit or one credit (at a minimum, you must supply at least one debit or one credit). The Constant Rule Type only operates against the Management Ledger. For Constant Allocation Rules, the Operator and Driver Process Tabs are disabled; specify a fixed amount in the Source Tab and debit and/or credit in the Outputs Process Tab.
- **Static Driver**: The Static Driver Method enables you to perform simple factor calculations against a set of source balances. The source balances can be drawn from the Management Ledger Table, Instrument Tables, or Transaction Summary Tables. For Static Driver Rules, the Driver Process Tab is disabled. For this kind of rule, define where to get your Source Data on the Source Process Tab, a Static Driver Amount on the Operator Process Tab, and the resulting debits and/or credits on the Outputs Process Tab.
- **Leaf**: Leaf type Allocations are used only against the Management Ledger Table. They are used to operate between two sets of rows that differ in a single Dimension.
- **Field**: A Field type Allocation is used to multiply two columns within a single row in an Instrument Table update Allocation Rule.
- **Dynamic Driver**: Dynamic Driver Allocation Rules aggregate or distribute balances using Dynamic Data (Business Resident Driver Data) such as Headcount, Square Footage, or Instrument-Level Balances. Dynamic Driver Data is not limited to statistics sourced as part of your ETL load to the OFSAA Data Model. Dynamic Driver Data can be “captured” or developed within an Allocation Rule. For example, balances by product within each Cost Center can normally be obtained from your Instrument Data. You can build Allocation Rules to aggregate these statistics from your Instrument-Level Data and post them to your Management Ledger for use in subsequent rules, or you can write an Allocation that

develops this set of driver data by querying your Instrument Data at Runtime. The Driver Data obtained from your instruments is not limited to balances. Examples of Instrument Level Dynamic Drivers you might use in Allocation Rules include:

- The number of accounts by product by Cost Center by year of origination.
- The number of loan payments processed by the loan processing center by month.
- ATM transaction counts by region by month.

Uniform Method: The most common Distribution Methods for the Dynamic Driver type of allocation are:

- Percent-to-Total
- Force to 100%
- Simple Method
  Dynamic Driver Allocation Rules and Methods are described in detail in the Driver Process Tab and Output Process Tab sections.

- **Static Driver Table**: Static Driver Table Allocation Rules offer functionality similar to Dynamic Driver Allocation Rules but use Driver Data that is stored in a Profitability Management Rule type called Static Table Driver. For more information on how to build and use Static Table Driver Rules, see Static Table Drivers.

Definitions of Static and Dynamic Drivers

Most Allocation Rules distribute, or aggregate balances using the Driver Data and can be used in the following ways:

- Expense Allocations as a function of Square Footage occupied or Headcount.
- Aggregation of Instrument Balances to the Management Ledger.
- Reclassification of Management Ledger Balances to Dimensions not found in the original General Ledger Data.

Drivers can be stored as components of your overall Allocation Model, or they can be stored as facts within your Business Data. Headcount and Square Footage Statistics, for example, are frequently stored as memo accounts within your General Ledger. When you load the OFSAA Management Ledger Table with your General Ledger Data, those Headcount and Square Footage statistics can be utilized as drivers within your Allocation Rules. These kinds of Business-Data Resident Drivers are referred to as Dynamic Drivers.

In some other cases, you will embed your Driver Data into an Allocation Rule or into a Driver Table that the Allocation Engine supports. These kinds of drivers are referred to as Static Drivers. The Profitability Management Cloud Service supports the following types:

- Static Driver
- Static Driver Table

Dynamic Drivers often have many advantages over Static Drivers. An Allocation Rule that uses a Static Driver takes the same value or values every time you use it in a rule, but an Allocation Rule that uses a Dynamic Driver may have different driver sets from day to day or month-to-month. Additionally, you must normally pre-compute your Static Drivers and Dynamic Drivers that are generated at Run time. Dynamic Drivers, frequently used in full cost-Absorption Allocation Models, are generated by other Allocation Rules.

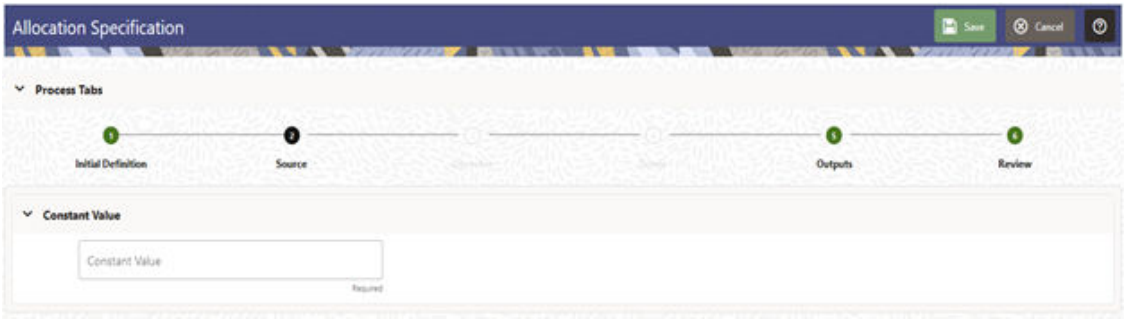
Static Drivers sometimes have advantages over Dynamic Drivers. For example, you may have pre-computed unit costs that you wish to use to drive your allocations to generate Partial Absorption Costing.

6.3.1.1.3 Source Process Tab

The Source Process Tab is to be used to specify an Allocation Rule's Data Source.

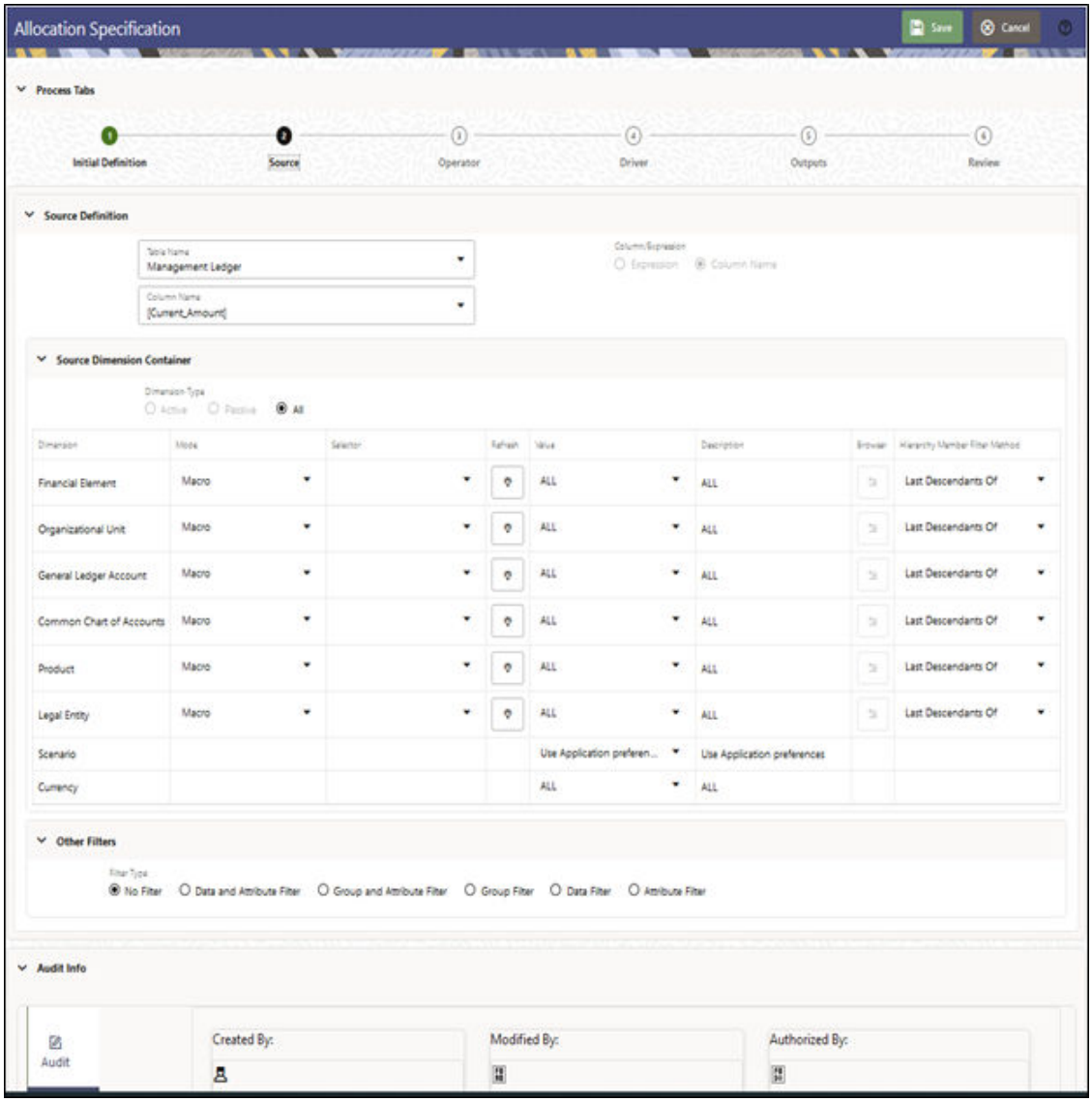
For a Constant Type Allocation Rule, you need to specify an amount as follows:

Figure 6-14 Allocation Specification Source Process Tab



For all other types of Allocation Rule, the Source Process Tab contains the Source Definition Pane, the Source Dimension Container, and Other Filters Pane.

Figure 6-15 Source Process Tab for all rule types except Constant type



6.3.1.1.3.1 Source Definition Pane

The Source Definition Pane is the parent pane of the Source process tab and hosts two sub sections of – the Source Dimension Container and the Other Filters. This parent pane allows the user to select a Source Table and then select either a Column from the selected table or an Expression on the selected table, that serves the Source Data for the Allocation Rule.

Figure 6-16 Source Definition Pane

6.3.1.1.3.1.1 Management Ledger Source

This section describes using the Management Ledger as the Source in Allocation Rules.

The Management Ledger is a Seeded Table of a new Management Ledger Class of Tables (see the Data Model Extension Guide for details on adding User-Defined Dimensions to the Management Ledger or for defining new User-Defined Management Ledger Tables.)

When your Source is the Management Ledger Table, use the <Current Amount> macro as your column name. The Management Ledger Table is the default table for new Allocation Rules (except for the Constant type), and <Current Amount> is the default column. The <Current Amount> macro selects the current month from your Management Ledger based on your As-of-Date and Fiscal Year definitions. If your As-of-Date is set to any day in March, <Current Amount> is interpreted as Fiscal Month 3. If your fiscal year begins in April, your March data is stored in the Management Ledger under Fiscal Month 12, since March is the last month in your Fiscal Year.

> **Note:**
>
> Allocation Rules that aggregate instrument-level data to the Management Ledger Table maintain literal As-of-Dates when posting to the Management Ledger, but when data is retrieved from the Management Ledger Table (such as in Allocation Sources or Allocation Drivers), it is consolidated into a month-to-date balance. For example, if you perform daily instrument-level Funds Transfer Pricing and if you use an Allocation Rule to aggregate daily Funds Transfer Pricing Charges or Credits from the instrument level to the Management Ledger, each day's charges and credits are posted to the Management Ledger by As-of-Date (by business date). Allocation Rules that reference these Management Ledger balances, however, combine the daily postings to obtain month-to-date balances. Similarly, all outputs at the Management Ledger level are inherently month-to-date balances.

When your Source is the Management Ledger table, the following macros are supported:

- <Last_Mo_Amount>
- <Months_Ago_Amt>
- <Current_Amount>
- <YTD_Amount>
- <Months_Ago_YTD_Amt>
- <Last_Mo_YTD_Amt>

<Last Mo_Amount> selects month-to-date balances from the month before your As-of-Date. <Months_Ago_Amount> selects month-to-date balance as of a designated number of months ago. For example, with a typical January to December fiscal year, if today's As-of-Date is March 31, 2015 (Fiscal Month = 3, Fiscal Year = 2015) then in the Enter Months field, enter 6 months ago. This corresponds to September 2014 (Fiscal Month = 9, Fiscal Year = 2014). The month range for entering Months is from -99 to 999.

> **Note:**
>
> When you select any of these macros, the Entered_Balance column in the Management Ledger Table is selected.

6.3.1.1.3.1.2 Instrument or Transaction Summary Source

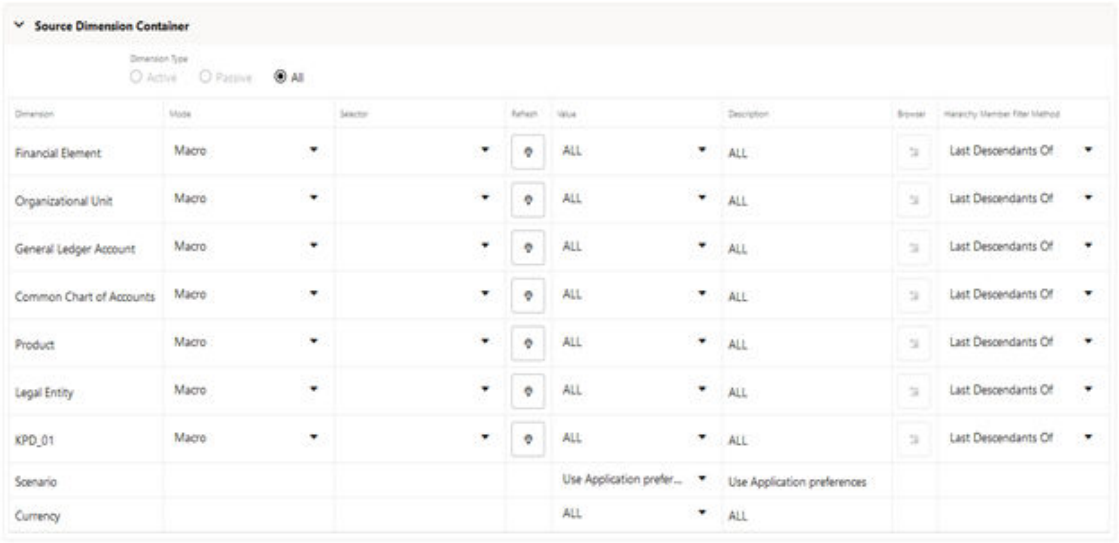
When your Source is an Instrument or Transaction Summary Table, you may choose any valid measure in the table. Valid measures include only rates, balances, and numeric statistics such as activity counts.

6.3.1.1.3.2 Source Dimension Container

The Source Dimension Container is used to provide dimensional constraints on your Source Data. For any Dimension, you may constrain your Source Data by selecting a leaf member, a roll-up node member within a Hierarchy, or a Hierarchy Filter. As and when a placeholder KPD is registered, the registered KPD appears in the dimension list in the order of the dimension number.

The Source Dimension Container is table that lists the OOTB and custom dimensions available for the rule, as follows:

Figure 6-17 Source Dimension Container



The Dimension Container starts with the Dimension Type radio button selection that displays the active, passive or all dimensions available for the allocation rule, through the options of Active, Passive and All respectively.

A Passive dimension is a dimension that the user has not applied any constraint to, and it comes with default Mode of ‘Macro’ and default Value as ‘ALL’.

Similarly, on the other hand, an Active dimension is a dimension that the user has applied a constraint to, and its Mode is not ‘Macro’ and Value is not ‘ALL’.

The Dimension column holds the Key Processing Dimensions for the Source Definition.

The separation of dimensions into shorter Active and Passive list was introduced to solve the problem of a long list of dimensions to choose from while in Edit mode. The dimensions list would be long when all the placeholder KPDs are registered, and user would need to search through the list to find the KPD he/she wants to apply constraint to.

In New mode, the Dimension Type radio button is defaulted as All while the other buttons are disabled.

In Edit mode, the Dimension Type is defaulted as Active and only the dimensions for which a constraint has been applied, is displayed under the Active set. All the dimensions for which a which a constraint has not been applied, in shown in the Passive set which can be viewed through changing the radio button to Passive. User can apply constraint to any dimension in the Passive set and the dimension comes to the Active set, that can be observed by changing the radio button to get the current Active set. In Edit mode, the All option is disabled.

In View mode, the allocation UI defaults to Active, and the user can toggle between the two sets of Active and passive to view the constraint applied or not applied dimensions.

6.3.1.1.3.2.1 Mode Selection for a Dimension

The Source Dimension Container grid contains a column called Mode that corresponds to the different modes of defining constraint to a dimension. The Mode displays a drop-down containing four modes – Macro, Leaf, Node and Hierarchy Filter.

The default mode for all dimensions is **Macro** and the default value for all dimensions is **ALL**. ALL means no constraint is applied to the dimension.

Leaf Mode must be used when you want to input a Leaf Value for a dimension. Once you select the Leaf Mode, the Value column drop-down is populated with all the leaf members available for the selected dimension. You can choose a member from the list of Leaf Members in the Value drop-down, or can type-ahead the required leaf member name in the Value Text Box. This free text type-ahead feature comes with Autosuggestion that creates a Dynamic List of values in the drop-down, matching the input string. If the Type-Ahead string does not match with a value from the drop-down list, the string will not be accepted.

Node Mode is to be used when you want to input a node value for a dimension. Once you select the Node mode, two things happen. First, the Selector Column drop-down is populated with all the Hierarchies available for that dimension and and the first Hierarchy in ascending alphabetical order of Hierarchy Name is selected as default in the Selector column. Second, the Value column drop-down is populated with all the node members applicable for the Hierarchy selected in the Selector column. This means the Value column drop-down displays all the node members available for the first Hierarchy (in ascending alphabetical order of Hierarchy Name) in the Selector.

> **Note:**
>
> If no hierarchy can be found for the dimension you have selected, the Selector column will be blank.

The Selector values appear as Folder name, hyphen and Hierarchy name for each of the hierarchies available for that dimension. The Folder name gives the name of the folder in which the displayed hierarchy is stored. You need to select one hierarchy from the Selector drop-down. This facilitates node member population in Value column dropdown, that are particular to that hierarchy. You can choose a member from the list of node members available in the Value drop-down, or type the required node member name in the Value text box. This free text type-ahead feature comes with Autosuggestion that creates a Dynamic List of values in the drop-down, matching the input string. If the type-ahead string does not match with a value from the drop-down list, the string will not be accepted.

Hierarchy Filter Mode is to be used when the user wants to apply a Hierarchy Filter constraint on a dimension. Hierarchy Filter mode works in similar fashion as that of Node mode. Once you select the Hierarchy Filter mode, the **Selector** Column drop-down is populated with all the available Hierarchies for that Dimension.

> **Note:**
>
> If no hierarchy can be found for the dimension you have selected, the Selector column will be blank.

The Selector values appear as Folder name, hyphen and Hierarchy name for each of the hierarchies available for that dimension. The Folder name gives the name of the folder in which the displayed hierarchy is stored. You need to select one hierarchy from the Selector drop-down. This facilitates Hierarchy Filter population in Value column dropdown, that are particular to that hierarchy.

> **Note:**
>
> If no Hierarchy Filter can be found for the Hierarchy you have selected, the Value column will be blank.

You can choose a hierarchy filter from the list of hierarchy filters available in the Value drop-down or can type-ahead the hierarchy filter in the Value text box. This free text type-ahead feature comes with Autosuggestion that creates a Dynamic List of values in the drop-down, matching the input string. If the type-ahead string does not match with a value from the drop-down list, the string will not be accepted.

The **Selector** is used for the Node mode and the Hierarchy Filter mode where selection of the Hierarchy is essential before selecting the node member or the hierarchy filter.

The **Refresh** button can be alternatively used to refresh and load the members in the Value column dropdown if the user faces performance issues with normal operation.

The **Value** column displays the value of a Macro, Leaf Member, Node Member, or a Hierarchy Filter. The member/filter value appears as Member Name, Hyphen and Member ID. You can choose a value from the list of values (that are essentially members and filters) in the Value drop-down, or can type-ahead the required member/filter in the Value text box. This free text type-ahead feature comes with Autosuggestion that creates a dynamic List of values in the drop-down, matching the input string. If the type-ahead string does not match with a value from the drop-down list, the string will not be accepted.

The **Description** Column displays the description of the member/filter selected in the Value column. The description includes information on the Dimension, Folder where the hierarchy is stored, the level of the member in the hierarchy, the member's name, and the member ID.

Next comes the column that hosts the Hierarchy Browser Widget, clicking on which invokes the **Hierarchy Browser**. The Hierarchy Browser functionality differs across the various modes of constraint selection. The following section discusses more details.

The last column, the Hierarchy Member Filter Method is discussed in the next section, along with the Hierarchy Browser.

Source Scenario: For Allocation Rules that Source Data from the Management Ledger-level, you must select a Source Scenario from the Allocation Source Pane. The default for new Allocation Rules is <Use Application Preferences>. When you use this default value, the Scenario (also called Consolidation Code) is determined by the value that is set in Application Preferences for Profitability Management Cloud Service for the user who is running the rule. If you do not select <Use Application Preferences>, you must select a Defined Dimension Member Value (for example, Actual, Budget, Forecast, and Forecast Prior). These values are

provided with the data model, but you may add additional Dimension Members in the Consolidation Code Dimension.

Table 6-12 Examples of using the Source Tab

Desired Data	Constraint
Get all expenses for all GL Accounts within a specific Cost Center.	Single-leaf constraint on Organizational Unit plus single-leaf constraint on Financial Element 457 – Non-Interest Expense.
Get all current mortgage balances for adjustable rate products originated in the past year.	Hierarchy member constraint on the Product dimension plus a Data Filter constraint.
Get all initial General Ledger balances and all allocated balances for a specified set of Cost Centers for one GL Account.	Single leaf constraint on General Ledger Account plus a Hierarchy member constraint on Organizational Unit.
Get ending balances for all balance sheet assets for the North, South, and East divisions (but not the West division except for the South-West sub-region).	Single leaf constraint on Financial Element plus Hierarchy member constraint on the GL Account dimension plus an Organizational Hierarchy Filter.

The dimensions listed in the Allocation Source Pane are limited to your Key Processing Dimensions. The seeded Key Processing Dimensions for all OFS Analytical Applications are:

- Financial Element
- Organizational Unit
- General Ledger Account
- Common Chart of Accounts
- Legal Entity Product

6.3.1.1.3.2.2 Hierarchy Browser on the Source Tab

We have learnt from the previous section how to define Dimension Constraints through user inputs, either through selection from drop-down or through free text type-ahead. The other way of Constraint Application is through the Hierarchy Browser.

The Hierarchy Browser Widget is enabled for the two modes of Leaf and Node. The widget is disabled for the Macro Mode and the Hierarchy Filter Mode.

To select a Constraint, click on the Hierarchy Browser icon in the column adjacent to the Description column in the Source Dimension Container table, next to the Dimension you want to constrain.

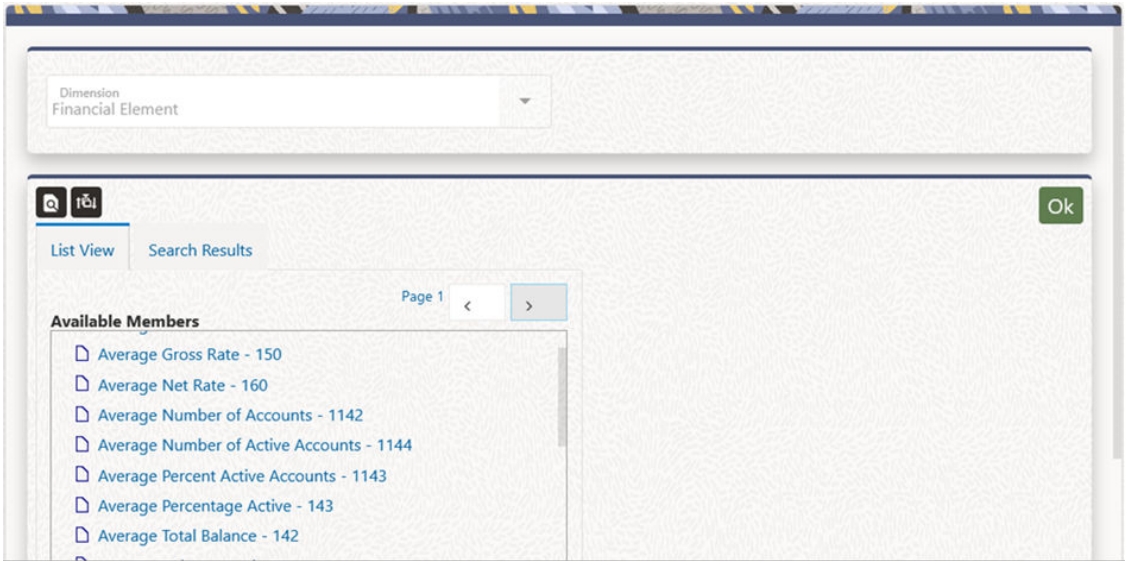
6.3.1.1.3.2.2.1 Hierarchy Browser for Leaf Mode

When in Leaf Mode, the Browser opens to show the List view of all Leaf Members available for the selected Dimension, in the List View Tab. The members appear as Member name, hyphen, Member ID. You can select a Single-Leaf Member by directly clicking on the Member.

The browser has only two action buttons – Search and Sort. You can search by clicking the Search icon and auto wild card search with search criteria as ‘contains' is applied on the Member ID and the Member Name that tries to match with the input string in the Search box. The Search results are displayed in the Search Results Tab.

The Sort function helps to sort the members in alphabetical order or Member Name. The Ascending or the Descending order of Sort action is as per user click and happens alternatively. Alternate member selection: You can select a Leaf Member from the Search Results Tab from among the search results.

Figure 6-18 Financial Element Hierarchy Browser – List View Tab



6.3.1.1.3.2.2.2 Hierarchy Browser for Node Mode

When in Node Mode, the browser opens to show the Hierarchy view of the selected Dimension Hierarchy, in the Hierarchy View Tab. The Hierarchy View displays the list of all the Node and Leaf Members for the Hierarchy. The members appear as Member Name, Hyphen, and Member ID. You can select a Single-Node Member by directly clicking on the Member. The Leaf Members are disabled for user selection.

The browser has four action buttons – Search, Sort, Expand All/Collapse All, and Focus/ Unfocus. You can search by clicking the Search icon and Auto Wild Card Search with Search Criteria as 'contains' is applied on the Member ID and the Member Name that tries to match with the input string in the search box. The Search results are displayed in the Search Results Tab.

The Sort function works on a selected node that has Child Members under it. It sorts only the immediate level child members (of the selected node member) into ascending or descending alphabetical order of Member Name. The Ascending or the Descending order of Sort action is as per the user click and happens alternatively. The default Sort order of members is as per the display order of members in the hierarchy definition.

The Expand-All/Collapse-All function works on a selected node that has Child Members under it. The function expands or collapses the selected node until the level of the Leaf Members under the selected node.

The Focus/Unfocus functions to focus a searched Member (from the Search Results tab) into the Hierarchy View with the position of the Member in the Hierarchy. When you click for the first time on Focus, the next click does not unfocus the focussed Member from the Hierarchy View back in the Search Results tab. Focus is on the first click on the icon, and the next click does an unfocus of the focussed Member from the Hierarchy View back in the Search Results tab.

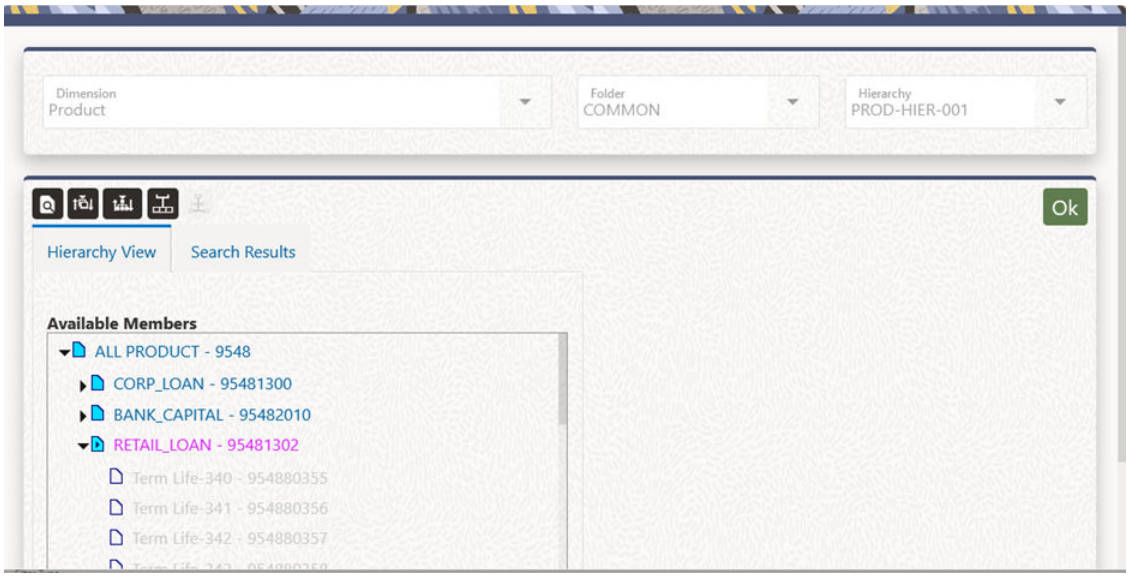
The Hierarchy View Tab or the Search Results Tab gives a full parentage information, on mouse hover, of each of its members starting from the root node until the mouse-hovered member.

Pagination is applicable only for a selected Node Member that has children spanning across multiple pages. On mouse-click of such Member, a pagination capability is displayed on the top

right corner of the Available Members box. You can navigate across the pages to view the Members displayed in other pages.

Alternate Member Selection: You can select a node member from the Search Results Tab from among the search results.

Figure 6-19 Product Hierarchy Browser



6.3.1.1.3.2.2.3 Hierarchy Member Filter Method

When the Source Table is Management Ledger and the Allocation Type is either Static Driver or Dynamic Driver, you can select a Hierarchy Member with additional options. You can select the Hierarchy Member by selecting any of the four “Hierarchy Member Filter Method”:

1. Node Only
2. Last Descendants Of
3. Descendants Of
4. Node and Descendants Of

This selection is applied at the per-dimension level of the Source Dimensions, meaning you have the liberty to select the “Nodes Only” filter method for the General Ledger Dimension while applying a “Last Descendants Of” Filter Method on the Organization Unit Dimension.

> **Note:**
>
> Caution should be used when posting node-level outputs from allocation rules. It is only intended to be used to temporarily post node-level results.
> If you build rules that output node-level results, you should plan to have follow on allocation rules to distribute those node-level results down to the leaf level.
>
> A sample use case might include initial generation of node-level Cost Pools before subsequent rules distribute the node-level Cost Pools down to more granular, leaf-level Cost Pools.
>
> You can query the results of node-level data, but results expressed along a hierarchy are always derived from rolling up level-level data so data posted at the node-level will not be included in any reporting results.

The Data Loader Service that loads the data from Staging to Management Ledger supports loading data to any kind of member in the Management Ledger – Leaf-Level members or Node Level members, rendering the user to select any of the two kinds of the member from the UI.

- If you choose the Hierarchy Member Filter Method as "Nodes Only", only the Node Member is selected in the filter.
- If you choose the Hierarchy Member Filter Method as "Last Descendants Of", only the Leaf Members of the Hierarchy rolling up to the selected Node are selected in the filter.
- If you choose the Hierarchy Member Filter Method as "Node and Descendants Of ", all the Descendant Nodes and Leaves of the selected Node in the Hierarchy including the selected Node itself, are selected in the filter.
- If you choose the Hierarchy Member Filter Method as "Descendants Of ", all the Descendant Nodes and Leaves of the selected Node in the Hierarchy but excluding the selected Node itself are selected.

6.3.1.1.3.3 Other Filters Pane

You may optionally select a Data Filter, a Group Filter, an Attribute Filter, or a combination filter between a ‘Data and Attribute Filter’ and a ‘Group and Attribute Filter’ to further constrain your Source Data.

Figure 6-20 Other Filters Pane

Data Filter or Data Element Filter is a stored rule that expresses a set of constraints on table columns. You can build a data filter on regular columns of instrument tables, management ledger tables, transaction summary tables, the portfolio table, or a lookup table or on any registered placeholder column.

We can combine different data filters with a logical AND condition and we call this new filter as the Group Filter. A group filter applies the conditions of all the individual data filters, over the dataset it is applied on.

Attribute filters are used to filter records based on one or more dimension type Attributes. An attribute filter filters the records for which the dimension members satisfy the given attribute conditions.

A Hierarchy filter can be used to filter members from a dimension hierarchy. Applying this filter, it filters the records that contain the members specified in the hierarchy filter.

6.3.1.1.4 Operator Process Tab

The Operator Process Tab allows you to specify how the Source data and Driver Data interact to create results.

- **Operator Process Tab for Constant Rules**: No Driver is necessary to specify a Constant Rule. Both the Operator Process Tab and the Driver Process Tab are disabled for the Constant Rule type.
- **Operator Process Tab for Static Driver Rules**: For Static Driver Rules, the Driver Process Tab is disabled, but the Operator Process Tab is enabled to allow you to specify a Static Driver Balance. Static Amounts are entered into the Factor Operator Pane.

Figure 6-21 Allocation Specification - Operator Process Tab

- Operator Process Tab for All Other Rule Types: For all other Rule Types, the Operator Process Tab offers both a Factor Operator and an Allocation Operator. The Allocation Operator links the Allocation Rule's Source Data with its Driver data. The Factor Operators may be interposed between the Source and Driver.

Factor Operator Pane

Factor Operators may be used to either:

- To store static driver amounts and/or accrual basis macros for Static Driver Rule types.
- To interject constant values and/or accrual basis macros between allocation Sources and Drivers for Leaf, Field, Dynamic Driver, Static Driver Table, or Lookup Driver Table rule types.

The Factor Operator allows you to modify Source Data by adding, subtracting, multiplying, or dividing Source Data by a Constant Amount, an Accrual Basis Macro, or both.

Examples of Usage of the Factor Operator

Instrument-level Rate Times Balance Allocations commonly use the “Both” type Factor Operator in which the first-factor operator is “times <accrual-basis> macro” and the second-factor operator is “divided by 100” when posting to a monthly income or expense balance. If you were to choose a 30/360 accrual basis factor, you could equally well specify your factor operator as “divide by 1200”.

Instrument-level Rate Times Balance Allocations can also utilize actual instrument-level accrual bases instead of applying the same Accrual Basis to every calculation.

In a Percent Distribution Allocation such as “distribute all Human Resource expense to all Cost Centers as a function of headcount”, you may sometimes want to distribute less than 100% of total expense. In this example, your Source Data would be “all Human Resource Expense”, your Driver Data would be “headcount by Cost Center” on a percent-to-total basis, and your Factor Operator would be whatever percentage of the total expense you are choosing to allocate.

Allocation Operator Pane

For all Allocation Types except Constant and Static Driver, the Allocation Operator links the Allocation Rule's Source Data with its Driver Data. The most common form of linkage is multiplication, but both multiplication and division are supported. For some Allocation Types, addition and subtraction are also supported.

6.3.1.1.5 Driver Process Tab

The Driver Process Tab allows you to specify a set of Driver Data that is combined with Source Data to create Allocation Outputs. How the Source Data and the Driver Data interact is a function of the type of Allocation Rule you are using and the nature of the Operator you have specified.

The Driver Process Tab is enabled for the following Allocation Types:

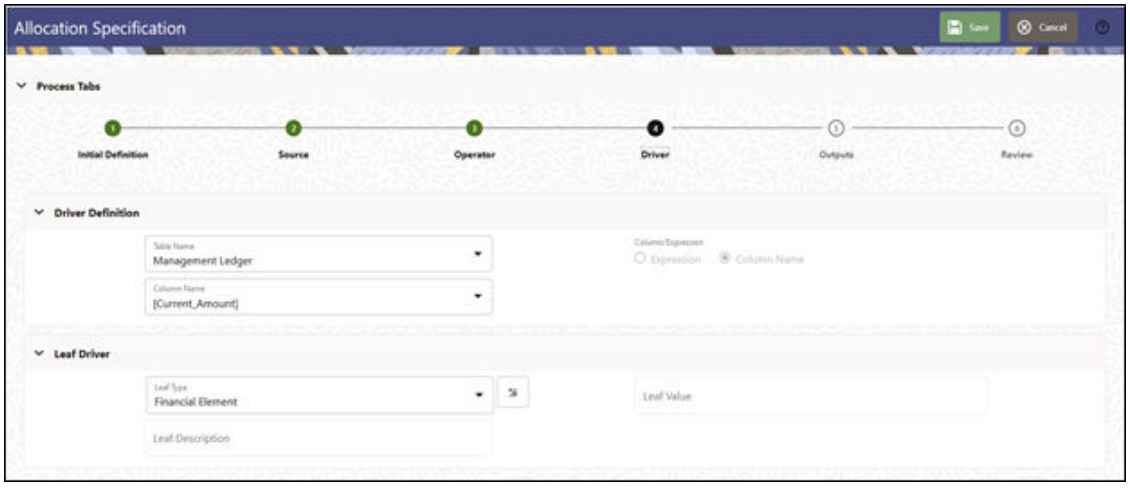
- Leaf
- Field
- Dynamic Driver
- Static Driver Table

The Panes displayed on the Driver Process Tab vary according to the different types of Rules.

6.3.1.1.5.1 Leaf

For a Leaf Allocation Type, the Driver Process Tab comprises of the Driver Definition Pane and the Leaf Driver Pane.

Figure 6-22 Allocation Specification Driver Process Tab

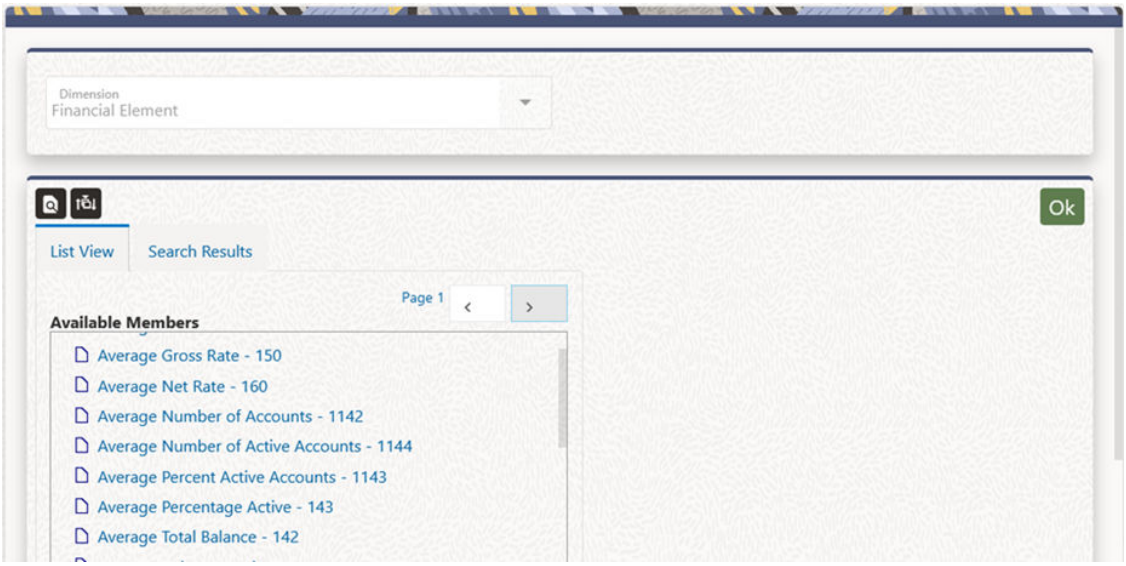


The Driver Definition Pane lets you choose the Driver Table and the Driver Column to serve as the source of your Driver Data.

The Leaf Driver Pane is only displayed for the Leaf Allocation Type. This Pane is to be used to specify the Leaf Driver Dimension and the Leaf Value of the Dimension that you want to use. You can select the Leaf Value by invoking the Hierarchy Browser Widget.

This Hierarchy Browser is identical to the Source Process Tab Browser used in Leaf Mode.

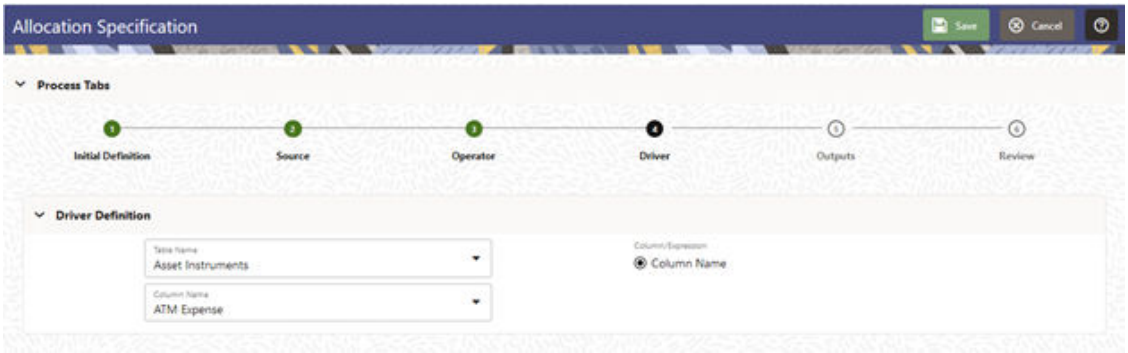
Figure 6-23 Financial Element Hierarchy Browser



6.3.1.1.5.2 Field

For a Field Allocation Type, the Driver Process Tab displays the Driver Definition Pane that lets you choose the Driver Table and the Driver Column to serve as the source of your Driver Data.

Figure 6-24 Driver Process Tab - Driver Definition



6.3.1.1.5.3 Dynamic Driver

For a Dynamic Driver Allocation Type, the Driver Process Tab displays the Driver Definition Pane, the Distribution Type Pane, the Driver Dimension Container and Other Filters Pane.

6.3.1.1.5.3.1 Driver Definition Pane

The Driver Definition Pane lets you choose the Driver Table and the Driver Column to serve as the source of your Driver Data.

Figure 6-25 Driver Definition Pane

6.3.1.1.5.3.2 Distribution Type Pane

The Distribution Type Pane is displayed only for the Dynamic Driver Allocation Type. This Pane allows you to select the Simple, Percent Distribution, or Uniform Distribution Method for a Dynamic Driver Allocation. By default, the Distribution Type is selected as Percent Distribution.

Figure 6-26 Distribution Driver Pane

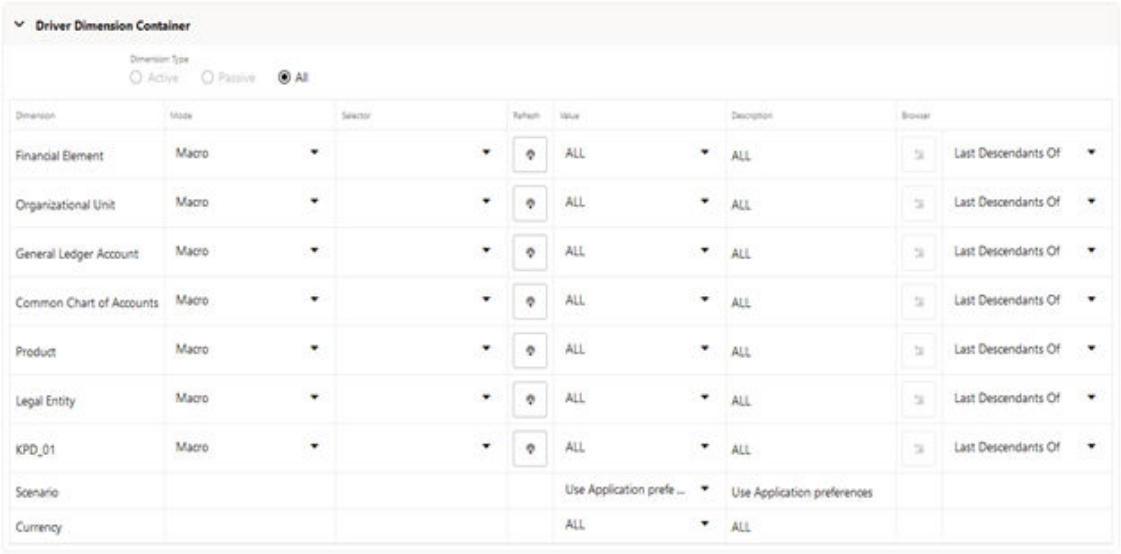
- **Percent Distribution Method**: The most common distribution method is Percent Distribution (sometimes referred to as Force to 100%). The use cases include Expense Allocations as a function of a driver set that has not been normalized and is converted to percentages of the total Driver Set. For example, if you want to distribute some expense balance to Departments 1, 2, and 3, and if Departments 1, 2, and 3 have headcounts of 100, 200, and 700, you choose the Percent Distribution method to allocate 10% (100/1,000) to Department 1, 20% (200/1,000) to Department 2, and 70% (700/1,000) to Department 3.
- **Simple Method**: Use the Simple Distribution Method in cases where your Dynamic Drivers are stored as percentages. You might also use the Simple Distribution Method if your Allocation Source Data were activity counts and your Driver Data represented unit costs.
- **Uniform Method**: Use the Uniform Distribution Method in cases where you want to allocate equal shares of your Source Data for each destination in your driver set regardless of driver amount. Continuing with the above headcount example, you may want to allocate equal shares of 10% of the total Human Resource department expense to any department having a non-zero headcount. In this case, you need to use Human Resource department expenses as your allocation source, specify a Factor Operator of 10%, specify your “Headcount by Cost Center” statistic set as Driver, and select the Uniform Distribution Method. Statistical Driver Sets are frequently stored in the Management Ledger under user-defined Financial Elements.

6.3.1.1.5.3.3 Driver Dimension Container

The Driver Dimension Container is used to provide Dimensional Constraints on your Driver Data. For any dimension, you may constrain your source data by selecting a leaf member, a roll-up node member within a Hierarchy, or a Hierarchy Filter. As and when a placeholder KPD is registered, the registered KPD appears in the dimension list in the order of the dimension number.

The Driver Dimension Container is table that lists the OOTB and custom dimensions available for the rule follows:

Figure 6-27 Driver Dimension Container



The Dimension Container starts with the Dimension Type radio button selection that displays the active, passive or all dimensions available for the allocation rule, through the options of Active, Passive and All respectively.

A Passive dimension is a dimension that the user has not applied any constraint to, and it comes with default Mode of ‘Macro’ and default Value as ‘ALL’.

Similarly, on the other hand, an Active dimension is a dimension that the user has applied a constraint to, and its Mode is not ‘Macro’ and Value is not ‘ALL’.

The Dimension column holds the Key Processing Dimensions for the Driver Definition.

The separation of dimensions into shorter Active and Passive list was introduced to solve the problem of a long list of dimensions to choose from while in Edit mode. The dimensions list would be long when all the placeholder KPDs are registered, and user would need to search through the list to find the KPD he/she wants to apply constraint to.

In New mode, the Dimension Type radio button is defaulted as All while the other buttons are disabled.

In Edit mode, the Dimension Type is defaulted as Active and only the dimensions for which a constraint has been applied, is displayed under the Active set. All the dimensions for which a which a constraint has not been applied, in shown in the Passive set which can be viewed through changing the radio button to Passive. User can apply constraint to any dimension in the Passive set and the dimension comes to the Active set, that can be observed by changing the radio button to get the current Active set. In Edit mode, the All option is disabled.

In View mode, the allocation UI defaults to Active, and the user can toggle between the two sets of Active and passive to view the constraint applied or not applied dimensions.

6.3.1.1.5.3.3.1 Mode Selection for a Dimension

The **Selector** is used for the Node mode and the Hierarchy Filter mode where selection of the Hierarchy is essential before selecting the node member or the hierarchy filter.

The **Refresh** button can be alternatively used to refresh and load the members in the Value column dropdown if the user faces performance issues with normal operation.

The **Value** column displays the value of a Macro, Leaf Member, Node Member, or a Hierarchy Filter. The Member/Filter Value appears as Member Name, Hyphen, and Member ID. You can choose a value from the list of values (that are essentially members and filters) in the Value drop-down, or can type-ahead the required member/filter in the Value text box. This free text type-ahead feature comes with Autosuggestion that creates a Dynamic List of values in the drop-down, matching the user input string. If the type-ahead string does not match with a value from the drop-down list, the string will not be accepted.

The **Description** column displays the description of the member/filter selected in the Value column. The description includes information on the Dimension and the Folder where the hierarchy is stored, the level of the Member in the Hierarchy, the Member Name, and the Member ID.

Next comes the column that hosts the Hierarchy Browser Widget, clicking on which invokes the **Hierarchy Browser**. The Hierarchy Browser functionality differs across the various modes of constraint selection. This is discussed in detail in the following section. The last column, Hierarchy Member Filter Method is also discussed in the next section, along with the Hierarchy Browser.

Driver Scenario: For Dynamic Driver Allocation Rules that obtain their driver data from the Management Ledger-level, you must also select a Driver scenario. The default for new Allocation Rules is <Use Application Preferences>. When you use this default value, the Scenario (also called Consolidation Code) is determined by the value that is set in Application Preferences for Profitability Management for the user who is running the rule. If you do not select <Use Application Preferences>, you must select a defined dimension member value (for example, Actual, Budget, Forecast, Forecast Prior). These values are provided with the data model, but you may add additional dimension members in the Consolidation Code dimension.

6.3.1.1.5.3.4 Hierarchy Browser on the Driver Tab

We have learnt from the previous section how to define Dimension Constraints through user inputs, either through selection from drop-down or through free text type-ahead. The other way of Constraint Application is through the Hierarchy Browser.

The Hierarchy Browser Widget is enabled for the two modes of Leaf and Node. The widget is disabled for the Macro Mode and the Hierarchy Filter Mode.

To select a Constraint, click on the Hierarchy Browser icon in the column adjacent to the Description Column in the Source Dimension Container Table, next to the Dimension you wish to constrain.

6.3.1.1.5.3.4.1 Hierarchy Browser for Leaf Mode

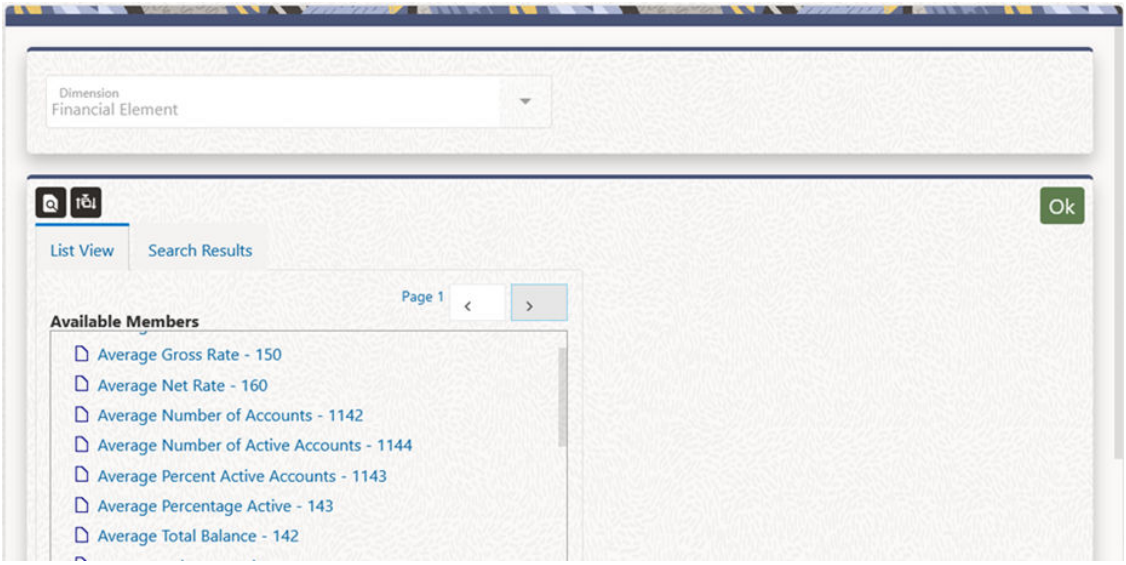
When in Leaf Mode, the Browser opens to show the List view of all the Leaf Members available for the selected Dimension, in the List View Tab. The Members appear as Member Name, Hyphen, and Member ID. You can select a single Leaf Member by directly clicking on the Member.

The browser has only two action buttons – Search and Sort. User can search by clicking the Search icon and auto wild card search with search criteria as 'contains' is applied on the Member ID and the Member Name that tries to match with the user input string in the search box. The Search results are displayed in the Search Results Tab.

The Sort function helps to sort the Members in alphabetical order or Member Name. The ascending or the descending order of Sort action is as per user click and happens alternatively.

Alternate Member Selection: You can select a Leaf Member from the Search Results Tab from among the search results.

Figure 6-28 Financial Element Hierarchy Browser



6.3.1.1.5.3.4.2 Hierarchy Browser for Node Mode

When in Node Mode, the Browser opens to show the Hierarchy View of the selected Dimension Hierarchy in the Hierarchy View Tab. The Hierarchy View displays the list of all the Node and Leaf Members for the Hierarchy. The Members appear as Member Name, Hyphen, and Member ID. You can select a Single Node Member by directly clicking on the Member. The Leaf Members are disabled for user selection.

The browser has four action buttons – **Search**, **Sort**, **Expand All/Collapse All**, and **Focus/ Unfocus**.

- **Search**: You can search by clicking the Search icon and auto wild card search with search criteria as 'contains' is applied on the Member ID and the Member Name that tries to match with the input string in the search box. The Search results are displayed in the Search Results Tab.
- **Sort**: The Sort function works on a selected Node that has Child Members under it. It sorts only the immediate-level Child Members (of the selected Node Member) into ascending or descending alphabetical order of Member Name. The ascending or the descending order of Sort action is as per user click and happens alternatively. The default Sort order of Members is as per the display order of Members in the Hierarchy Definition.
- **Expand-All/Collapse-All**: The Expand-All/Collapse-All function works on a selected Node that has Child Members under it. The function expands or collapses the selected Node until the level of the Leaf Members under the selected node.
- **Focus/Unfocus**: The Focus/Unfocus functions to focus a searched Member (from the Search Results Tab) into the Hierarchy View with the position of the Member in the Hierarchy. Focus is on the first user click on the icon, and the next click does an unfocus of the focussed member from the Hierarchy View back in the Search Results Tab.

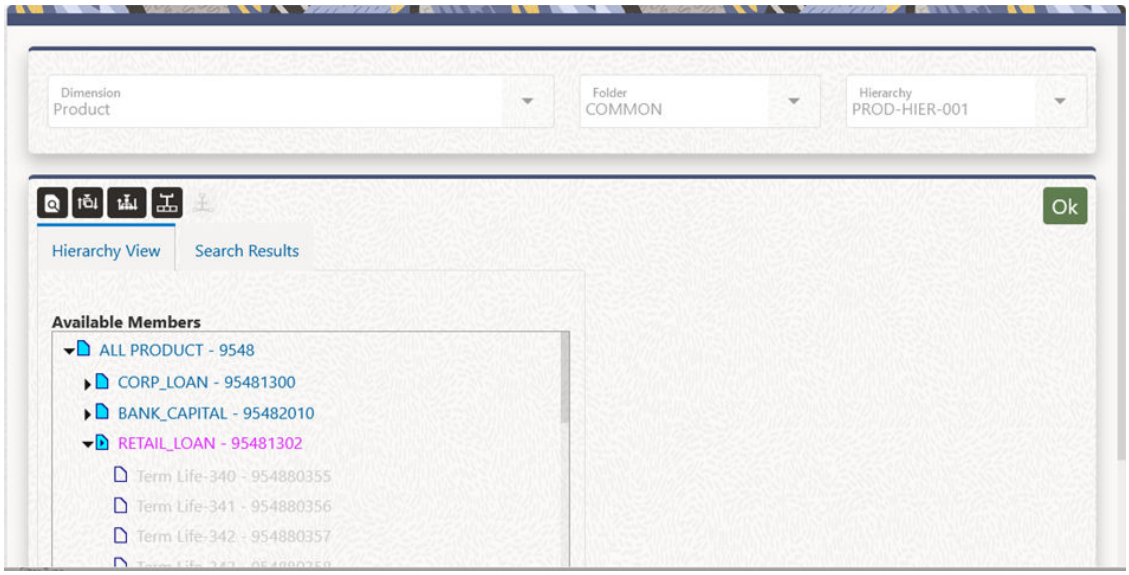
The Hierarchy View Tab or the Search Results Tab gives a full Parentage Information, on mouse hover, of each of its members starting from the root node until the mouse-hovered Member.

Pagination is applicable only for a selected Node Member that has Children spanning across multiple pages. On mouse-click of such Member, a pagination capability is displayed on the top

right corner of the Available Members box. User can navigate across pages to view Members displayed in other pages.

Alternate Member Selection: You can select a Node Member from the Search Results Tab from among the search results.

Figure 6-29 Product Hierarchy Browser



6.3.1.1.5.3.4.3 Hierarchy Member Filter Method

When the Driver Table is Management Ledger and the Allocation Type is either Static Driver or Dynamic Driver, you are provided with additional options to select a Hierarchy Member. You can select any of the four Hierarchy Members “Hierarchy Member Filter Method” from the following:

1. **Node Only**: Only the Node Member is selected in the filter.
2. **Last Descendants Of**: Only the Leaf Members of the Hierarchy rolling up to the selected node are selected in the filter.
3. **Descendants Of**: All the Descendant Nodes and leaves of the selected node in the hierarchy including the selected node itself are selected in the filter.
4. **Node and Descendants Of**: All the Descendant Nodes and leaves of the selected node in the hierarchy but excluding the selected node itself is selected.

This selection is applied at the per-Dimension Level of the Driver Dimensions, meaning you have the liberty to select the “Nodes Only” filter method for the General Ledger Dimension while applying a “Last Descendants Of” filter method on the Organization Unit Dimension.

The Data Loader service that loads the data from Staging to Management Ledger supports loading data to any kind of member in the Management Ledger – Leaf-Level Members or Node Level Members, rendering you to select any of the two kinds of a member from the UI.

6.3.1.1.5.3.5 Other Filters Pane

You may optionally select a Data Filter, a Group Filter, an Attribute Filter, or a combination filter between a ‘Data and Attribute Filter’ and a ‘Group and Attribute Filter’ to further constrain your Source Data.

Figure 6-30 Other Filters Pane

Data Filter or Data Element Filter is a stored rule that expresses a set of constraints on table columns. You can build a data filter on regular columns of instrument tables, management ledger tables, transaction summary tables, the portfolio table, or a lookup table or on any registered placeholder column.

We can combine different data filters with a logical AND condition and we call this new filter as the Group Filter. A group filter applies the conditions of all the individual data filters, over the dataset it is applied on.

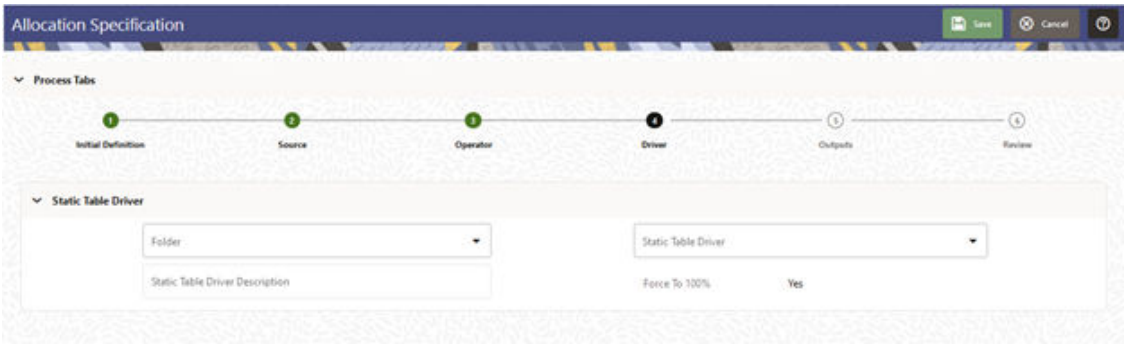
Attribute filters are used to filter records based on one or more dimension type Attributes. An attribute filter filters the records for which the dimension members satisfy the given attribute conditions.

A Hierarchy filter can be used to filter members from a dimension hierarchy. Applying this filter, it filters the records that contain the members specified in the hierarchy filter.

6.3.1.1.5.4 Static Table Driver

For a Static Driver Table Allocation Type, the Driver Process Tab displays the Folder to select your Static Table Driver Rule. By default, the Distribution Type of the Static Table Driver is set to Force to 100%.

Figure 6-31 Driver Process Tab - Static Table Driver Pane



After you have chosen a Static Table Driver Rule, a View control is added to the Static Table Driver Title Bar. Click the **View Control** to view a read-only version of the Static Table Driver Rule you have chosen.

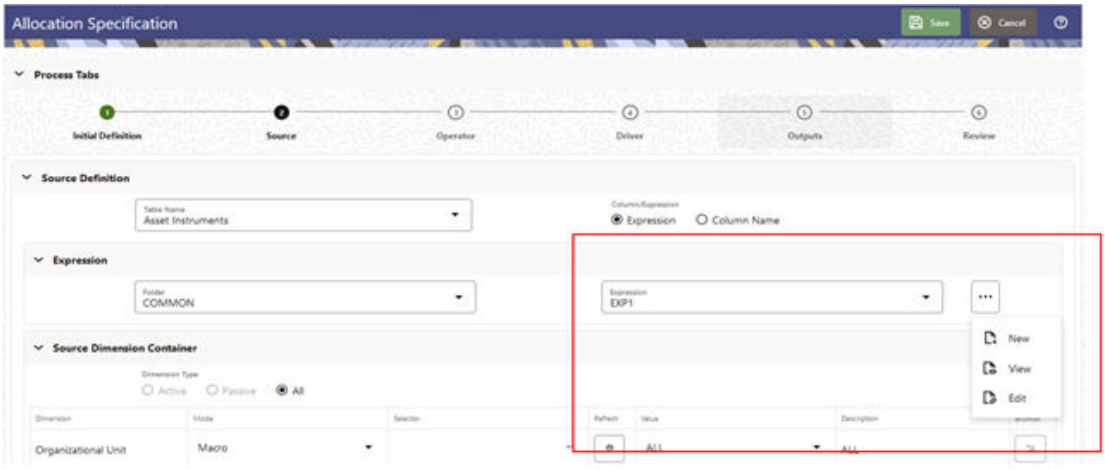
6.3.1.1.5.5 Embedded Objects in Source and Driver

In an allocation rule, there are a number of embedded objects that are used, namely filters, expressions and table drivers. The Allocation Specification Detail screen provides view, edit and create option for these embedded objects. This means, the user does not need to navigate to the embedded object detail screen from LHS menu for viewing, editing or creating an object to be used for an allocation rule, but can open the object detail screen in new/edit/view mode directly from the Allocation Specification Detail screen.

The embedded objects that can be opened in this manner from the Allocation Detail screen are:

- Data filters
- Attribute filters
- Group filters
- Expressions
- Satic Table drivers
- Lookup Table drivers

Figure 6-32 New/Edit/View option for Expressions in an Allocation Rule

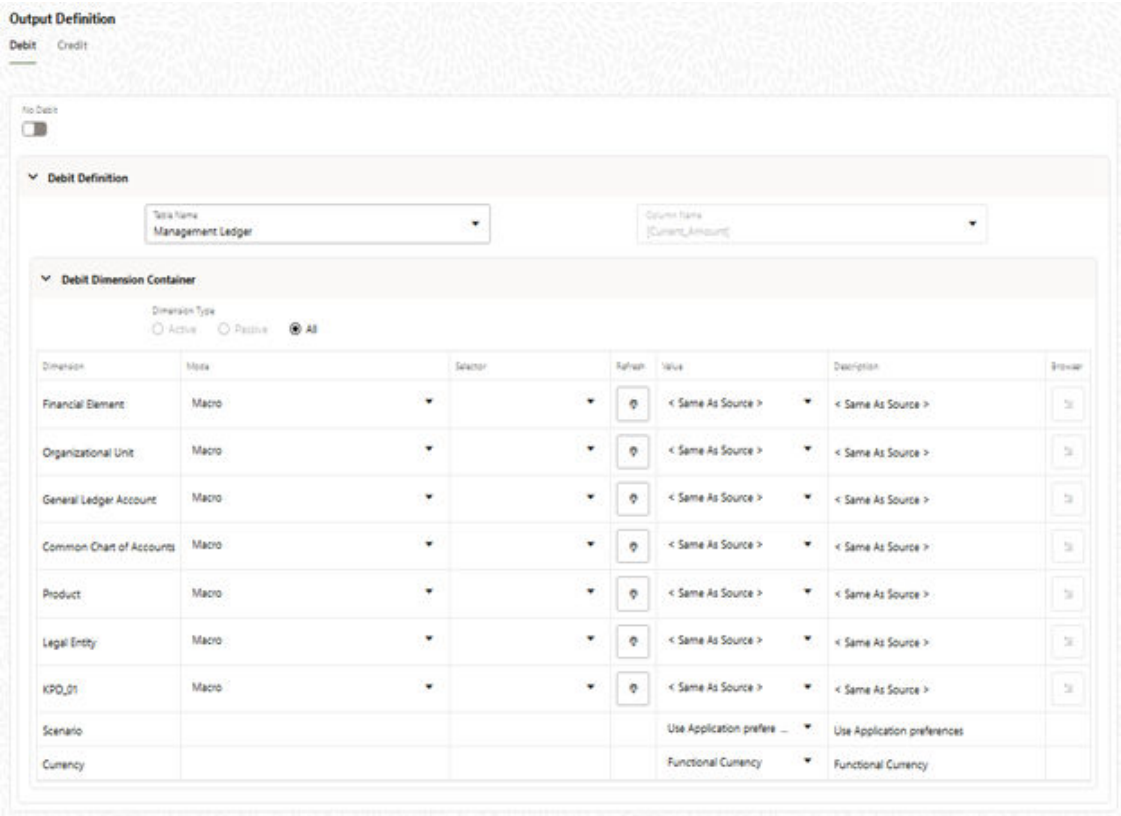


Users will find a three dot meatballs menu icon adjacent to an embedded object dropdown, clicking which will display the options of New, View and Edit in a dropdown to choose from. User can select the required action to open the object detail screen in the selected mode.

6.3.1.1.6 Outputs Process Tab

The Outputs Process Tab allows you to specify where the outputs of an Allocation Rule are written. When the output generates to the Management Ledger Table, the allocation engine creates Management Ledger debits and/or credits. When the output generates to Instrument or Transaction Summary Tables, the Allocation Engine updates Target Columns.

Figure 6-33 Allocation Specification – Output Process Tab



6.3.1.1.6.1 Source-Driver Relationship Pane

Leaf Allocation Type: The Source-Driver Relationship pane appears in the Outputs tab only when the Allocation Type is set as Leaf Allocation in the Initial Definition tab. This pane looks as follows:

Figure 6-34 Outputs Process Tab - Source-Driver Relationship

The following options are available:

- **Include All Rows**: When you select this option, the output includes all the rows that are available in both Driver and Source.

- **Include Rows Found Only in Source**: When you select this option, the output includes the rows that are available only in Source.
- **Include Rows Found Only in Driver**: When you select this option, the output includes the rows that are available only in Driver.
- **Include Only Rows Found in Both Source & Driver**: When you select this option, the output fetches the rows from both Source and Driver based on defined condition(s).

6.3.1.1.6.2 Output Definition

The Output Definition Tab is divided under two Tabs – the Debit and Credit tabs. The Debit Tab and the Credit Tab are similar in design and contain the Debit or Credit Definition Pane and the Debit/Credit Dimension Container.

Within the Outputs Process Tab, the Debit/Credit tabs allow you to navigate back and forth between a rule's Debit Definition and its Credit Definition. You may also use the Debit/Credit Tabs to suppress the output of either Debits or Credits, but you may not suppress the output of both Debits and Credits.

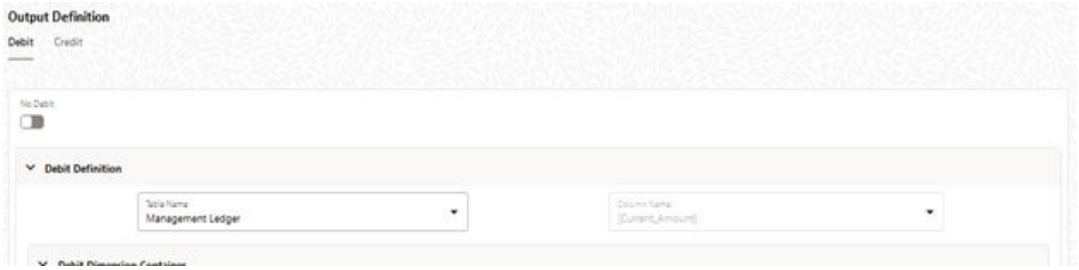
6.3.1.1.6.2.1 Debit/Credit Definition Pane

The Debit/Credit Definition pane allows you to input the Output Table and/or the Output column.

- **When Output is Management Ledger-level**: When posting Allocation Results to the Management Ledger-level, the Profitability Management Allocation Engine generates a balanced accounting transaction consisting of multiple debits and credits. One debit or credit is generated, or you may generate thousands of debits and credits.

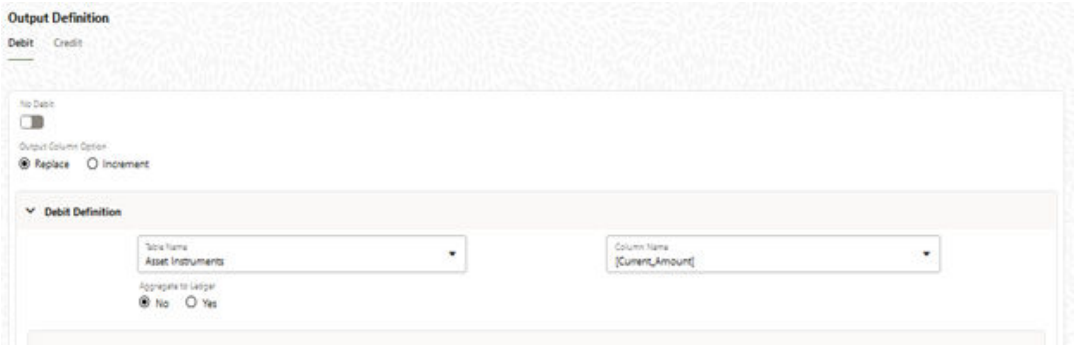
> **Note:**
>
> When the output table is Management Ledger, Hierarchy Node Members can be selected in Output [Debit and Credit] tabs only for Static Driver and Dynamic Driver Allocation Types. Other allocation Types do not support Hierarchy Node Member Selection in Output.

- **Figure 6-35 Debit Definition pane when Output table is Management Ledger**



- **When the Output Table is Instrument Level**: When using an Allocation Rule to update an Instrument or Transaction Summary Table, the Profitability Management Allocation Engine updates your chosen output column for each Instrument-Level Account found in your Source and for which a matching Driver is found. When the output is generated to the Instrument or Transaction Summary Tables, you may choose to either Replace or Increment your Target Column Values. The default behavior for Allocation Rules built is Replace.

Figure 6-36 Debit Definition pane when Output table is Instrument



Determining the Target side

With rules of the Static Driver Table type and the Dynamic Driver type, the user encounters a radio button with the question "Apply Static Table Driver to". There are two options available - Debit or Credit, the default being 'Debit' selected. User can change the value as required to either of 'Debit' or 'Credit'.

The Target side is the side of the output that consumes the driver. The other side of the output (if not suppressed) is generally the Offset side.

When the value of this radio button is set as 'Debit', the UI considers the Debit side to be the Target side that consumes the driver. Similarly, when the value is set as 'Credit', the UI considers the Credit side to be the Target side.

When 'Debit' is selected, user cannot apply 'No Debit'. Similarly, when 'Credit' is set, user cannot apply 'No Credit'.

As soon as the Target is determined, for Dynamic Driver type of rules, the macros <Match Source & Driver> and <Same as Driver> are available to be used as dimension constraints only for the Target definition. The <Same as Source> macro is avialble to be used both in the Target definition and in the Offset definition.

For Static Table Driver types, as soon as the Target is determined, the Target side auto-applies the Static Table Driver. This means:

1. the Key only dimensions are set with <Match Key> macro and gets disabled for user input,
2. the Target only dimensions are set with <Match Target> macro and gets disabled for user input,
3. the dimensions that are common to both Key and Target are set with <Match Key & Target> macro and gets disabled for user input.

The user can set any dimension other than the Key and the Target dimensions that remain enabled for user input. The <Same as Source> macro is avialble to be used both in the Target definition and in the Offset definition.

Output Table and Output Column Specification

To specify the output table and column for the Allocation Rule, use the following rules:

- You may only output to < Current Amount > when posting allocation results to the Management Ledger-level.
- For Constant and Leaf type rules, you may only output to the Management Ledger-level.
- For Field type rules, you may only output to an Instrument or Transaction Summary Table.

6.3.1.1.6.2.2 Aggregate to Ledger

For Allocation Rules that update an Instrument or Transaction Summary Table, you can aggregate your results and post them to the Management Ledger level.

For Allocation Rules that update an Instrument or Transaction Summary Tables, you can aggregate your results and post them to the Management Ledger, or Ledger Stat Table. To do this, select the Aggregate to Ledger option as Yes and select Ledger Stat or Management Ledger from the Ledger Table Name drop-down list.

> **Note:**
>
> In Profitability Management Cloud Service, Lookup Driver Table Type Allocation Rules can send the output to the Management Ledger-level.

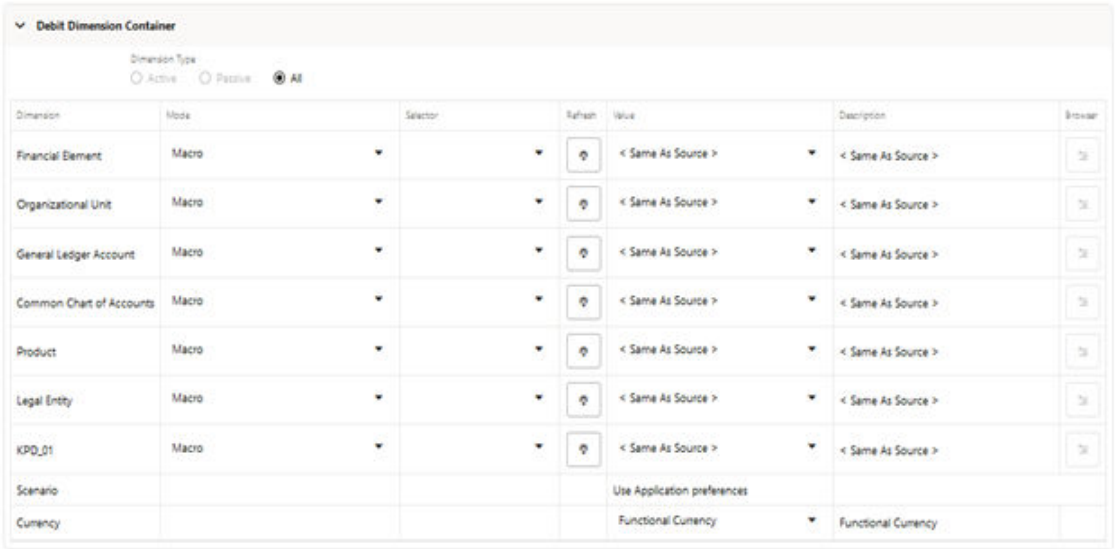
6.3.1.1.6.2.3 Debit/Credit Dimension Container Pane

The Debit/Credit Dimension Container Pane is displayed for every Allocation Type.

The Dimension Container is used to provide dimensional constraints on your Output data. For any Dimension, you may constrain your Source Data by selecting a Leaf Member, a Roll-Up Member within a Hierarchy, or a Hierarchy Filter.

The Dimension Container includes a table that lists the Dimensions, and the Output Scenario as follows:

Figure 6-37 Debit/Credit Dimension Container



The Dimension Container starts with the Dimension Type radio button selection that displays the active, passive or all dimensions available for the allocation rule, through the options of Active, Passive and All respectively.

A Passive dimension is a dimension that the user has not applied any constraint to, and it comes with default Mode of ‘Macro’ and default Value as ‘Same as Source’.

Similarly, on the other hand, an Active dimension is a dimension that the user has applied a constraint to, and its Mode is not ‘Macro’ and Value is not ‘Same as Source’.

The Dimension column holds the Key Processing Dimensions for the Output Definition.

The separation of dimensions into shorter Active and Passive list was introduced to solve the problem of a long list of dimensions to choose from while in Edit mode. The dimensions list would be long when all the placeholder KPDs are registered, and user would need to search through the list to find the KPD he wants to apply constraint to.

In New mode, the Dimension Type radio button is defaulted as All while the other buttons are disabled.

In Edit mode, the Dimension Type is defaulted as Active and only the dimensions for which a constraint has been applied, is displayed under the Active set. All the dimensions for which a which a constraint has not been applied, in shown in the Passive set which can be viewed through changing the radio button to Passive. User can apply constraint to any dimension in the Passive set and the dimension comes to the Active set, that can be observed by changing the radio button to get the current Active set. In Edit mode, the All option is disabled.

In View mode, the allocation UI defaults to Active, and the user can toggle between the two sets of Active and passive to view the constraint applied or not applied dimensions.

The design and operation on the fields in the Output Dimension Container is similar to the Source or Driver Dimension Container. For more information, see Driver Dimension Container.

There is, however, some differences of Output Dimension Container in comparison to the Source or Driver Dimension Containers.

The Output Dimension Container table ends with the column hosting the Hierarchy Browser Widget. It does not contain the Hierarchy Member Filter Method Column.

The modes applicable to Output Dimension Container are – Macro, Leaf and Node. Hierarchy Filter mode is not applicable for Output. When the Output table is Management Ledger, the modes of Macro, Leaf, and Node are applicable. When the output table is not Management Ledger, only the modes of Macro and Leaf are applicable.

The default mode for all Dimensions is Macro and the default value for each Dimension is <Same As Source>. The other macros applicable to Output Dimensions are <Same As Driver>, <Match Source & Driver> and <Same As Table>.

You can choose a specific Dimension Member Value for any Dimension for both debits and credits for any Allocation Type.

Output Scenario: For Allocation Rules posting to the Management Ledger-level, you must select an Output Scenario. The default for new Allocation Rules is <Use Application Preferences>. When you use this default value, the Scenario (also called Consolidation Code) is determined by the value that is set in Application Preferences for Profitability Management Cloud Service for the user who is running the rule. If you do not select <Use Application Preferences>, you must select a defined Dimension Member Value (For example, Actual, Budget, Forecast, and Forecast Prior). These values are provided with the Data Model, but you may add additional Dimension Members in the Consolidation Code Dimension.

6.3.1.1.6.2.4 Specific Leaf Value versus <Same as Source> Macro

For Allocation Rules posting to the Management Ledger-level, <Same as Source> for a particular Dimension means that for that Dimension, the values found in Source records are passed directly to Output records. For example, you might want to allocate 100% of the expenses from one department to a second department. In your original General Ledger data, expenses for the Source Cost Center can be posted under hundreds of different General Ledger accounts. In this example, you might specify your Credit Output (expense allocation offset) as follows:

- <Same as Source> for the Organizational Unit Dimension.

- <Same as Source> for the General Ledger Account Dimension.

In this way, your Allocation Rule generates a credit to the original department for every original expense balance. If the Source Department contained balances under 81 different General Ledger Accounts, the Allocation Rule would generate 81 Credit Records.

Specify your Debit Output as:

- Target Department (leaf value) for the Organizational Unit Dimension.
- Allocated Expense (leaf value) for the General Ledger Account Dimension.

In this example, Allocated Expense is a user-defined General Ledger Account. Define this Dimension Member in a reserved range of accounts for use in your Profitability Management model. Note that only one debit row is created in this scenario.

> **Note:**
>
> When you choose to output to a specific Leaf Value, you may not output to a node value. The output generating to node values is not supported.

Other Output Macros: Other output macros include:

- <Same as Driver>
- <Match Source & Driver>
- <Same as Table>
- **Constant Allocation Type**: For Constant type Allocations, specify a target leaf value for each processing Dimension for both debit and credit. You may optionally suppress either the Debit or the Credit.
- **Static Driver Allocation Type**: For Static Driver Allocations, choose either a specific Dimension Member Value or the <Same as Source> macro for each processing Dimension.
- **Leaf Allocation Type**: For Leaf Allocations, choose either a specific Dimension Member value or the <Same as Source> macro for each processing Dimension.
- **Field Allocation Type**: For Field Allocations, choose either a specific Dimension Member Value or the <Same as Source> macro for each processing Dimension.
- **Dynamic Driver Allocation Type**: For Dynamic Driver Allocations, for each processing Dimensions choose either a specific Dimension member value or from the following:
  - <Same as Source>
  - <Same as Driver>
  - <Match Source & Driver>

At least one Dimension in either your Debit or Credit specification must be either <Same as Driver> or <Match Source & Driver>.

- **Same as Driver Macro**: The <Same as Driver> macro is used when you want your outputs to inherit values from your Driver Data. For example, building an Allocation Rule to distribute some kind of processing expense to branches using “Number of Checks Processed per Branch” as your driver statistic set. In this example, your statistics “drive” your processing expense to branches, therefore, you must specify <Same as Driver> in the Organizational Unit Dimension of your Debit definition. Since this is an expense allocation,

you might want to construct a Credit definition using <Same as Source> in every Dimension.

- **Match Source & Driver Macro**: The <Match Source & Driver> macro is used when you want to distribute data to one Dimension while holding another Dimension constant. For example, you might want to build an Allocation Rule that allocates a Human Resource expense cost pool as a function of headcount, but that also allocates an Occupancy Expense cost pool as a function of square footage occupied. If your destinations are Cost Centers, then you can store your statistic sets – one for headcount and one for square footage – on a per Cost Center per Cost Pool basis. In this example, you would use <Match Source & Driver> on the Cost Pool dimension and <Same as Driver> on the Organizational Unit Dimension. This causes the rule engine to create two sets of Debits to Cost Centers:
  - Debits from the Human Resource expense Cost Pool using the headcount statistics.
  - Debits from the Occupancy expense Cost Pool using the square footage occupied statistics.
- **Static Driver Table Allocation Type**: For Static Driver Table allocations, for each of the Processing Dimensions, choose either a specific Leaf Value or choose from the following:
  - <Same as Source>
  - <Same as Table>

  When you choose <Same as Table> for a Dimension, you indicate the Allocation Engine that the rule to inherit its destination Dimension Member values from the Static Table Driver.
- **Lookup Driver Table Allocation Type**: For Lookup Driver Table Allocations, choose either a specific Leaf Value or the <Same as Source> macro for each processing Dimension.

6.3.1.1.7 Review Process Tab

The Review Process Tab displays a single-page, printable report of an Allocation Rule's specification.

The review tab shows the Dimension Values for source and debit/credit output.

Figure 6-38 Allocation Specification Definition - Review Process Tab

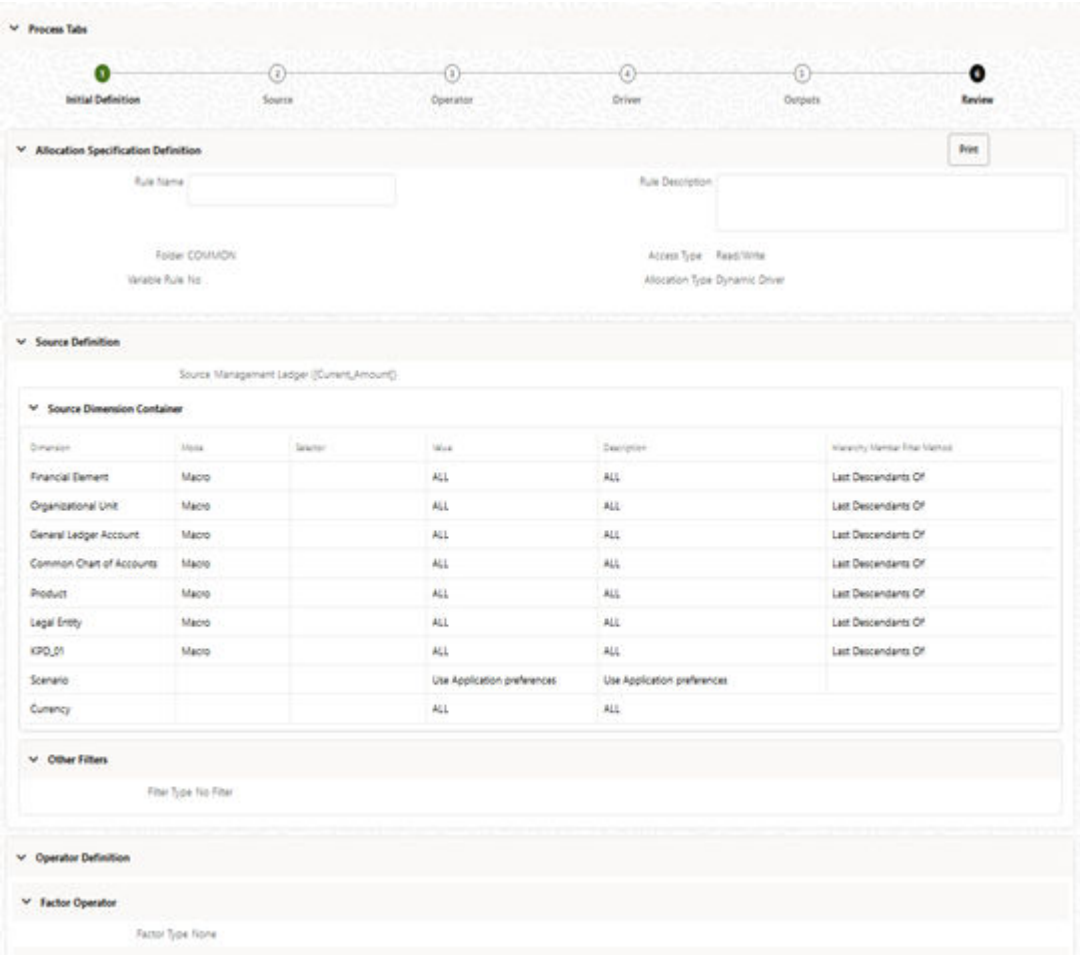


Figure 6-39 Allocation Specification Definition - Review Process Tab

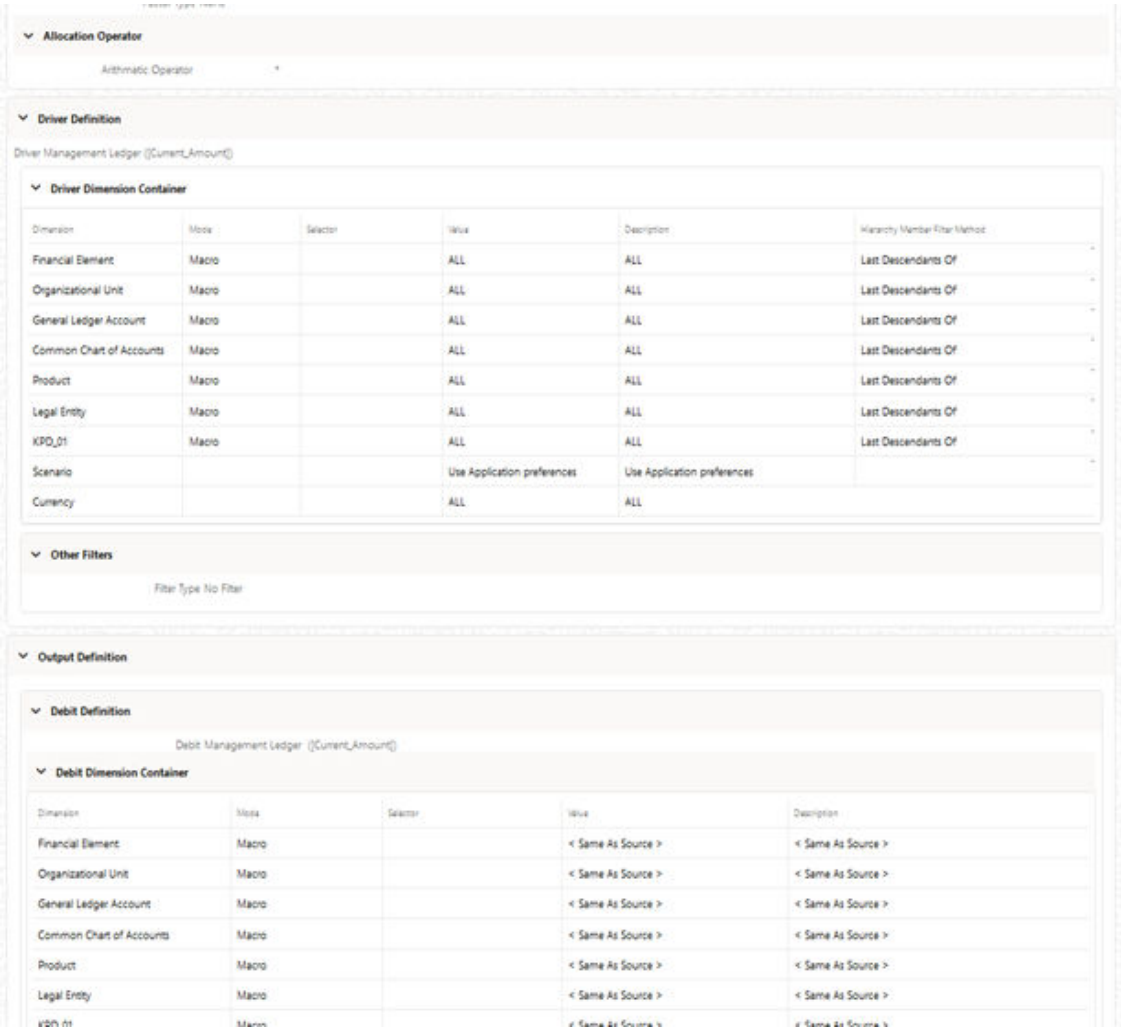


Figure 6-40 Allocation Specification Definition - Review Process Tab

6.3.1.2 Enhancements added to Allocation Specifiation

To help the user to create functionally valid rules, we have added a set of UI validations in the Allocation Detail screen.

Limitation of using at most two tables per allocation rule

An allocation rule should functionally have at most two tables in its definition across Source, Driver, Debit, Credit. A rule is rendered ambiguous when we define more than 2 tables in its definition and the rule execution does not produce results.

A UI validation has been added on Save of the rule, restricting saving if the rule definition uses more than two tables.

Similarly, an allocation rule containing more than one management ledger table is not functionally valid and the application does not allow allocations to run across multiple management ledger tables. In cases where more than one management ledger table is used in the definition, the rule does not get saved and throws error.

Allocation Rule limitation on Output Dimensional constraints

This limitation is applicable only when the Output (Debit/Credit) table of an allocation rule is a Non-Management Ledger table, like an Instrument table or a Transaction Summary table.

When the Output table is a Non-Management Ledger table, the allocation engine updates only the value of the output column for a set of rows.

Earlier, two modes of selecting output dimensions was allowed – Macro and Leaf.

The problem with leaf selection is, the user can select any leaf member from the dropdown, that may not exist in the table, and even if exists in the table may not satisfy any output table row when further dimensions are selected in leaf mode. In such cases, no output rows will be selected for engine processing, resulting to no allocation output.

The user thus needs to go through the process of knowing the exact dimension values to be used for output selection. Altenatively, if the user chooses to use macros like <Same as Source> or <Same as Driver>, the user need not worry about the exact dimension value to be used as the engine takes the values from the table and the rows concerned.

Thus, when the output table is an Instrument table or a Transaction Summary table, the redundant Leaf mode of selecting output dimensions, has been removed, and the default mode for selecting output dimensions is Macro.

Allocation Rule limitation on Output Macros

This limitation is applicable only when the Output (Debit/Credit) table of an allocation rule is a Non-Management Ledger table, like an Instrument table or a Transaction Summary table, and we have discussed the default mode for selecting output dimensions in such cases to be Macro.

When the Output table in debit/credit tab is the same as the driver table, the macros dropdown excludes <Same as Source> from the list of available macros for the debit/credit tab.

This is because, when the output table is same as the driver table, we have either of the two cases:

- The source table is the same as that used in output and driver. Here, applying <Same as Source> in output would have the same impact as applying <Same as Driver>. Thus existence of both the macros is redundant.

- The source table is different than that used in output and driver. Here, using <Same as Source> in output carries the risk that the check is not satisfied as the underlying tables are different and in that case, the macro <Same as Source> does not hold any meaning. We need to remember that we are discussing cases when the output table is Non-Management Ledger table, for which the engine only updates the output column.

Similarly, when the Output table in debit/credit tab is the same as the source table, the macros dropdown excludes <Same as Driver> from the list of available macros for the debit/credit tab.

6.3.1.3 Allocation Examples

The Static Driver Allocation Rules are explained in the following sections:

- From Management Ledger to Management Ledger
- From Instrument to Management Ledger
- From Instrument to Instrument
- From Transaction Summary to Management Ledger
- From Transaction Summary to Instrument
- From Transaction Summary to Transaction Summary
- Examples of Leaf Allocations
- Examples of Field Allocations
- Examples of Dynamic Allocations
- Aggregation to the Management Ledger
- Instrument to Instrument
- Management Ledger to Instrument

6.3.1.3.1 From Management Ledger to Management Ledger

For Static Driver Allocation Rules, Management Ledger-to-Management Ledger is a common use case. Allocate 15% of the occupancy expense from one Cost Center to another Cost Center. In this example, the Static Driver is 15%.

Create a cost pool by aggregating 25% of the expense found under a select group of General Ledger accounts for a Region or a Division or a Department, or a single Cost Center. In this kind of aggregation, the static driver is 25%.

Transfer 100% of loan assets from all loan origination centers within a region to a regional holding center. In this example, the static driver is 1.

> **Note:**
>
> While such allocations are relatively common when you have a series of such allocations utilize Static Driver Table Rules. Using a Static Driver Table Rule, you can accomplish with a single Rule what might otherwise require dozens or even hundreds of Static Driver Allocation Rules.

6.3.1.3.2 From Instrument to Management Ledger

The Instrument-to-Management Ledger is a very common use case. Such allocations are inherently aggregative, that is multiple rows from the instrument source map to each row posted to the Management Ledger.

You may aggregate your instrument-level principal balances (current book balances) to the Management Ledger to either enrich your ledger with a dimensionality that is present in your Instrument Data but not present in your initial Financial Accounting Data. For example, General Ledgers normally have more constrained dimensionality than is available in your Instrument Data. Each row of your Instrument Data may designate an owning Cost Center, a General Ledger corresponding to the Instrument's principal balance, its Product, its Customer Segment, and so on. Your General Ledger, however, may only have Dimensions corresponding to Cost Center and GL Account. In this case, although the Management Ledger Table includes columns for Product and Customer Segment, every row from your source General Ledger System populates a single value for these Dimensions as Not Applicable or N/A.

The following example demonstrates how to use a Static Driver Allocation Rule to reclassify the Management Ledger Data using Data from the Liability Instrument Table. Build a Static Driver Allocation Rule as follows:

1. Set the Source to Current Par Balance for the Liability Instrument Table.
2. Set the Allocation Operator to multiply by 1.
3. Credit Management Ledger for Financial Element 100 (Ending Balance) using <Same as Source> for every Dimension.
4. Debit Management Ledger for Financial Element 100 (Ending Balance) using <Same as Source> for the GL Account and Organizational Unit Dimensions; set every other Key Processing Dimension to N/A.

> **Note:**
>
> When allocating debit balances, you must post them using the Debit Output Tab; offsets to these debits should be posted using the Credit Output Tab. Conversely, when allocating credit balances, you must post them using the Credit Output Tab; offsets to these credits should be posted using the Debit Output Tab.

This allocation effectively eliminates your original balances and replaces them with “enriched” data which is the data that is aligned to the Product and Customer Segment, Organizational Unit, and General Ledger Account. For more information about the aggregation rule, especially, when there are any variances between the sum of your Instrument Level Balances and your initial General Ledger Balances, see the Examples of Dynamic Allocations Section.

Another general use case for aggregating Instrument-level Data to the Management Ledger concerns is summarizing Funds Transfer Pricing results. An example of the Liability Instrument table is as follows:

5. Set the Source to Transfer Pricing Charge/Credit for the Liability Instrument Table.
6. Set the Allocation Operator to multiply by 1.
7. Credit Management Ledger for Financial Element 450 (Transfer Pricing Charge/Credit) using <Same as Source> for every dimension.

8. Debit Management Ledger for Financial Element 450 (Transfer Pricing Charge/Credit) using <Same as Source> for every dimension except for Organizational Unit; for the Organizational Unit dimension, post to the Funding Center.

Here, the Funding Center is a Shadow Cost Center established to house all the transfer pricing offsets. The Funding Center acts as an interest rate risk management center. For a typical bank whose weighted asset duration exceeds its weighted liability duration, the Funding Center is usually a profit center (at least in a normal upward sloping yield curve environment).

6.3.1.3.3 From Instrument to Instrument

Instrument-to-Instrument is a common use case.

- For each Instrument, calculate and update a Target Column as a fixed relationship to some other column. For example, calculate a loan loss reserve as a fixed percentage of the current balance of each mortgage loan.
- For each Instrument, calculate a rate times a balance and multiply it by an accrual basis factor and divide it by 100 to update a revenue or expense column. This allocation uses Expression as a Source where the expression contained a Rate Time Balance Calculation. The Static Driver would consist of (1) an accrual basis macro and (2) and factor of 0.01.

6.3.1.3.4 From Transaction Summary to Management Ledger

Transaction Summary-to-Management Ledger is a common use case.

- Aggregate Transaction Summary level costs to the Management Ledger; post results to a user-defined Financial Element.

6.3.1.3.5 From Transaction Summary to Instrument

Transaction Summary-to-Instrument is a common use case.

Aggregate Transaction Summary level costs to an associated Instrument Table Column. For example, you may record activity level volumes and costs in your Liability Transaction Summary Table. You may want to aggregate a group of ATM-related activities such as ATM Withdrawal Expense, ATM Inquiry Expense, ATM Transfer Expense, ATM Deposit Expense, and Other ATM Expense to an Instrument Column in the Liability Instrument Table called ATM Expense.

6.3.1.3.6 From Transaction Summary to Transaction Summary

Transaction Summary-to-Transaction Summary is an infrequent use case.

- Multiply Liability Transaction Summary volumes by a fixed unit cost and post the result to Liability Transaction Summary costs.
- Another reason that Transaction Summary-to-Transaction Summary is an infrequent use case is that customers often have unit cost data for their activities that allow them to multiply their Volumes times Unit Costs to populate the both the Volume & Cost columns within their ETL that is used to initially load Transaction Summary tables.
- Because Transaction Summary Tables commonly store activity volumes, you are more likely to build this kind of rule using Static Table Driver Rules that contain unit costs for many activities. To complete your Volume * Unit Cost process, one Static Driver Table Allocation Rule could take the place of dozens or hundreds of Static Driver Allocation Rules.

6.3.1.3.7 Examples of Leaf Allocations

Leaf Allocations only support the Management Ledger-to-Management Ledger use case. Leaf Allocations are used to compare a Source set of Management Ledger Balances to a Driver set of Management Ledger balances to create an Output set of Management Ledger Balances.

In this type of rule, the Allocation Engine attempts to match each Source row to a Driver row where the two rows share the same values for every Key Processing Dimension. For example, in an implementation in which there are seven Key Processing Dimensions, for each Source row, the Engine attempts to find a Driver row that matches the Source row in six dimensions, but which differs in one dimension. The one dimension in which Source and Driver rows must differ is the dimension chosen in the Driver as the “Leaf” dimension.

- **Example 1**: You divide a set of Management Ledger Transfer Pricing Charge/Credit balances (stored under Financial Element 450) by a set of Management Ledger Average Balances (stored under Financial Element 140) to generate a third set of Management Ledger Weighted Average Transfer Rates (stored under Financial Element 170). In this case, constrain your Source data to Financial Element 450; for your Driver, you specify Financial Element as your Leaf Dimension and you select Financial Element 140. For your output, choose a Financial Element of 170.
- **Example 2**: You subtract a set of “Aggregated Instrument Level Ending Balances” (stored under a user-defined Financial Element such as 10100) from a set of “original General Ledger ending balances” (stored under Financial Element 100) to generate a set of variances between your General Ledger data and your Instrument data. These variance records might be stored under a second user-defined Financial Element such as 20100.

6.3.1.3.8 Examples of Field Allocations

In the Instrument Table context, Field Allocations perform Arithmetic Operations on different columns within the same row of data. For example, you might use a Field Allocation Rule to multiply Instrument-level balance times a rate times an accrual basis factor to update a Rate-related income or expense column. Such an Allocation could update a single row or millions of rows depending on your filtering criteria.

In the Management Ledger context, Field Allocations are rarely used. When they are used, Field Allocations perform Arithmetic Operations on different columns within the same “logical” row of data. For example, to generate a result set of rows in the Management Ledger that represent changes in asset values from month-to-month, build a Field Allocation that used the < Current Amount > macro for all Management Ledger asset balances as your Source and that subtracted the < Last Month Amount > in the Driver. In this example, you would suppress the Credit output and write the Debit output to a user-defined Financial Element. If your Source Financial Element were 100 (Ending Balance), post your results to a user-defined Financial Element whose name was Month-Over-Month Change.

6.3.1.3.9 Examples of Dynamic Allocations

Management Ledger Reclassification Using Instrument Level Driver Data.

6.3.1.3.9.1 Example #1

Commonly, General Ledger constitutes a starting point for building up Management Ledger. One way of enriching your Management Ledger is to exploit your Instrument level data to distribute balances to additional dimensions that are not present in your book-of-record General Ledger.

For this example, assume that your General Ledger Data is aligned in the Organizational Unit and GL Account Dimensions but is not aligned to the Product Dimension. For example:

- Your General Ledger records principal balances for Commercial Loans and Consumer Loans under 2 GL accounts for Branch 1 and Branch 2.
- Your Asset Instrument table contains thousands of loan records for the same 2 GL Accounts (Commercial Loans and Consumer Loans) for Branch 1 and Branch 2 for two different products.

Table 6-13 Summary of the Balances for Example 1

Table	GL Account	Branch	Product	Balance	# of Loans
Management Ledger	Commercial Loan	1	—	$1,000	—
Management Ledger	Commercial Loan	2	—	$2,000	—
Management Ledger	Consumer Loan	1	—	$3,000	—
Management Ledger	Consumer Loan	2	—	$4,000	—
Asset Instrument	Commercial Loan	1	Land	$600	214
Asset Instrument	Commercial Loan	1	Construction	$400	659
Asset Instrument	Commercial Loan	2	Land	$1,400	814
Asset Instrument	Commercial Loan	2	Construction	$600	907
Asset Instrument	Consumer Loan	1	Auto	$2,100	273
Asset Instrument	Consumer Loan	1	Personal	$900	622
Asset Instrument	Consumer Loan	2	Auto	$2,600	861
Asset Instrument	Consumer Loan	2	Personal	$1,400	590

Note that the Instrument balances and General Ledger balances reconcile perfectly. For example, the 214 Land loans and 659 Construction Loans under Branch 1 have balances totaling $1,000 that reconcile with the General Ledger balance of $1,000 for Commercial Loans under Branch 1.

To product align the Management Ledger:

1. Build a Dynamic Driver Allocation Rule where the Source filters on the Management Ledger for the < Current Amount > macro for the Asset branch of your GL Hierarchy for Financial Element 100 (Ending Balance). Instead of utilizing a Rollup Node to filter on assets, construct a Data Element Filter for the Commercial Loans and Consumer Loans GL accounts. For this reason, only the Financial Element constraint is truly required.
2. Set the Allocation Operator to Multiply.
3. Set the Dynamic Driver to utilize Current Par Balance from your Asset Instrument Table. Set the Driver's Distribution Type to Percent Distribution. No dimensional constraints or other filters are necessary.

4. Set the Credit Output to Management Ledger (Note: when posting outputs to Management Ledger, you must output to the < Current Amount > macro). Set < Same as Source > for each Key Processing Dimension.
5. Set the Debit Output to Management Ledger; use < Match Source & Driver > for the GL Account and Organizational Unit dimensions, < Match Driver > for the Product dimension, and < Same as Source > for all other Key Processing Dimensions.

Written in this fashion, the Allocation Rule will (1) generate credit records that exactly offset the original ledger (debit) balances and (2) aggregate the instrument ending balances on a per GL Account, per Organization Unit, per Product basis and post the results to Management Ledger.

Table 6-14 Summary of the Management Ledger Rows before and after the Allocation Run

Row Type	GL Account	Branch	Product	Balance
Initial Load	Commercial Loan	1	—	$1,000
Initial Load	Commercial Loan	2	—	$2,000
Initial Load	Consumer Loan	1	—	$3,000
Initial Load	Consumer Loan	2	—	$4,000
Credit	Commercial Loan	1	—	($1,000)
Credit	Commercial Loan	2	—	($2,000)
Credit	Consumer Loan	1	—	($3,000)
Credit	Consumer Loan	2	—	($4,000)
Debit	Commercial Loan	1	Land	$600
Debit	Commercial Loan	1	Construction	$400
Debit	Commercial Loan	2	Land	$1,400
Debit	Commercial Loan	2	Construction	$600
Debit	Consumer Loan	1	Auto	$2,100
Debit	Consumer Loan	1	Personal	$900
Debit	Consumer Loan	2	Auto	$2,600
Debit	Consumer Loan	2	Personal	$1,400

Note the following:

- The original Ledger balances are exactly offset by the Allocation's Credit Records.
- The Allocation Rule produces a balanced accounting transaction- a set of Debit and Credit records that sum to zero.
- The Allocation Rule's Debit records effectively “product align” the Management Ledger.

Also, note that it was not necessary to supply any kind of GL Account or Organizational Unit filter in the Allocation's Source specification. The reason that doing so is not strictly speaking required is that your rule is written to < Match Source & Driver > in the GL Account and Organizational Unit dimensions. Since only 2 GL Accounts (Commercial Loans and Consumer Loans) and 2 Organizational Units (Branch 1 and Branch 2) are found in the driver data (the instrument records), the Source is effectively constrained to these values even if you do not explicitly filter on them in the Source specification.

6.3.1.3.9.2 Example #2

The same results from Example #1 above can be obtained from a Static Driver Rule:

- Source = Instrument ending loan balances.
- Allocation Operator = “times 1.00”.

- Debit = < Same as Source > for all dimensions.
- Credit = < Same as Source > for Organization Unit and GL Account and N/A for Product.

Table 6-15 Summary of the Instrument Data that does not reconcile to the General Ledger data

Table	GL Account	Branch	Product	Balance	# of Loans
Management Ledger	Commercial Loan	1	—	$1,000	—
Management Ledger	Commercial Loan	2	—	$2,000	—
Management Ledger	Consumer Loan	1	—	$3,000	—
Management Ledger	Consumer Loan	2	—	$4,000	—
Asset Instrument	Commercial Loan	1	Land	$603	214
Asset Instrument	Commercial Loan	1	Construction	$399	659
Asset Instrument	Commercial Loan	2	Land	$1,401	814
Asset Instrument	Commercial Loan	2	Construction	$604	907
Asset Instrument	Consumer Loan	1	Auto	$2,106	273
Asset Instrument	Consumer Loan	1	Personal	$903	622
Asset Instrument	Consumer Loan	2	Auto	$2,597	861
Asset Instrument	Consumer Loan	2	Personal	$1,399	590

Note that total Commercial Loans under Branch #1 is now $1,002 whereas the Ledger Balance is only 1,000. A simple Static Driver Allocation that aggregated these balances to the Management Ledger would create one credit record for $1,002 and two debit records totaling $1,002. This would leave a net “unaligned” balance of $2. The Dynamic Driver Allocation, however, would still create a single credit record for Commercial Loans under Branch 1 in the Management Ledger for $1,000; and it would still create two debit records for Commercial Loans under Branch 1 totaling $1,000.

Table 6-16 Summary of Data Dynamic Driver Allocation creates an Example #2

Row Type	GL Account	Branch	Product	Balance
Initial Load	Commercial Loan	1	—	$1,000
Initial Load	Commercial Loan	2	—	$2,000
Initial Load	Consumer Loan	1	—	$3,000
Initial Load	Consumer Loan	2	—	$4,000
Credit	Commercial Loan	1	—	($1,000)
Credit	Commercial Loan	2	—	($2,000)
Credit	Consumer Loan	1	—	($3,000)
Credit	Consumer Loan	2	—	($4,000)
Debit	Commercial Loan	1	Land	$601.80

Table 6-16 (Cont.) Summary of Data Dynamic Driver Allocation creates an Example #2

Row Type	GL Account	Branch	Product	Balance
Debit	Commercial Loan	1	Construction	$398.20
Debit	Commercial Loan	2	Land	$1,397.51
Debit	Commercial Loan	2	Construction	$602.49
Debit	Consumer Loan	1	Auto	$2,099.70
Debit	Consumer Loan	1	Personal	$900.30
Debit	Consumer Loan	2	Auto	$2,599.60
Debit	Consumer Loan	2	Personal	$1,400.40

6.3.1.3.9.3 Management Ledger Allocations Using Statistics

The Management Ledger Allocation using statistics covers the following:

- **Percent Distribution**: Examples #1 and #2 above utilize the Instrument-level statistics as Driver Data for rules whose Source is the Management Ledger and that generates an output to the Management Ledger. It is also possible to use the Management Ledger as a Source, the Management Ledger as the source of Driver data, and the Management Ledger as your output target. Two examples of percentage distribution are:
  - Distributing Human Resource expenses to Cost Centers as a function of (Management Ledger Resident) headcount statistics.
  - Distributing Occupancy expenses to Cost Centers as a function of (Management Ledger resident) square footage statistics (space occupied by the target Cost Centers).
- **Uniform**: See the Uniform Method Section for an example of the Uniform allocation method.
- **Simple**: Your Institution might obtain volumetric statistics for different kinds of activities either from your source systems or as memo accounts within your General Ledger. If you have such activity counts stored within your Management Ledger, you could build Allocation Rules to develop Cost Pools. Subsequently. build other rules to develop unit costs for each of your activities. For example, beyond general marketing expense, your Institution might track advertising expense for Time Deposits under a single General Ledger account and record “Number of CD's Sold” for each Time Deposit product under a General Ledger memo account (likely stored in Management Ledger under Financial Element 10,000: Statistic). In this case, build a Dynamic Driver Allocation Rule that used the “Time Deposit Advertising Expense” GL Account as its Source. Divided by the “Number of CD's Sold” on a Percent to Total basis, and that debited a new, user-defined Financial Element 10,100: CD Acquisition Unit Costs (for this Allocation, set your debit GL Account and Org Unit and all other Key Processing Dimension Values to a dummy value meaning of which was “N/A” or “Not Applicable”). In creating these unit costs, use instrument-level data to obtain your “Number of CD's Sold” statistic. To accomplish this, your driver would look to the Record Count column (the Record Count column contains the number “1”) of the Time Deposit table (FSI-D-TERM-DEPOSITS). This would include a Data Element Filter that isolated new accounts; and a Hierarchy Filter on the Product Dimension that included only the relevant Time Deposits Products.

Under either approach, your result set is a series of unit costs by Product for acquiring new CDs. In this example, we assumed that the only costs included in acquiring new Time Deposits were the advertising costs directly related to Time Deposit products. More realistically, you might first build a series of Allocation Rules that created a cost pool for this expense category; or you might have to build a more complex Source expression to capture all of the relevant

costs dynamically. Moreover, your Institution might capture these unit costs within your General Ledger or might develop these costs in an external model. The following example demonstrates how to utilize unit costs using a Dynamic Driver Allocation Rule under the “Simple” method. Having acquired (or developed) your unit cost statistics, build a Dynamic Driver Allocation Rule as follows:

- **Source**: Record Count (1) from the Time Deposits Table.
- **Allocation Operator**: Multiplication.
- **Driver**: CD Acquisition Unit Costs under Financial Element 10,100 using the Simple Method.
- **Debit Outputs**: A user-defined Acquisition Costs column within the Time Deposits Table; set the Product Dimension to < Match Source & Driver >; set all other Key Processing Dimensions to < Same as Source >.
- **Credit Outputs**: None

Written in this fashion, the Allocation Engine reads each record, matches it to the appropriate unit cost for the record's Product, and updates the record with that appropriate unit cost.

> **Note:**
>
> You could set the Credit Output to the aggregate total allocated costs to offset the Management Ledger GL Account or Cost Pool containing the original costs.

In achieving the objective of distributing activity-based costs, it is not strictly necessary to either build cost pools or unit costs. You might be able to simply define your cost pool dynamically within an Allocation Rule and allocate those costs directly to your instruments on a Percent to Total basis using appropriate instrument-level drivers (in this example, number of new accounts).

One reason to take the more complicated path of developing unit costs is to be able to more readily report directly on those unit costs, or that you have obtained those unit costs from an independent cost study or an external Activity Based Costing Application.

You may decide that burdening new Time Deposits with their entire Acquisition Cost based on:

- In the month in which there were originated,
- The current month's advertising costs were not economically “fair” or realistic.

To develop unit costs reflecting the average of your YTD or “rolling 12” advertising expense; allocate not only to new accounts but to all Time Deposit accounts. Choosing either of these methods complicates the task of reconciling your total account level profitability back to your General Ledger but choosing Economic allocation methods for allocating expenses to the account level is common.

6.3.1.3.9.4 From Management Ledger to Instrument

As seen in Example #1 and Example #2 above, Dynamic Driver Allocation Rules can also update balance or rate columns at the Instrument level. The following example uses the Management Ledger as a Source while using an Instrument column as Driver to post to the Instrument level.

In this example, your objective is to distribute Item Processing expenses from your Management Ledger to individual Customer Account Records. If each of your individual Customer Account records for every demand Deposit Account carried a statistic called Number

of Items Processed, that statistic would make an excellent Percent Distribution driver for item processing expense; your target column for such a rule would be a user-defined Instrument column called Item Processing Expense. For this rule, you would likely utilize < Match Driver > for each Key Processing Dimension in your Output. Note that Instrument-level allocations can only alter the target balance or rate column. Instrument level allocations cannot alter Key Processing Dimension Values; the Instrument-level Key Processing Dimensions can only be used as lookup keys. If you use either < Same as Source > or < Match Source & Driver > on one dimension, your rule is forced to exclude any Instrument rows that did not match your Management Ledger for the dimension in which you chose < Match Source & Driver >.

6.3.1.3.9.5 Transaction Summary Tables

Each row within an Instrument Table describes a unique Customer Account or position at a point in time. Instrument rows are “wide” or “horizontal”, that is, they contain potentially hundreds of columns containing Attributes or Measures. By contrast, Transaction Summary Tables (each Instrument Table has a corresponding Transaction Summary Table) also describe unique Customer accounts or positions at a point in time, but they include one or more (meaningful) dimensions in their primary keys that are not populated in the corresponding Instrument Table. In this sense, Instrument Tables and Transaction Summary Tables have a parent-child relationship; each row in an Instrument Table may have one or more child rows in its corresponding Transaction Summary Table; parent and child records share the same business date and “account identifier” (ID-NUMBER), but the “child” records vary in the “differentiating” dimension or dimensions. Each child row in a Transaction Summary Table contains only two fact columns: Volume & Cost (you may, however, customize your Transaction Summary Tables). Unlike Instrument Tables, Transaction Summary Tables are “tall” or “vertical”.

Transaction Summary Tables as vertical expressions of Instrument Tables. Each numeric measure within an Instrument row could be expressed as a single row within a Transaction Summary Table. Used in this fashion, define a Transaction Summary Table to have the same primary key as its parent Instrument Table with the addition of one additional Key Processing Dimension called “Measure Name”. In this case, each member in the Measure Name dimension would correspond to a column in the parent instrument table. Note that Key Processing Dimensions are present in all the Business Fact Tables (Instrument Tables, Transaction Summary Tables, and the Management Ledger). When you actively utilize a Key Processing Dimension within a Transaction Summary Table, you typically do not “actively” use that dimension at the instrument level (that is, the value in the Instrument Table would be “N/A”). Although this is not how Transaction Summary Tables are intended to be used, it may help in understanding their structure.

Another way of conceptualizing Transaction Summary Tables is as follows. At the Instrument level, the value of General Ledger account for a given row is meant to express the principal balance General Ledger account for that row. When you aggregate all instrument-level current book balances, the resulting total balance should reconcile to your General Ledger principal balance. You may, however, want to reconcile balances other than simply principal balances. You might wish to reconcile average book balances, par balances, deferred balances, interest income or expense balances, accrued interest receivable or payable balances, or fee balances. To accomplish this, you might store all your balances in Instrument records but store selected balances in child Transaction Summary Tables under their respective General Ledger accounts that will reconcile back to your General Ledger.

Table 6-17 Mortgage Instrument Record (hundreds of additional columns not depicted

Loan #	As-of-Date	GL Account	Book Balance	Par Balance	Interest Income	Fee Income
1	Jan 2011	Mortgages, Book Balance	100,000	99,734	713	14

Table 6-18 Associated Transaction Summary Child Records for Selected Balance

Loan #	As-of-Date	GL Account	Balance
1	Jan 2011	Mortgages, Book Balance	100,000
1	Jan 2011	Mortgages, Par Balance	99,734
1	Jan 2011	Mortgages, Interest Income	713
1	Jan 2011	Mortgages, Fee Income	14

These examples explain the basic structure of Transaction Summary Tables. The primary purpose of Transaction Summary Tables is to support bottom-up profitability models. For example, the “differentiator” between an Instrument Table and its child Transaction Summary Table might be a user-defined Key Processing Dimension called Transaction or Activity. If your source systems can provide account level volume statistics for different kinds of activities, you might develop unit costs for each activity to calculate account-level costs for each activity. For example, you can collect the following account level statistics (counts over time, typically over a month) from your source systems:

- ATM Inquiries
- ATM Withdrawals
- ATM Deposits
- ATM Transfers, In-Network
- ATM Transfers, Out of Network
- Other ATM Transactions
- Direct Deposits (Electronic)
- E-Banking Auto-transfers
- E-Banking Bill Pay
- E-Banking Transfers, In Network
- E-Banking Transfers, Out of Network
- Teller Inquiries
- Teller Withdrawals
- Teller Deposits
- Teller Transfers
- Checks Processed
- Overdrafts Processed
- Paper Statements Processed

You could store these volume and cost statistics using user-defined columns within the Liability Instrument table. The listing of such activities and costs might number in the dozens or even in the hundreds, and each activity would require its own extended Cost (typically populated in “rate times volume allocations” or directly via the ETL process). Moreover, when you have a large number of such activities, many activities might have a count of zero resulting in wasted storage in your instrument columns. Finally, if your list of activities changes over time, you would have to restructure how you use user-defined instrument table columns corresponding to activities & costs you no longer use.

Alternatively, you could store these volume & cost statistics in the Liability Transaction Summary Table utilizing a user-defined Key Processing Dimension called Activity to differentiate child records from parent records. The dimension members within the Activity dimension would correspond to your list of activities.

There are many other advantages to this Transaction Summary approach. First, since your Activity dimension would be a Key Processing Dimension, you could construct an Activity Hierarchy. The Activity Hierarchy might be useful in a reporting context, but more importantly, higher-level rollup points within your Activity Hierarchy are likely to be much more stable than individual activities (leaf members within the Activity dimension). For example, you may wish to construct an account-level profitability model for demand deposits in which you want to calculate and report on higher-level cost elements that have a channel orientation such as ATM Expense, Branch Expense, and E-Banking Expense. You might choose to store your volumes and compute your costs for each (leaf level) activity at the Transaction Summary level and then construct Instrument level columns for ATM Expense, Branch Expense, and E-Banking Expense. Using unit costs, you can construct Allocation Rules to compute your Transaction Summary level costs. Subsequently, you can use other Allocation Rules to roll up your Transaction Summary levels costs to target columns within your Instrument table that correspond to rollup points in your Activity Hierarchy.

Using this approach, you do not pay any storage penalty if many activities frequently have a zero count for any given account (you do not have wasted Instrument columns that have zero counts and zero costs, and Transaction Summary rows only exist for non-zero counts). Also, note that if you add new activities, you need only construct a new Activity member and update your Activity Hierarchy to indicate its rollup point. No further maintenance is required in either terms or your data model or your Allocation Rules.

6.3.1.3.9.6 Updating Transaction Summary Tables

To update a Transaction Summary Table with unit costs held in your Management Ledger, perform the following steps:

Construct an Allocation Rule that uses the Volume column of your Transaction Summary Table as its Source, that uses the Management Ledger statistics as your driver (using the Simple method), and that debits the Cost Column in your Transaction Summary Table. In the debit specification, use < Match Source & Driver > for the Activity dimension and < Same as Source > for every other Key Processing Dimension. The (Management Ledger resident) unit cost drivers are stored under a user-defined Financial Element (one unit cost for each Activity).

> **Note:**
>
> For each Activity, you might have different unit costs for different products. If the statistics were stored under a single Financial Element, but varied by Activity and by Product, you can construct your cost to < Match Source & Driver > for both Activity and Product.

The sample list of Activities used in this discussion has a Channel orientation. You might wish to construct a smaller list of more fundamental Activities that vary by channel. For example, the list of activities presented above could be re-expressed as follows:

- Inquiries
- Debits Processed
- Credits Processed
- Other Transactions
- Reversals Processed
- Statements Processed

Under this smaller set of Activities, you could choose to store your unit costs in Management Ledger by Activity and by Channel (another user-defined Key Processing Dimension). In this scenario, you would define your Transaction Summary Table to utilize both Activity and Channel to differentiate it from its parent Instrument Table.

Note that this example uses a Dynamic Driver Allocation Rule to update the Transaction Summary Table. In this example and the examples of updates to Instrument Tables, you could also use Static Driver Table Allocation Rules. Even if your unit costs are the same from month-to-month, they generally need to be stored for every month in Management Ledger (although you can store your unit costs under a fixed month, for example, January, and then hard code your Allocation Rules to “always use the January balance”). For additional examples of using Static Driver Table Allocation Rules, see the Static Table Drivers section.

6.3.1.3.9.7 Updating Instrument Tables from Transaction Summary Tables

After you have run your Allocation Rule to update the Cost Column in the Transaction Summary Table, run other Allocation Rules to aggregate costs to the Instrument level. You need one Allocation Rule for each instrument-level target column, but each of these aggregation allocations is structurally very similar. For example, to aggregate the costs associated with each of the ATM-related activity-based cost in your Transaction Summary Table, build a Static Driver Allocation Rule that uses the Transaction Summary Table's Cost Column as your Source, that multiplies by 1.00 in the Allocation Operator, and that debits the ATM Expense column in your target Instrument Table. The Source specification also utilizes the ATM Expense rollup point within your Activity Hierarchy. Each subsequent allocation would have the same structure but would vary its hierarchy rollup point filter in its Source specification and its Instrument Target column in its Debit specification.

Examples of Static Driver Table Allocations: For more information, see Using Static Table Drivers in Static Table Drivers section.

6.3.1.3.10 Aggregation to the Management Ledger

Allocation rules can be written to aggregate one column from an instrument table to the Management Ledger Table. Common aggregations include ending or average balances or interest income or transfer charges or credits to specific Financial Elements in the Management Ledger table. Frequently, there may also be other non-interest income or non-interest expense columns that you may want to aggregate to the Management Ledger Table. For any column to be aggregated, the operation is functionally identical for the Asset Instrument table and for the Liability Instrument table (as well as for any other instrument table).

6.3.1.3.11 Instrument to Instrument

Another common rule type performs column-wise calculations such as rate x balance x accrual basis factor that is again identical for different Instrument Tables.

6.3.1.3.12 Management Ledger to Instrument

Another common rule type allocates from Management Ledger to the Instrument Level.

6.3.2 Allocation Models

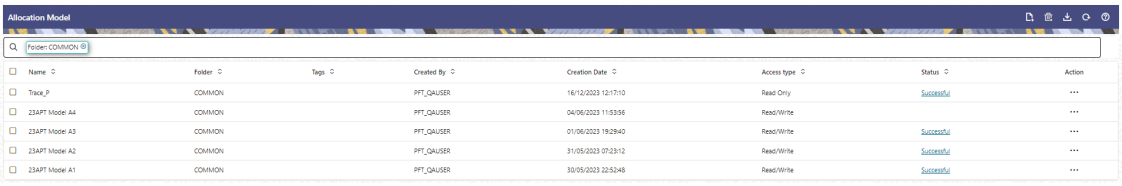
An Allocation Model consists of a list of individual allocation rules that can be executed as a single unit. Oracle Financial Services Profitability Management Cloud Service supports only the Standard type of Allocation Model construction.

- **Standard Model**: A Standard Allocation Model consists of a list of individual allocation rules that run sequentially and that can be executed as a single unit of work. Standard Allocation Models are useful to assemble a logical grouping of allocation rules into a single executable rule.
- **Circular Model**: A Circular Allocation Model is similar to a Standard Allocation Model, but includes two lists of allocation rules: a list of “circular” rules and a list of “sweep” rules. The list of circular rules executes first; generally, the circular list runs multiple times. Each rule within the circular list of rules runs sequentially. After the circular list has run one or more times, each of the sweep rules also runs sequentially, but the list of sweep rules only runs once.
  The primary purpose of the Circular Allocation Model is to process allocation scenarios in which the allocation rules can Source data that result from previous allocations and that send data back to Sources that had previously been eliminated. One common example of this kind of situation occurs in a center-to-center type of allocation rule that involves providers of shared services. For example, a block of allocation rules can be designed to push expenses from a series of providers of shared services such as IT, Finance, HR, Payroll, Accounting, Treasury, and so on to a downstream series of direct support centers and profit centers. An issue that you can encounter here is that HR allocates most of its expense to direct support centers and to profit centers, but also allocates some of its expense to other providers of shared services such as Payroll or Accounting. These centers, in turn, might allocate some of their expense back to HR when the first allocation had already cleared all of the expenses from the HR center.

To open the Allocation Model summary page, from the LHS menu, select **Operations And Processes**, and select **Allocation Model**.

When you navigate to the Allocation Model summary page, the Allocation Models stored within your current Default Folder are displayed in a summary table. The Allocation Model Specification summary page has two panes: Search and Allocation Model Specification.

Figure 6-41 Allocation Model summary screen



The title bar of the summary page provides several actions for the user. They are:

- **Add**: Click Add icon to build a new Allocation model. The Add icon is disabled if any rows in the table are selected.
- **Multiple Delete**: Select one or more models in the table and then click the (-) icon at the top right of the summary page to delete more than one rule at the same time.
- **Download**: Click to download the displayed information in the summary table in .xls format.
- **Refresh**: Click the Refresh icon to refresh the Summary Page.
- **Help**: Click Help icon to view the Allocation Model help.

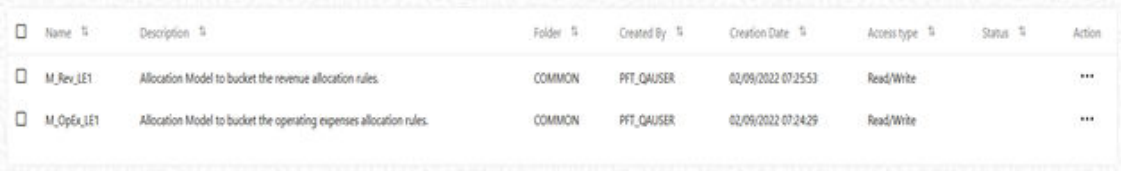
The Allocation Model summary can be divided under two sections – the Search section and the Summary table.

On the summary page, enter your search criteria in the search box and click **Search**. The Allocation Model definitions meeting your search criteria are displayed.

Allocation Model Summary Table

This section displays a table containing all the Allocation models that are already created or those models that meet your search criteria.

Figure 6-42 Allocation Model Summary Table



The Allocation Model Summary Table displays the following details:

- **Name**: Displays the Allocation model's short name. Hovering over an allocation model name displays the Allocation model's object_code.
- **Folder**: Displays the folder in which the model has been created.
- **Tags**: Displays the tags associated with the rule.
- **Created By**: Displays the name of the user who created the allocation model.
- **Creation Date**: Displays the date and time at which an Allocation model was created
- **Access Type**: Displays the "Read/Write" or "Read Only" property of an Allocation model. Only the creator of a rule may change its Access Type.
- **Status**: Before executing an Allocation Model for the first time, the Status is blank. After executing an Allocation Model, the appropriate status of the rule is displayed among Processing, Success or Failed.
  For a successful or a failed execution, the **Log Viewer** screen can be invoked by clicking on the status of a rule. The Log Viewer screen displays the logs/messages for the execution.
- **Action**: Displays the list of following actions that can be performed on the selected model.
  - **View**: Click the View icon to view the contents of an Allocation model on a read-only basis as the user is launched into the Allocation Model Detail screen in view mode.

- **Edit**: Click the Edit icon to modify a previously saved Allocation model as the user is launched into the Allocation Model Detail screen in edit mode.
- **Run**: Click Run to execute the selected Allocation model. On click of Run, the Run Execution Parameters window opens up to show the process name being executed and take user input of run time parameters – the As of date and the legal Entity. The As-of-Date can be reset in the User Preferences for Profitability Management.
- **Save As**: Click on this option to create a copy of an existing Allocation model. The Save As pop-up window allows you to enter the Name, Description, Folder, and Access Type Details for the copy model.
- **Delete**: Click Delete to delete the models you have selected.

You may select or de-select all of the Allocation models in the summary table by clicking on the check-box in the upper left-hand corner of the summary table directly to the left of the Name column header.

6.3.2.1 Detail Screen

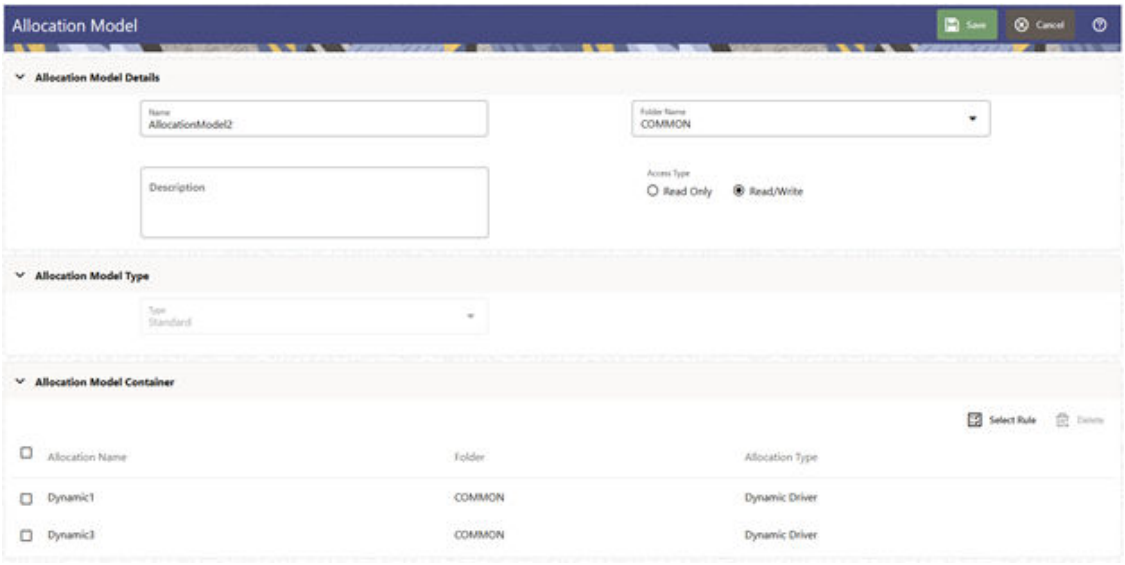
Click **Add** from the Title bar of summary screen or Edit/View an allocation model from summary to launch into the Allocation Model Detail screen.

Navigation within the Detail Screen

When you Add, Edit, or View an Allocation Model, the Allocation Model Definition screen is displayed with the following panes:

- Allocation Model Details
- Allocation Model Type
- Allocation Model Container

Figure 6-43 Allocation Model Definition screen



Allocation Models Details Pane

The Allocation Model Details pane allows you to specify an allocation model's Name, Description, Folder and the Access Type.

Figure 6-44 Allocation Model Details Pane

Allocation Model Type Pane

The Allocation Model Type pane allows you to specify the type of the model you want to construct.

The appearance of the Allocation Model Type pane depends on whether you are building a Standard Model or a Circular Model.

- **Standard Model**: To construct a Standard Allocation Model, select Standard from the Model Type drop-down list box.
- **Circular Model**: To construct a Circular Allocation Model, select Circular from the Model Type drop-down list. By default the screen is launched with the allocation model type selected as ‘Standard’.

Figure 6-45 Allocation Model Type Pane-Standard is selected as default

To build a Circular Model, the user needs to select the value as ‘Circular’ in the Allocation Model Type drop-down. The user then needs to specify the number of iterations or cycles the user wants the circular part of the Allocation Model to execute, in text field “Number of Cycles”. The user needs to input positive integer values as the number of cycles.

Figure 6-46 Allocation Model Type Pane with Type selected as ‘Circular’

There is however, a maximum limit set for the number of cycles the user can input.

Maximum Circular Allocation Iterations: To omit an infinite loop of allocation rules, Allocation Models are governed by an overall limit on the maximum number of iterations or cycles that can be run before the circular part of a model completes. This maximum number of iterations is set in the User Preferences for Profitability Management.

Figure 6-47 User Preferences

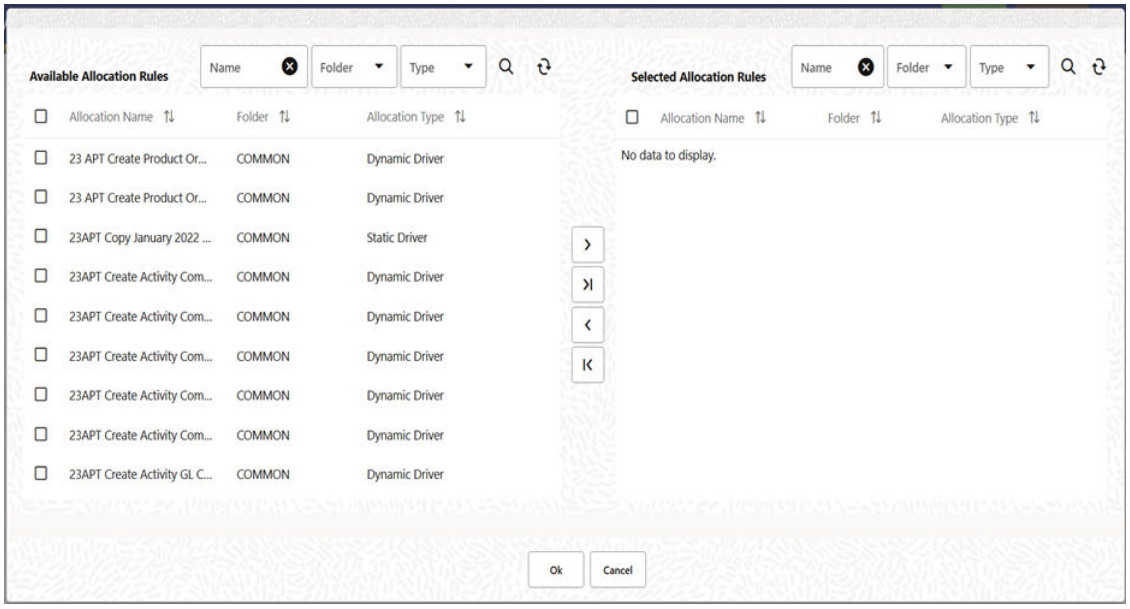
6.3.2.1.1 Allocation Model Container Pane

To construct a Standard Allocation Model, the Allocation Model Container pane allows a single list of allocation rules.

Figure 6-48 Allocation Model Container Pane for Standard Allocation Model

Click the **Select Rule** button or to open a pop-up window that allows you to select the rules you want to include in your model. The pop-up opens into a shuttle-box element with the list of the available Allocation Rules on the left hand side and the list of the selected Allocation Rules on the right hand side.

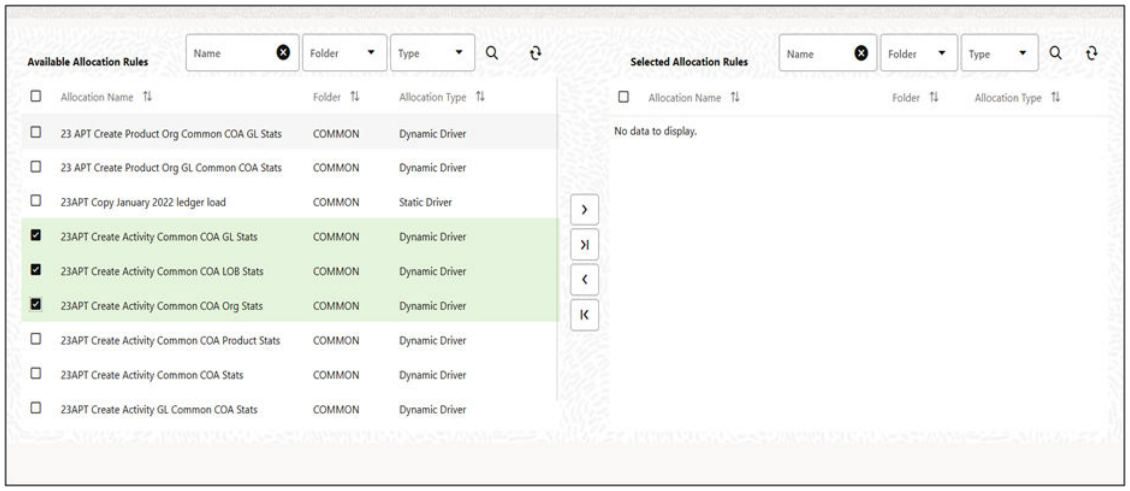
Figure 6-49 Allocation Rule Selection



The window has search capability in each of the available and the selected lists, and the search acts as a dynamic search on the list of rules that each list contains. Search capability is provided for Allocation rule name, the folder in which an allocation rule is defined and the Type of the allocation rule.

On launch of the window, the user is directed to the allocation name search field on the available list and the user can perform a search action on available rules to be selected and shuttled into the Selected list, or can directly choose the required available rules to be shuttled into the Selected list. The window gives a feature to shuttle the rules one by one or all at once by using one of the shuttling buttons available.

Figure 6-50 Allocation Rule Selection



Once the rules are selected into the Selected list, the same rules do not appear in the LHS Available list. The rules arrive in the Selected list in the same order the user has dragged or selected the rules from the Available list.

The user can move one or more rule from left to right by selecting one or more rules in the LHS box and also selecting a rule in the RHS box, and clicks the ‘single right arrow’ shuttle button. The rules arrive in the RHS box at a position just one level up the selected rule in the RHS. If no rule is selected in the RHS, all the rules arrive at the bottom of the existing rules in the RHS.

A drag feature has been enabled in the RHS box ‘Selected list’ that enables user to drag up or down any rule across the RHS box and set the sequential order of the rule executions within the model. User can drag one or more rules with this feature.

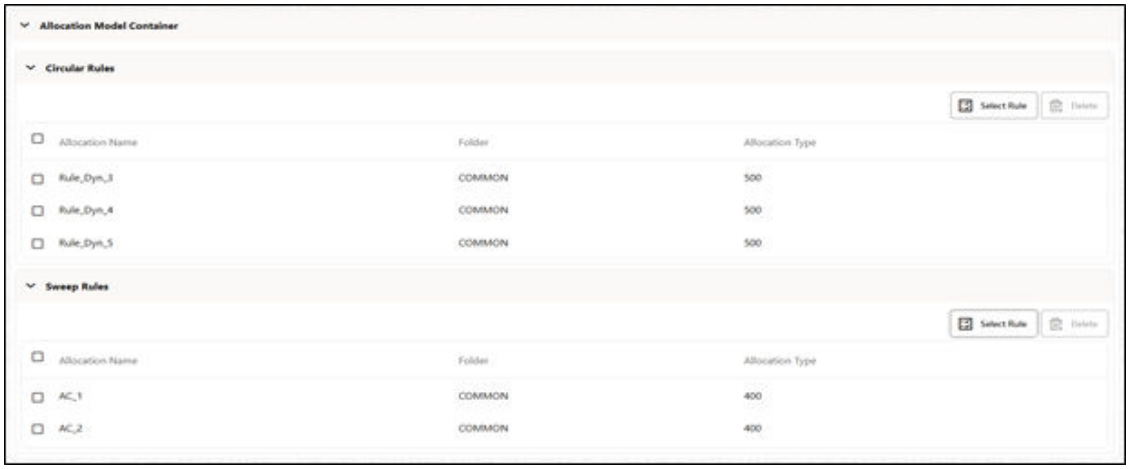
Once the rules are selected, the user can press **OK** on the shuttle box window, and the Allocation Model Container section in the Detail screen is populated with the selected rules under this standard Allocation model.

Figure 6-51 Allocation Model Container (Standard) after Rules selection

To construct a Circular Allocation Model, the Allocation Model Container pane allows two lists of Allocation Rules - the **Circular Rules** list and the **Sweep Rules** list. The selection operation of the rules in both these lists is the same as described above for rules selection in the Standard Allocation model. The **Select Rule** button opens up a pop-up window that lets the user select the rules for the model. The pop-up opens into a shuttle-box element with the list of the available Allocation Rules on the left hand side and the list of the selected Allocation Rules on the right hand side.

Figure 6-52 Allocation Model Container for Circular Allocation Model

Figure 6-53 Allocation Model Container (Circular) after rules selection



Use Case of Circular Allocation Model

The general use case for Circular Allocation Models involves sequences of center-to-center rules where your objective is to transfer a series of expense balances in which each allocation rule allocates expense from one center to a series of target centers. In this scenario, it is very common to credit back to the source using <Same as Source> in your specification for each dimension within your allocation credit specification. In a shared service's context, centers that you have cleared of the expense become the targets of allocations that come later in a sequence of allocation rules. Often, each center allocates 100% of its original expense, but by the end of the series of shared services allocations, each center has some small expense balances that have been allocated back to it from other centers. The amount of expense that backwashes to centers that have already been cleared of the expense vary in the range of 1% to 10% of the expenses originally found in each center. For example, if the center in a series of such rules ends up with 10% of its original expense after the full sequence of rules runs one time; then after running the same sequence of rules a second time, the center has 1% of its original expense remaining. After two cycles, the center has 1/10th of 1% of its original expense remaining.

The Circular Allocation Model allows you to organize lists of allocation rules that you wish to run iteratively for multiple cycles to reduce to near zero balances that were originally present. After the remaining balances have reached an acceptable threshold, you can sweep the remaining balances from all sources with one or more additional rules that run only once.

6.3.3 Execution History

The Execution History screen displays the historical executions of Allocation Rules/Models and Management Ledger loads. The screen has two tabs – Allocation Execution History and Ledger Load History- to serve the purpose applicable to the two historical views.

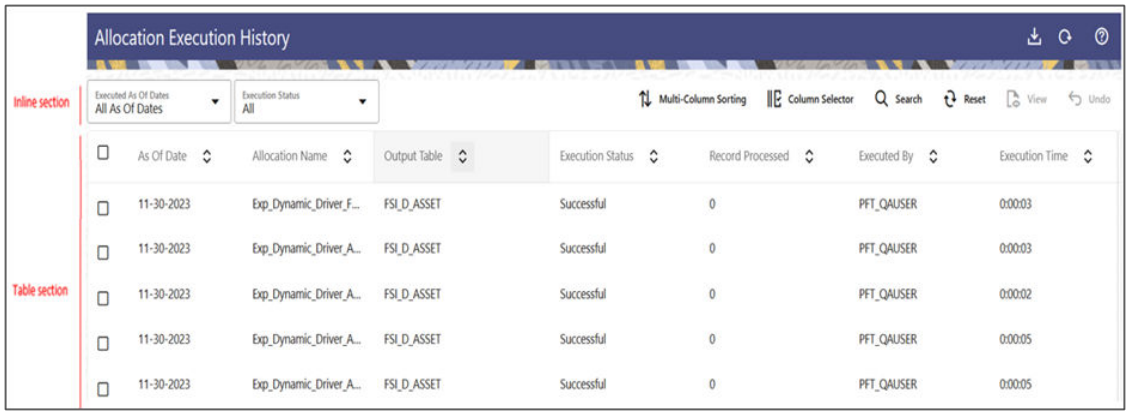
The Allocation Execution History screen presents a table that lists a series of allocation runs sorted by As-of-Date and by Execution End Time. You may sort on any column you choose by clicking on the column header upward/downward arrows, but the results are sorted first by As-of-Date and second by the column you have chosen.

Navigation in Allocation Execution History

When you first enter the Allocation Execution History screen, your results are shown for all As-of-Date values for which an allocation was run with the Executed As of Dates displaying value “All As of Dates”. You may select a different As-of-Date from a drop-down list as required.

With the ‘All As of Dates’ selected, the Allocation Execution History Table displays the Allocation Names sorted in descending order based on the As-of-Date and the Execution End Time.

Figure 6-54 Allocation Execution History – Sections



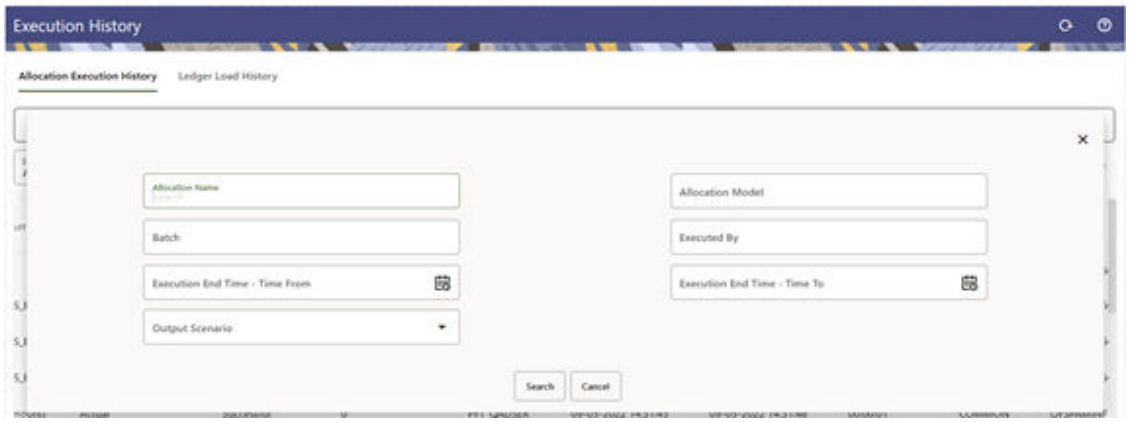
Search Section

The Search is used to specify the search criteria that will reduce the number of rule executions that gets displayed in the Allocation Execution History table.

To search the Allocation Rules, perform the following steps:

1. Click **Search** on the Inline section to display the criteria window.
2. Enter the **Allocation Rule Name**, **Allocation Model Name**, **Batch**, **Executed By**, **Execution End Time**, or **Output Scenario** and click **Search** to display the Allocation Rules that match the criteria.
3. Click **Cancel** to remove the filter criteria on the search window and refresh the window.

Figure 6-55 Allocation Execution History – Criteria Window



The screen displays the search results that meet the search criteria in a table containing all the Allocation Rules.

You may search based on the following parameters:

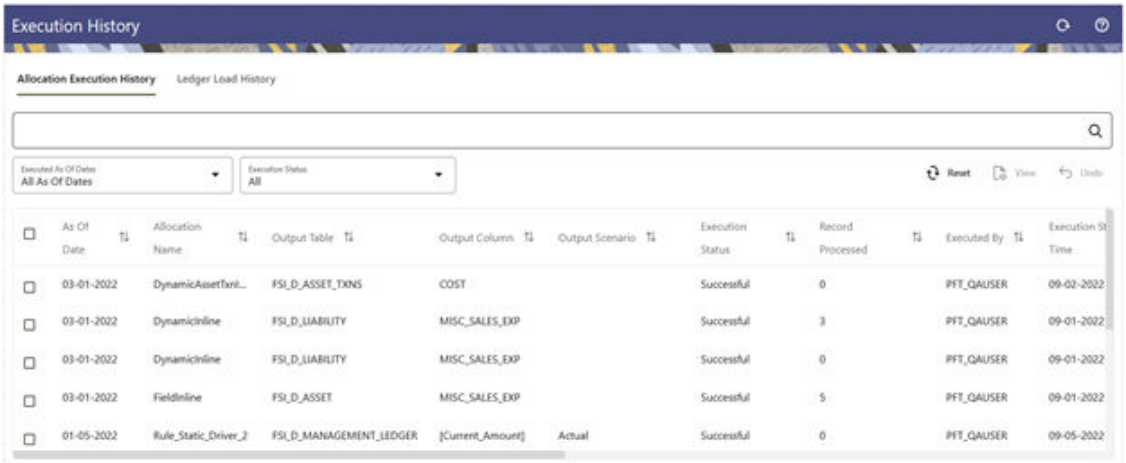
- **Allocation Name**: Performs a wild card search on Allocation Rule Name.
- **Allocation Model**: Performs a wild card search on Allocation Model Name under which different Allocation Rules are grouped together.
- **Batch**: Performs a wild card search on Batch Name.
- **Executed By**: Performs a wild card search on the logged-in username that has executed the rule when rule execution happened through Allocation Summary. While it performs a wild card search on the username that has been passed as a parameter in the batch when rule execution happened through batch method.
- **Execution End Time**: Restricts the number of rules displayed on the Allocation Execution History summary screen based on a user's specification of a single execution date and a no earlier than Execution End Time – Time From and a no later than Execution End Time – Time To.
- **Output Scenario**: Performs a wild card search on the Output scenario for any Allocation Rule.

6.3.3.1 Navigation in Allocation Execution History

When you first enter the Allocation Execution History screen, your results are shown for all As-of-Date values for which an allocation was run with the Executed As of Dates displaying value “All As of Dates”. You may select a different As-of-Date from a drop-down list as required.

With the ‘All As of Dates’ selected, the Allocation Execution History Table displays the Allocation Names sorted in descending order based on the As-of-Date and the Execution End Time.

Figure 6-56 Allocation Execution History Screen

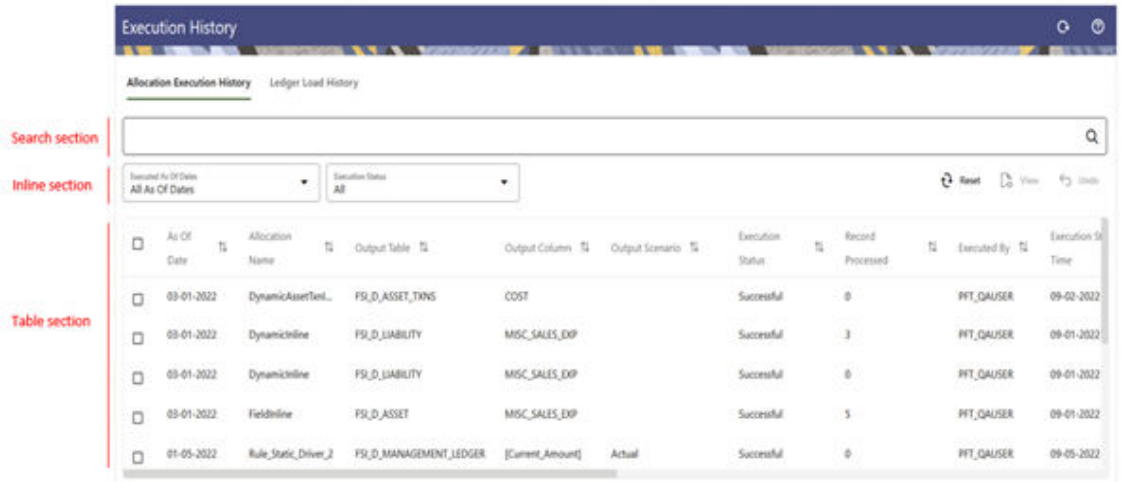


The title bar of the Screen displays several actions for the user. They are:

- **Refresh**: Click Refresh to refresh the Allocation Execution History Page.
- **Help**: Click Help to view the Allocation Execution History Help Page.

The Allocation Execution History screen is divided in to three sections – the Search section, the Inline section, and the Table section.

Figure 6-57 Allocation Execution History – Sections



6.3.3.1.1 Inline Section

The Inline section contains two additional filters as follows:

- Executed As-of-Dates with default value as 'All As of Dates'.
- Execution Status with default value as 'All'.

The following statuses occur when an Allocation Execution is initiated:

- **Processing**: Allocation Engine updates this status when rule execution is started.
- **Successful**: Allocation Engine updates this status when rule execution is successful.
- **Failed**: Allocation Engine updates this status when rule execution is failed.

An Undo operation on any Allocation Execution can lead to one of the following statuses:

- **Undo in Progress**: Undo engine updates this status when it picks up a record for Undo so that another process does not pick up the same record.
- **Undo Failed**: Undo engine updates this status when the Undo is failed.
- **Undo Rolled Back**: When one of the rules as part of a Batch or an Allocation Model, is processed for Undo and fails, the status of the rule is marked as 'Undo Failed'.

All the previous rules in the Batch/Model that were successfully processed for Undo before the point of failure, will be rolled back, and the status of those records will be updated as 'Undo Rolled Back'.

User can apply these two filters to select the execution rows he wants to see in the Allocation Execution History Table.

This section also offers several controls that allow the user to perform different functions when an Allocation Rule is selected. You can select multiple Allocation Rules at a time, but this may disable some of the icons.

The following are the controls in the Inline section:

- **Reset**: Resets the search criteria and also refreshes the Allocation Execution History table. 'Reset' applies to all fields under the Criteria Window but not to the Inline filters.
- **View**: On choosing a single row of the Allocation Execution History table, select View to drill into an audit trail for the currently selected rule. The View icon is disabled if no rows have been selected or if multiple rows have been selected.
  See the Allocation Execution Audit Functionality section for details.
- **Undo**: You can use this icon to UNDO or reverse one or more allocation runs.
  For details, see the UNDO Functionality section.

6.3.3.1.2 Table Section

The following columns categorize each Allocation Execution row in the table:

You can sort any of these columns by clicking on the text in the column header.

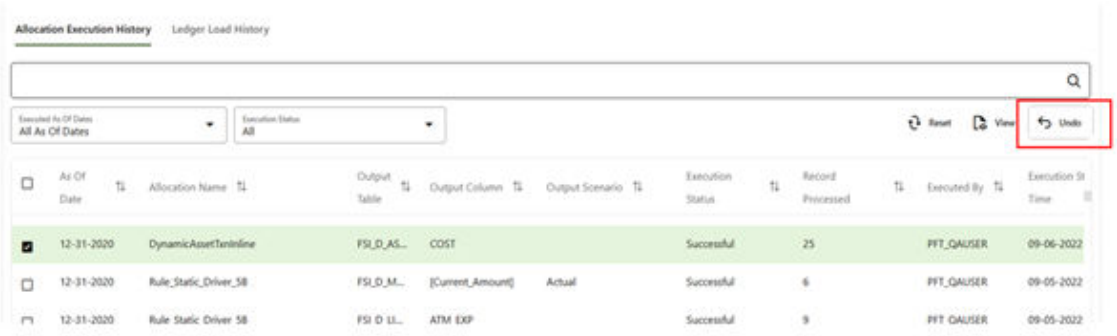
- **As of Date**: Displays the As-of-Date when the Allocation Rule was executed.
- **Allocation Name**: Displays the Allocation Rule's short name. A “mouse over” on the Rule's name displays the Rule's long description as well as the Identity Code generated or used by that allocation. You can use Identity Codes in queries against the database to identify rows generated by the rule.
- **Output Table**: This denotes the target table name in the database where the Allocation is either posted or updated records. For example, Management Ledger, Assets, and so on.
- **Output Column**: This denotes the target column name in the database where the Allocation is either posted or updated records.
- **Output Scenario**: This denotes the scenario value configured in the Output Configuration of the executed Allocation Rule.
- **Execution Status**: Denotes the status of each allocation execution. See the Inline section for more details.
- **Record Loaded**: Displays the record count of the Allocation Execution, meaning the count of inserts or updates that has taken place.
- **Executed By**: Displays the username that has executed the Allocation Rule.
- **Execution Start Time**: Displays the date and time at which each Allocation Rule has been started.
- **Execution End Time**: Displays the date and time at which each Allocation Rule is completed.
- **Execution Time**: Displays the elapsed time required for each Allocation Rule to complete, shown in hours, minutes & seconds.
- **Folder**: Displays the name of the Folder to which the Allocation Rule belongs.
- **Batch**: Displays the Batch name under which each Allocation Rule was executed. For rules executed directly from the Allocation Specification user interface, the system automatically generates synthetic batch names.
- **Allocation Model Name**: Displays the allocation model name under which the Allocation Rule is grouped. The Allocation Model consists of a list of individual Allocation Rules that can be executed as a single unit.

> **Note:**
>
> Allocation Model Name column remains blank for any Allocation Rule that was not executed from within an Allocation Model.

6.3.3.1.3 UNDO Functionality

For Allocations that insert data into the Management Ledger, an UNDO operation reverses the effect of that rule run by deleting the inserted rows.

Figure 6-58 Allocation Execution History - Undo

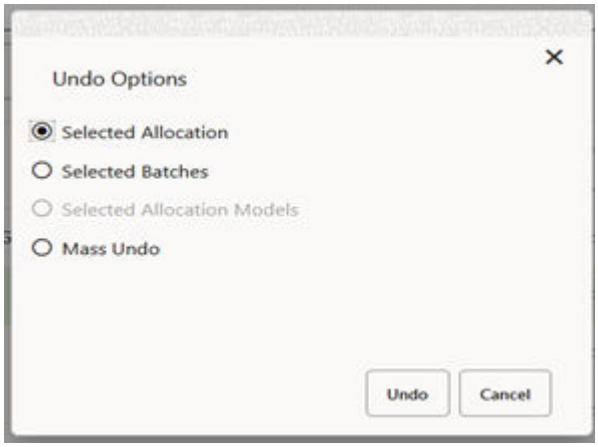


For Allocations that update data in Instrument or Transaction Summary Tables, an UNDO operation reverses the effect of that rule run by updating the output column targeted by that Allocation Run with a value of zero.

UNDOING a rule effectively removes completed allocation data from your environment, thus your management may wish to restrict your access to UNDO functionality. For details on restricting action to UNDO functionality, see User Preferences section. The UNDO icon is enabled whenever you select one or more rows from the table. Upon requesting an UNDO operation, a pop-up dialog appears offering the following UNDO options:

- Selected Allocations
- Selected Batches
- Selected Allocation Models
- Mass UNDO

Figure 6-59 Allocation Execution History - Undo Options

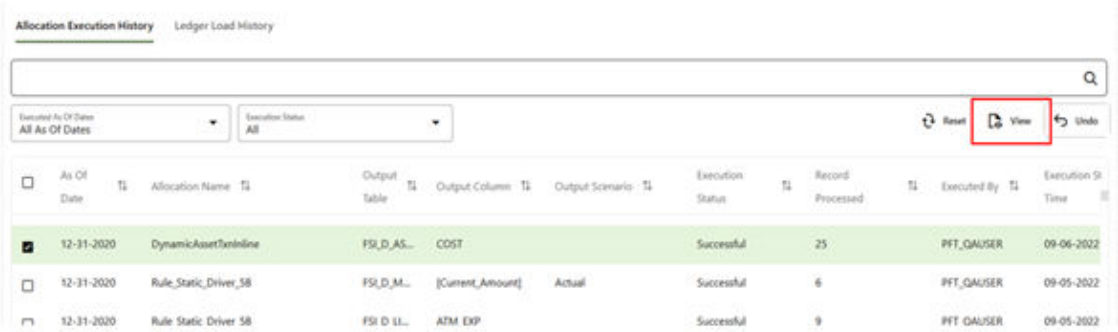


- **Selected Allocations**: Each row that you have selected from the table will be UNDONE. This functionality works only if the Enable Undo for Selected Allocations option in the User Preferences is set to Yes.
- **Selected Batches**: All rule executions that belong to any of the batches you have selected will be UNDONE. This functionality works only if the Enable Undo for Selected Batches option in the User Preferences is set to Yes.
- **Selected Allocation Models**: All rule executions that belong to any of the Allocation Models that you have selected will be UNDONE. This functionality works only if the Enable Undo for Selected Allocation Models option in the User Preferences is set to Yes.
- **Mass UNDO**: Every rule execution whose Execution End Time (a time-stamp value) is chronologically later than the earliest row that you have selected from the table will be UNDONE. This functionality works only if the Enable Mass Undo option in the User Preferences is set to Yes.

6.3.3.1.4 Allocation Execution Audit Functionality

When we select a single row from the Allocation Execution History table and click the View icon, a series of screens are displayed in a separate window that shows the Allocation Rule as it appeared at the time the rule was executed.

Figure 6-60 Allocation Execution History - View



6.3.3.1.4.1 Inline Reports

The Audit functionality provided within the Allocation Execution History includes inline reports for Sources, Drivers, and Outputs of Allocation Rules. These inline reports are described in detail in the following sections of Source Tab, Driver Tab and Output Tab.

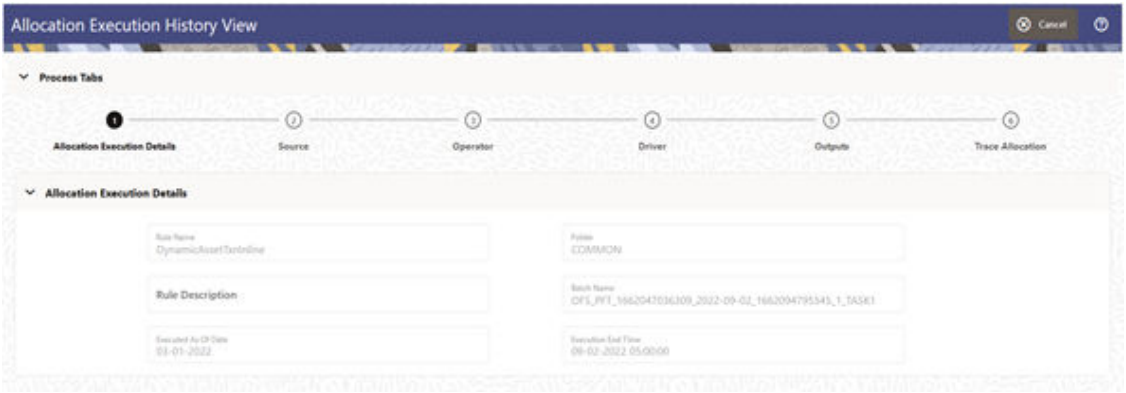
The View screen displays the following tabs:

- Allocation Execution Details Tab
- Source Tab
- Operator Tab
- Driver Tab
- Output Tab
- Trace Allocation Tab

6.3.3.1.4.1.1 Allocation Execution Details Tab

This is the first tab to be displayed when the user chooses to view a specific Allocation Run on the Allocation Execution History Summary page.

Figure 6-61 Allocation Execution Details Tab

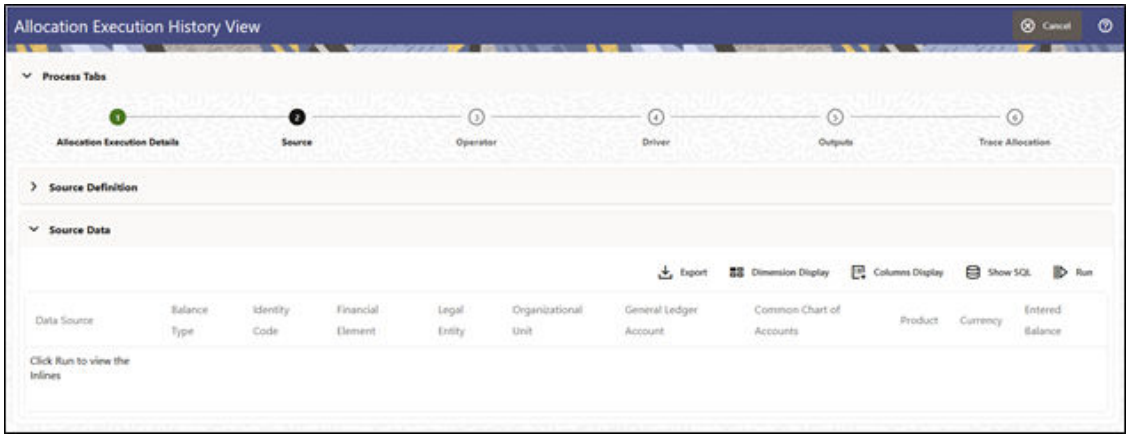


The tab displays the Allocation Rule Name, Description, Folder, Batch Name, Executed As-of-Date and Execution End Time.

6.3.3.1.4.1.2 Source Tab

The Source tab displays the details about the Allocation's Source Specification at the time that it was run. This view-only screen also offers an inline report of the Source data generated by the Allocation Rule at the time that it was run, and enables the user the ability to trace the sources of the data that fed into the current allocation.

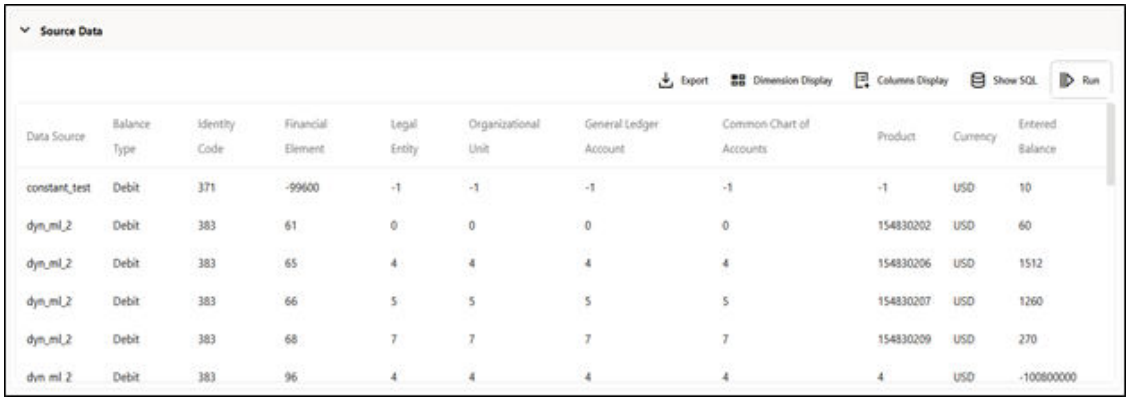
Figure 6-62 Source Tab



Source Definition: This section of the Allocation Execution History Source tab displays a read-only version of the Source Definition section of the underlying Allocation Rule's Source specification. This section is by default collapsed in the Source tab and the user can expand the section to view the source definition.

Source Data: This section of the screen remains empty initially and displays the message Click Run to view the Inlines. Refer to the earlier figure to view the source data section as it appears when you click on Source tab. If you wish to see an inline report for The Allocation's Source Data, you must click on the Run icon.

Figure 6-63 Source Data in Source Tab



The actual source query of a rule generated by the Allocation Engine at runtime are preserved and the same query is executed to show the source inline report. The source inline will always be available (regardless of whether or not the rule has been modified since it was executed). The source inline report excludes any data generated by allocations or other processes that were run after the execution of the current rule being examined.

Source Data Controls: These include Run, Show SQL, Dimensions Display and Columns Display.

- **Run**: Select the Run icon to invoke the Source Inline Report.
- **Show SQL**: Select the Show SQL icon to view the query that generates the inline report. That is, it displays the Source Query that has been prepared and stored in the database

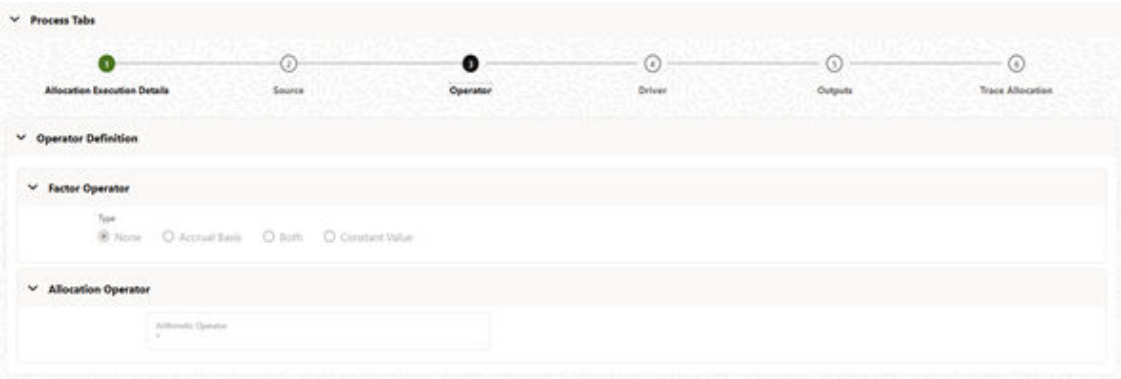
while running the allocation. You may copy and paste this SQL to any query tool and execute to get the same inline report.

- **Dimension Display**: Clicking on this icon invokes a small dialog window that displays the choice of displaying the Dimensions as Short Names (Dimension Member ID), Long Names (Dimension Member name) or Both (both Member ID and Member Name) within your inline report.
- **Columns Display**: Clicking this icon opens a window that displays all the Non-Dimensional Columns of the inline. The user has the option of selecting the columns from this window that he wants to display in the inline report.
- **Export**: Clicking on Export, the user can export the inline source data.
- Additionally, user can **trace** an Allocation row that appears in the source inline through a hyperlink feature given in the Data Source column. Each of the source inline rows comes with the Data Source column value as a hyperlink clicking which takes the user to the View of the clicked Allocation row. This hyperlink is currently enabled for Allocation Rows only and not enabled for Ledger Load Rows, Instrument Load Rows, or Transaction Summary Load Rows. For Management Ledger Rows, the data source value comes with the corresponding data sources while for Instrument and Transaction Summary Load Rows, the value comes hardcoded as 'Instrument Load' and 'Transaction Summary Load' respectively.

6.3.3.1.4.1.3 Operator Tab

This tab displays the Allocation's Operator specification at the time the rule was run.

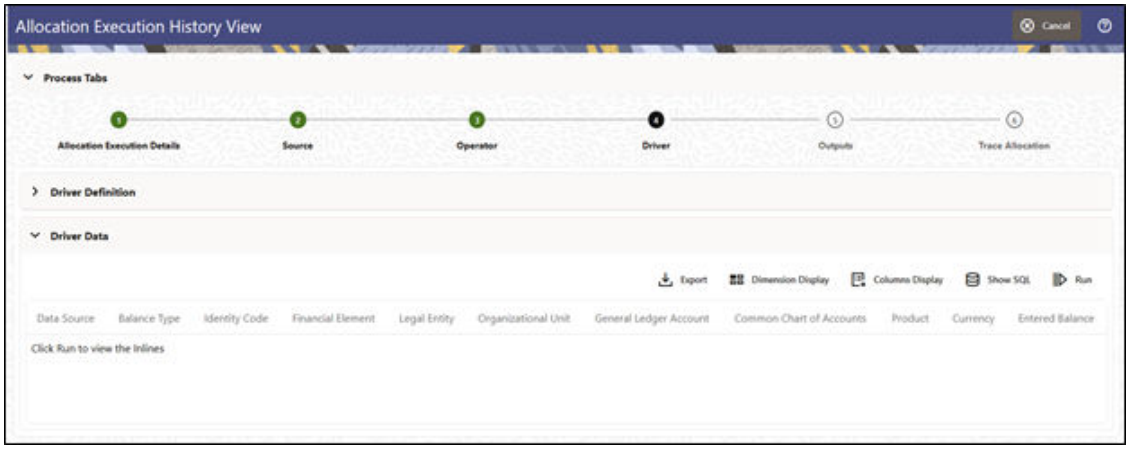
Figure 6-64 Operator Tab



6.3.3.1.4.1.4 Driver Tab

The Source tab displays the details about the Allocation's Driver Specification at the time that it was run. This view-only screen also offers an inline report of the Driver Data generated by the Allocation Rule at the time that it was run, and enables the user the ability to trace the sources of the data that fed into the current Allocation.

Figure 6-65 Driver Tab

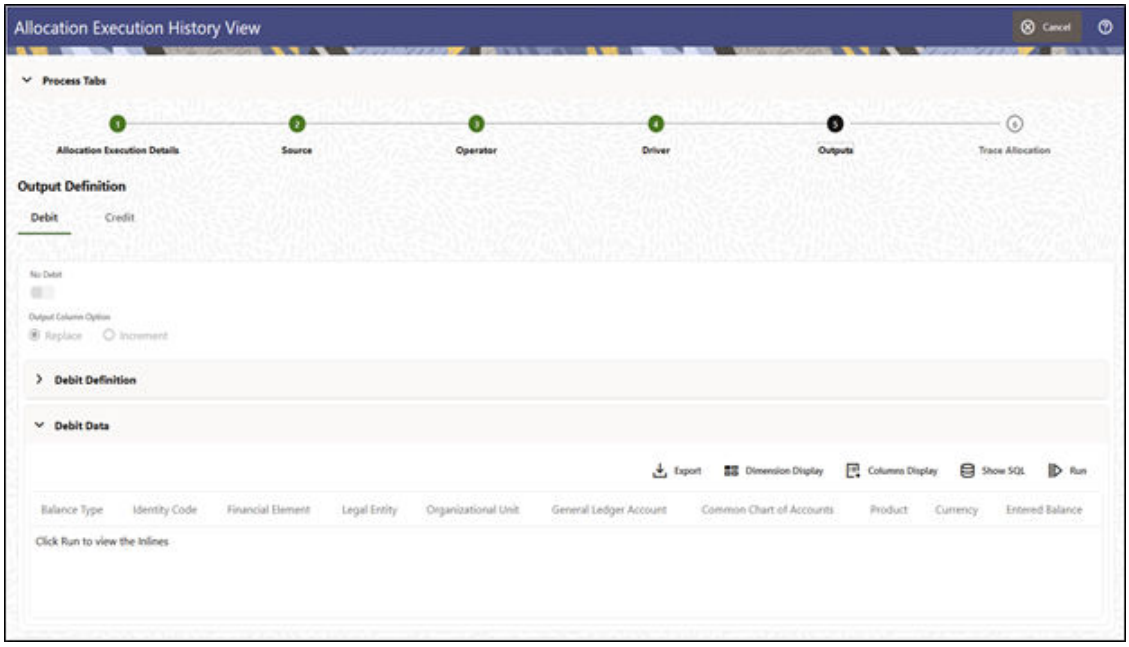


- **Driver Definition**: This section of the Allocation Execution History Driver tab displays a read-only version of the Driver Definition section of the underlying Allocation Rule's Driver specification. This section is by default collapsed in the Driver tab and the user can expand the section to view the source definition.
- **Driver Data**: This section of the screen remains empty initially and displays the message Click Run to view the Inlines. If you wish to see an inline report for the Allocation's Driver Data, you must click on the Run icon.
  The driver query of a rule generated by the Allocation Engine at Runtime are preserved and the same query is executed to show the Driver Inline Report. The driver inline will always be available (regardless of whether or not the rule has been modified since it was executed). The Driver Inline Report excludes any data generated by allocations or other processes that were run after the execution of the current rule being examined.
- **Driver Data Controls**: This includes Run, Show SQL, Dimensions Display, Columns Display, and Export, and they are identical to those described under the Source Data Controls.

6.3.3.1.4.1.5 Output Tab

The Outputs tab displays the details about the Allocation's Output specification at the time it was run. This view-only screen also offers an inline report of the Output data generated by the Allocation Rule at the time it was run.

Figure 6-66 Output Tab



The Output Definition, just like the Output Specification in the Allocation Specification screen, displays two tabs of Debit and Credit. The Debit/Credit Definition and the Debit/Credit Data sections are identical to the Source and Driver tabs.

Output Data Controls: This includes Run, Show SQL, Dimensions Display, Columns Display, and Export, and they are identical to those described under the Source Data Controls.

6.3.3.1.4.1.6 Trace Allocation Tab

The Trace Allocation tab displays two adjacent panes, one showing distinct Upstream Data Sources or Allocations and the other showing affected Downstream Allocations.

Each of the panes has three sections called Generation 1, Generation 2 and Generation 3. By default, the Generation 1 section is expanded and the other two generation sections are collapsed.

Here, in Upstream Allocations pane or Downstream Allocations pane, the current allocation rule is identified as Generation 0.

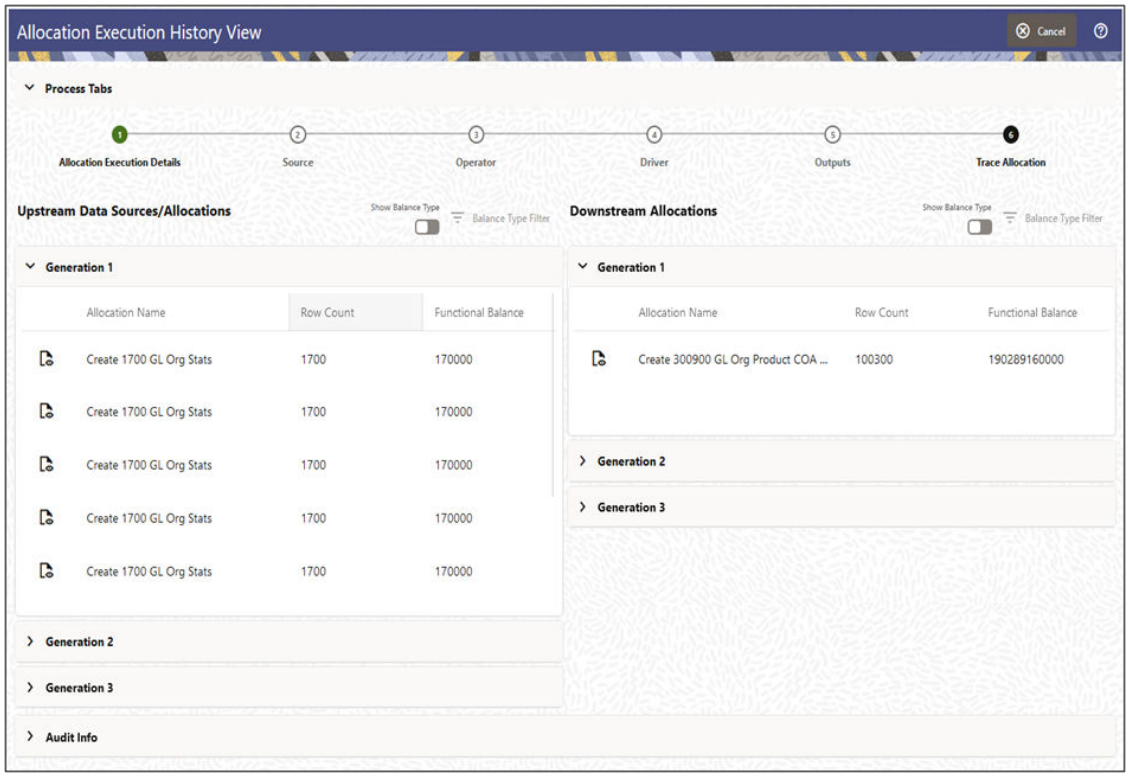
The UI allows allocations tracing only up to Generation 3.

If user wants to view generations before Generation 3, the user can use hyperlink to view a Generation 3 rule and view the upstream generations.

Each pane displays the allocation names, the row counts and the functional balance.

The panes also have a ‘Show Balance Type’ toggle button and a Balance Type Filter to further filter the data on the panes.

Figure 6-67 Trace Allocation Tab



Upstream Data Sources/Allocations

The pane displays all distinct Sources of data or Allocations that fed into the current Allocation run.

- Generation 1 rules are the parents to the current allocation rule.
- Generation 2 rules are the grandparents of the current allocation rule.
- Generation 3 rules are the great grandparents of the current allocation rule.

To view a Generation 2 rule, the user needs to select the Generation 1 rule for which the user wants to view the Generation 2 rules. Similarly, in order a view a Generation 3 rule, the user needs to select the Generation 2 rule for which the user wants to view the Generation 3 rules.

The user may not be able to trace non-allocation sources like initial ledger loads, initial instrument loads, initial transaction summary loads, transfer pricing rate migrations, and so on.

Downstream Allocations

The pane displays all the Downstream Allocation Rules that included the outputs of the current rule run in their Source queries.

- Generation 1 rules are the children to the current allocation rule.
- Generation 2 rules are the grandchildren of the current allocation rule.
- Generation 3 rules are the great grandchildren of the current allocation rule.

To view a Generation 2 rule, the user needs to select the Generation 1 rule for which the user wants to view the Generation 2 rules. Similarly, in order a view a Generation 3 rule, the user needs to select the Generation 2 rule for which the user wants to view the Generation 3 rules.

6.3.4 Ledger Load History

Ledger Load History allows you to review the Runtime History of a Management ledger Load. You may see the order in which Ledger Loads are executed, and you may select any Ledger Load row and Undo the Ledger Load.

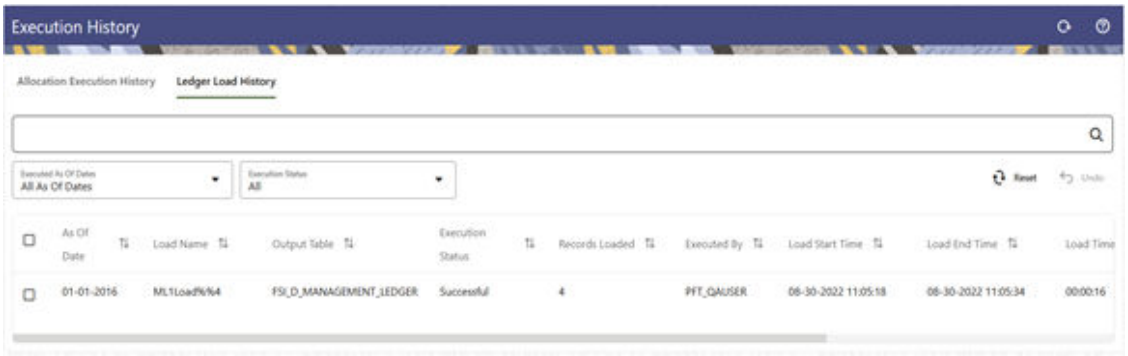
The screen presents a table that lists the Ledger Loads sorted by As-of-Date and by Load End Time. You may sort on any column you choose by clicking on the column header upward/ downward arrows, but the results are sorted first by As-of-Date and second by the Column, you have chosen.

Navigation in Ledger Load History

When you first enter the Ledger Load History screen, your results are shown for all As-of-Date values for which a ledger load was executed, with the Executed As-of-Dates displaying value “All As of Dates”. You may select a different As-of-Date from a drop-down list as required.

With the ‘All As of Dates’ selected, the Ledger Load History Table will display the load names sorted in descending order based on the As of Date and the Load End Time.

Figure 6-68 Ledger Load History Screen



The title bar of the Screen displays several actions for the user. They are:

- **Refresh**: Click Refresh to refresh the Ledger Load History Page.
- **Help**: Click Help to view the Ledger Load History Help Page.

The Ledger Load History screen can be divided under three sections – the Search section, the Inline section and the Table section.

6.3.4.1 Search Section

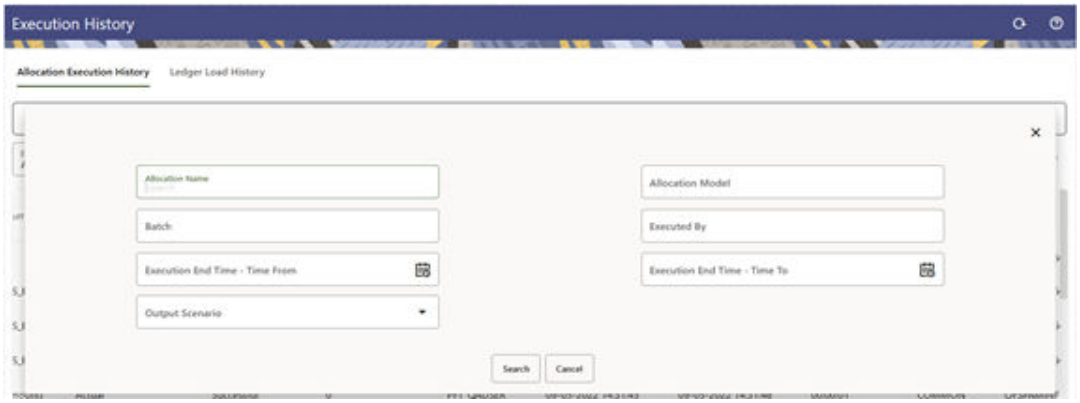
The search pane is used to specify the search criteria that will reduce the number of Ledger Loads that are displayed in the Ledger Load History table.

To search the Ledger Loads, perform the following steps:

1. Click the **Search** icon on the Search Pane to display the Criteria Window.
2. Enter the **Load Name**, **Batch**, **Load End Time**, or **Executed By** and click **Search** to display the Allocation Rules 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.

Figure 6-69 Ledger Load History – Criteria Window



The screen displays the search results that meet the Search Criteria in a table containing all the Ledger Loads.

You may search based on the following constraints:

- **Load Name**: Performs a wild card search on Ledger Load Name. You can execute the search when you select the Search button.
- **Batch**: Performs a wild card search on Batch Name. You can execute the search when you select the Search button.
- **Load End Time**: Restricts the number of rules displayed on the Ledger Load History screen based on a user's specification of a Single Load Date, and a no earlier than Load End Time – Time From and a no later than Load End Time – Time To. You can execute the search when you select the Search button.
- **Executed By**: Performs a wild card search on the logged-in username that has executed the ledger Load (Management Ledger Data Loader process).

6.3.4.2 Inline Section

The Inline section contains two additional filters of:

- Executed As-of-Dates with default value as 'All As of Dates'.
- Execution Status with default value as 'All'.

The following status occur when a ledger load is initiated.

- **Successful**: Ledger Load process updates this status when Ledger Load is successful.

An Undo operation on any Ledger Load can lead to one of the following statuses:

- **Undo Status**: Status Description
- **Undo in Progress**: Undo Engine updates this status when it picks up a record for Undo so that another process does not pick up the same record.
- **Undo Failed**: Undo Engine updates this status when the Undo is failed.

User can apply these two filters to select the Ledger Load rows he wants to see in the Ledger Load History table.

This section also offers several controls that allow the user to perform different functions when a Ledger Load is selected.

The following are the controls in the Inline section:

- **Reset**: Resets the search criteria and also refreshes the Ledger Load History table. 'Reset' applies to all fields under the Criteria Window but not to the Inline filters.
- **Undo**: You can use this icon to UNDO or reverse one or more ledger loads. For details, see the Ledger Load Undo Functionality section.

6.3.4.3 Table Section

The following columns categorize each Ledger Load row in the table:

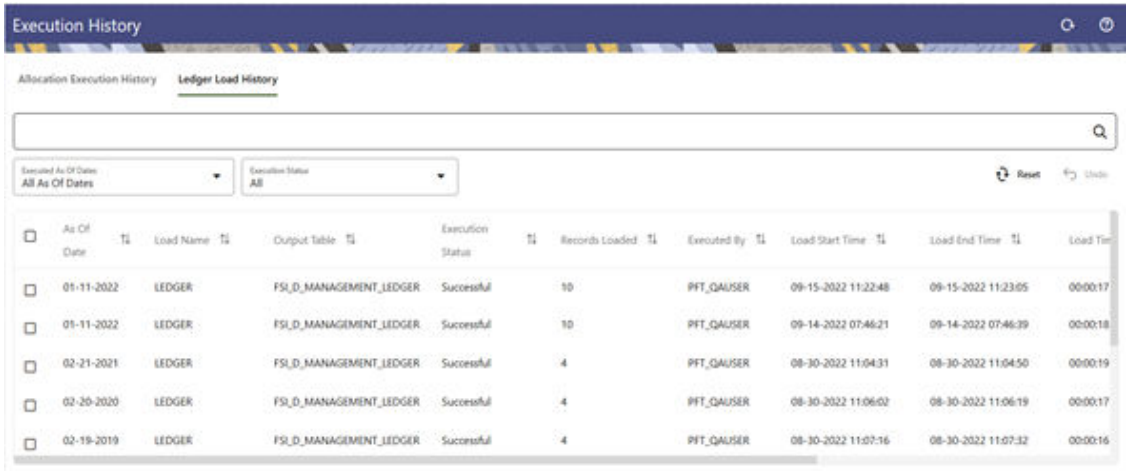
You can sort any of these columns by clicking on the text in the column header.

- **As of Date**: Displays the As-of-Date when the Allocation Rule was executed.
- **Load Name**: Displays the Ledger Load name. A “mouse over” on the Load Name displays the Identity Code generated by the Load. You can use Identity Codes in queries against the database to identify rows generated by the Load.
- **Output Table**: This denotes the target Table Name in the database where the load has happened. The Output table is one of the Management Ledger Tables.
- **Execution Status**: Denotes the status of each Ledger Load. See the Inline section content for more details.
- **Record Loaded**: Displays the load count of the load process, meaning the count of inserts that has taken place.
- **Executed By**: Displays the username that has executed the Leger Load process.
- **Load Start Time**: Displays the date and time at which each Ledger Load has been started.
- **Load End Time**: Displays the date and time at which each Ledger Load is completed.
- **Load Time**: Displays the elapsed time required for each Ledger Load to complete, shown in hours, minutes & seconds.
- **Batch**: Displays the Batch name under which each Ledger Load was executed.

6.3.4.4 Ledger Load UNDO Functionality

A Ledger Load Undo operation reverses the effect of the Ledger Load process meaning it deletes the rows that were inserted into a Management Ledger as part of the Ledger Load process.

Figure 6-70 Ledger Load History - Undo



The Undo icon is enabled whenever you select one or more rows from the table.

For details on restricting action to Undo functionality, see User Preferences section. This functionality works only if the Enable Undo for Ledger Load option in the User Preferences is set to Yes.

6.3.5 Static Table Driver

Profitability and Balance Sheet Managerment (PBSM) Cloud Service's Static Table Drivers are declared as drivers in the Driver process tab for allocation rules of the type Static Driver Table.

For more information, see Allocation Specification.

Topics:

- Working with Exported Static Table Driver Data
- Large Cross Product Static Table Drivers
- Using Static Table Drivers

Navigating in the Summary Screen

When you first navigate to the Static Table Driver Summary screen, the rules stored within your current default Folder are presented in a summary table. The Static Table Driver Summary screen has the following panes: Search and Static Table Driver.

The title bar of the summary page provides the following actions for the user:

- **Add**: Click Add icon to build a new Static Table Driver rule.
- **Multiple Delete**: Select one or more rules in the table and then click the (-) icon at the top right of the summary page to delete more than one rule at the same time.
- **Export**: Click Export to download the displayed information in the summary table in .xls format.
- **Refresh**: Click Refresh to refresh the summary page.
- **Help**: Click the Help icon to view the Static Table Driver Rule help.

Search

To search the Static Table Drivers, perform the following steps:

1. Click the **Search** icon on the Search pane to collapse (display) the criteria window.
2. Enter the Static Table Driver **Name** or **Description** and click **Search** to display the Static Table Drivers that match the criteria.
3. Click **Cancel** to remove the filter criteria on the search window and refresh the window.

The search results are displayed in a table containing all the Static Table Drivers that meet the search criteria.

Static Table Driver Pane

The Static Table Driver pane presents a table containing all Static Table Driver rules that meet your search criteria and displays the following columns.

- **Name**: Displays the short name of the rule.
- **Folder**: Displays the folder name where the rule is stored.
- **Tags**: Displays the tags associated with the rule.
- **Created By**: Displays the Name of the user who created the rule.
- **Modified By**: Displays the Name of the user who last modified the rule.
- **Modified Date**: Displays the Date and Time when the rule was modified last.
- **Access Type**: Displays the access type of the rule - Read/Write or Read Only property of a Static Table Driver rule. Only the creator of a rule may change its Access Type.
- **Action**: Displays the list of following actions that can be performed on the selected rule.
  - **View**: Click View in the Action column and select View to view the contents of a Static Table Driver in read/write format.
  - **Edit**: Click Edit in the Action column and select Edit to edit the contents of a Static Table Driver in read/write format.
  - **Save As**: Click Save As in the Action column and select Save As to create a copy of an existing Static Table Driver.
  - **Delete**: Click Delete in the Action column and select Delete to delete an existing Static Table Driver.

You may select or deselect all the Static Table Driver 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.

6.3.5.1 Navigating in the Detail Screen

When you Add, Edit, or View a Static Table Driver rule, the Static Table Driver Detail Screen is displayed.

In addition to Name, Description, Folder, and Access Type, the definition of a Static Table Driver includes Key Leaves, a Target Leaf, and coefficients values. After a Static Table Driver is defined and saved, you only edit an existing rule to update your driver coefficients (you cannot delete the Key and Target dimensions).

The Audit Trail pane is a standard footer pane for every OFSAA rule type. It displays Created By, Creation Date, Last Modified By, and Modification Date on the Audit Trail tab. The User Comments tab is used to add comments to any rule, subject to a maximum of 4000 characters.

Static Table Drivers are used in conjunction with Allocation rules for the following purposes:

- To distribute balances at the Management Ledger level.
- To perform a lookup table function against instrument tables.

Distribution with the Management Ledger-level

Static Driver Table Allocation rules that distribute balances at the management ledger-level function similarly to Dynamic Driver allocation rules.

- Key Leaves function similarly to Dynamic Driver allocation rules that utilize < Match Source & Driver >
- Target Leaves function similarly to Dynamic Driver allocation rules that utilize < Match Driver >

Instrument Level Update: Static Driver Table Allocation rules perform a lookup table function against an instrument table to match dimension values for each instrument row against the Key Leaf values you define in your Static Table Driver rule. When you find matching rows, the allocation performs an arithmetic operation combining source balance columns and a coefficient value you specify to update a result column.

Static Table Driver Pane

Specify the Static Table Driver rule's Name and Description, select a Folder in which the Static Table Driver rule is to be stored, and specify whether you want the Static Table Driver rule to be “Read/Write” or “Read Only” (Access Type). Naming your Static Table Driver rule is required before you can save it. Static Table Driver rule Name does not accept Special characters (&, @, ~, +, Single quote). Default values for Folder and Access Type are stored in Application Preferences for Profitability Management.

Static Table Driver Definition Pane

When creating a new Static Table Driver, first define its structure. After a Static Table Driver has been defined, the maintenance is usually limited to updating driver coefficients. The most critical aspects of a Static Table Driver's structural definition are as follows:

- Key dimension
- Key Leaf values for each Key Leaf
- Target dimension
- Target Leaf values for each Target Leaf
- Defining Key Leaf values and Target Leaf values
- Static Table Driver Coefficients

You do not need to specify both a Key Leaf and a Target Leaf, but you must specify at least one of them. That is, you should select a Key or Target dimension while defining a new Static Table rule.

> **Note:**
>
> You cannot add or delete the Key or Target dimensions after defining the Static Table Driver (edit mode). You can add or delete the dimension members.

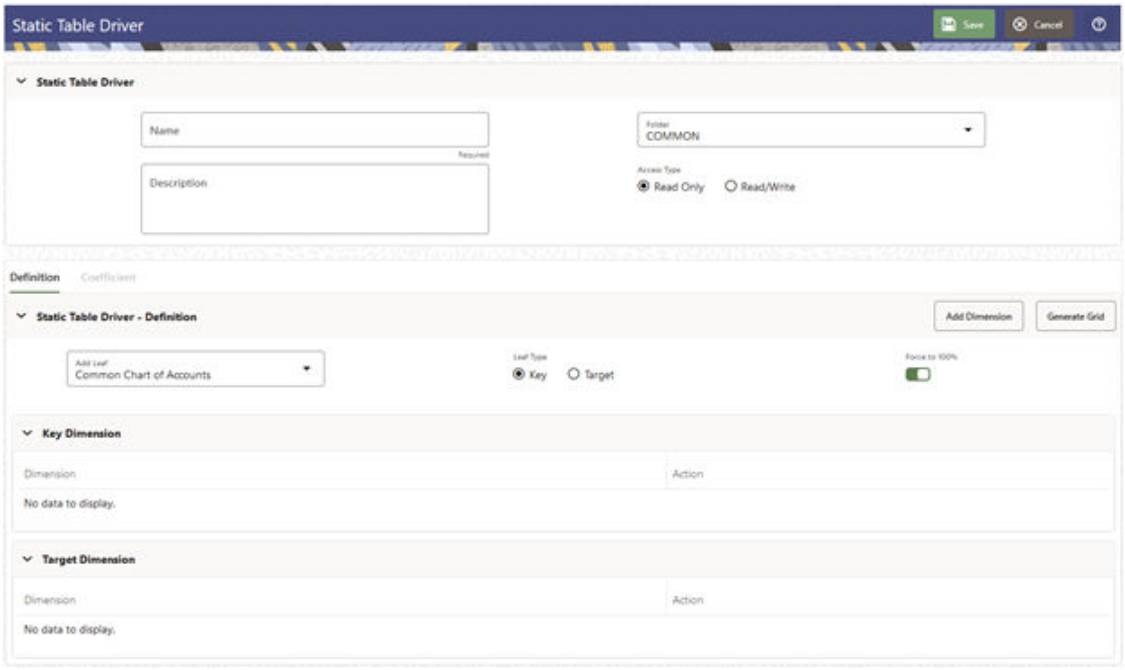
- **Key Leaves**: For both Management Ledger-level and Instrument allocations, Key Leaves perform a lookup function. Rows from the Source of the Allocation rule are joined with the Key Leaf values from the Static Table Driver. If an Input Row Leaf value matches a Key Leaf value for the first Key Leaf dimension specified in the Static Table Driver, the row is checked against the second Key Leaf values, and so on. If you find a match for every Key Leaf dimension, the row is processed by the Allocation rule. Profitability Management supports a maximum of three Key Leaf dimensions.
- **Target Leaf**: You can use Target leaves only in allocations that distribute to the Management Ledger-level. You can view the Distribution allocations as first performing a lookup on one or more Key Leaves. When you find a match for each Key Leaf dimension, the matching input row's amount is distributed to all dimension values specified as Target Leaf values. This means that data is added to the Management Ledger for each dimension member value specified as a Target Leaf value. The leaf values specified in the Allocation rule's Debit use the < Same As Source > macro for all Key leaf dimensions and use the < Same As Table > macro for the Target Leaf dimension (very similar to the < Same as Driver > macro used in Dynamic Driver allocation rules).
- **Coefficients**: You must specify coefficient values for every Static Table Driver rule. A part of the coefficient specification process is to enter the values for each distinct combination of each of your Key Leaves and Target Leaves. Where only Key Leaves are used, you must enter values for each distinct combination of each of your Key Leaves.
  - **For Static Table Drivers with a Target Leaf Dimension**: For a Static Table Driver that uses a Target Leaf dimension, you must supply one coefficient value for each distinct combination of each of your Key Leaves and your Target Leaves., Static Table Drivers that use a Target Leaf dimension are only supported for Management Ledger allocation rules.
    Target Leaf coefficient values represent distribution statistics. You would typically use these statistics on a Percent-to-Total basis. Static Table Drivers support both the Percent-to-Total method and the Simple method.

    Precede the definition of the Target Leaf dimension by the definition of one or more Key Leaf dimensions. Key Leaves are never required unless there is no Target Leaf defined. When Key Leaves are present, they operate as lookup keys as described above. For a Static Table Driver that uses a Target Leaf dimension, the Key leaves function analogously to the Dynamic Driver allocation function of < Match Source & Driver > and the Target Leaf functions analogously to the Dynamic Driver allocation function of < Match Driver >.
  - **For Static Table Drivers with Key Leaf Dimensions But No Target Leaf**: For Static Table Drivers that do not use a Target Leaf dimension, you must supply one coefficient value for each distinct combination of each of your Key Leaves. Static Table Drivers that use Key Leaves but do not use a Target Leaf can support both distributive Management Ledger allocation rules and Instrument level update rules.
    For an Instrument level update rule using a Static Table Driver, the Key Leaves function as lookup keys, and the coefficients function as arithmetic factors in updating a target column in an instrument table. For Management Ledger allocation rules, the Key Leaves function analogously to the Dynamic Driver allocation function of < Match Source & Driver >.

6.3.5.1.1 Creating a New Static Table Driver – Sample Workflow

This section describes a workflow for defining a Static Table Driver rule.

Figure 6-71 Static Table Driver Definition screen

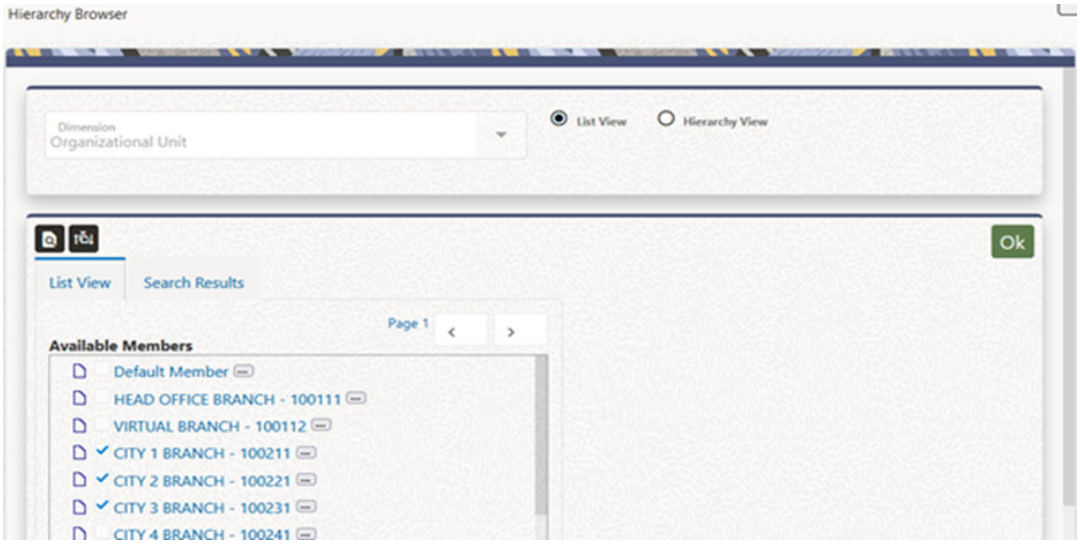


6.3.5.1.1.1 Create a New Key Leaf

To define a Key Leaf dimension, perform the following steps:

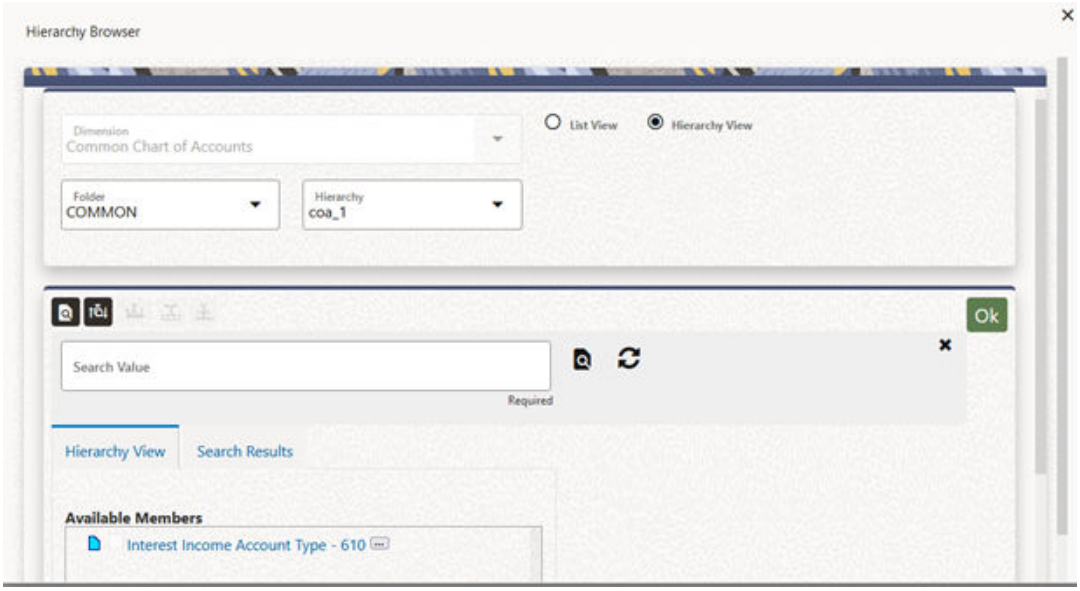
1. Select the **Dimension** you want to define as a Key Leaf from the Add Leaf drop-down list.
2. Select the **Key**.
3. Click **Add Dimension**. The Key Leaf dimension is added to the Key Dimension section.
4. Once a Key Leaf dimension is added, click the first icon in the **Action** column to invoke the **Hierarchy Browser** that appear adjacent to your Key Leaf Dimension.
   The Hierarchy Browser defaults to the **List View** that contains the list of all leaf members for the Key Leaf dimension you have chosen. You may scroll up and down to find the leaf member or leaf member you want. You may also search for a dimension member's name (short description) using the Search action button. Search has been revised as an inline search that implicitly comes with wildcard search. This functionality allows you to search a Dimension Member by its ID or Name. Once you have selected the Key Leaf values you want, click **OK**.

Figure 6-72 Organizational Unit Hierarchy Browser



5. You may also define Key Leaf values to be rollup members within a hierarchy. To select hierarchy rollup point members, click on **Hierarchy View** near the top right of the browser window and then search for the hierarchy you wish to use. After the browser window displays your chosen hierarchy, navigate into the hierarchy until you have found the rollup points you want. Select the value or values you want and click **OK**.

Figure 6-73 Hierarchy Selection screen

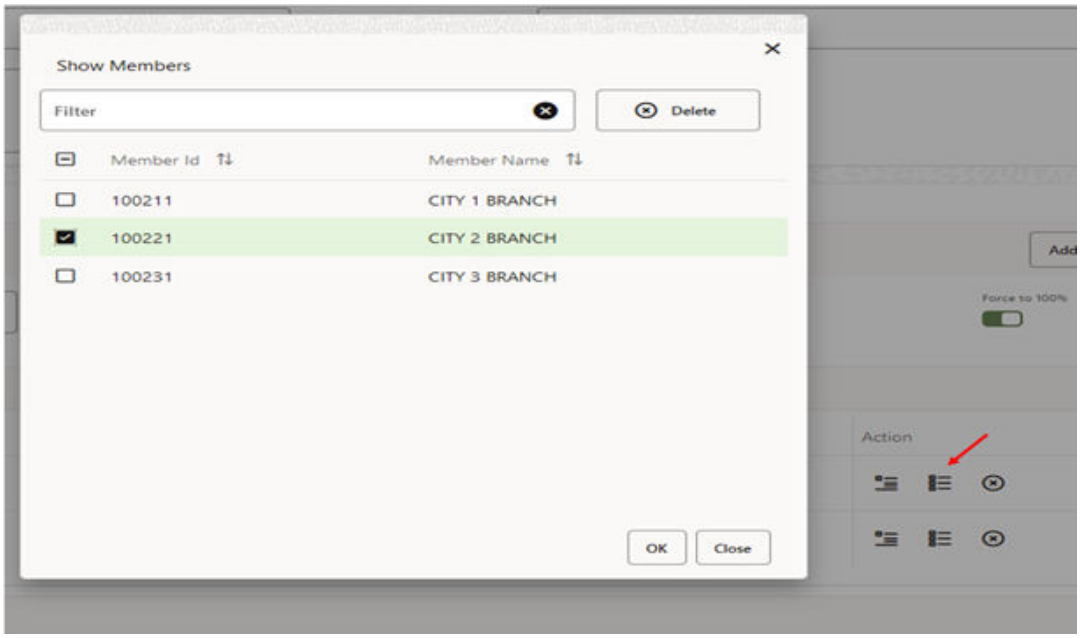


6. After you have clicked OK within the Hierarchy Browser window, that window closes and you are directed back to the Static Table Driver Definition tab. If you open the Hierarchy Browser of dimension, it shows the members as checked, which were already selected while defining a key leaf.
   You may now repeat this process to add a second or third Key Leaf if desired. If you do not need any additional Key Leaves, you may proceed to either of the following:
   - Adding a Target Leaf dimension.

- Providing coefficients for your chosen Key Leaf value(s).

7. If you want to view the members selected for a Key Leaf Dimension, you can click on the second icon in the Action column that appears adjacent to your Key Leaf Dimension. This feature also gives you the facility to delete any selected member without going through the Hierarchy Browser way.

Figure 6-74 Members Browser



> **Note:**
>
> When you select hierarchy, rollup points, all of the members, you select must come from the same level within the underlying hierarchy. Hierarchy Filters, which may include leaves and rollup nodes from different levels within a hierarchy, are not supported in Static Table Driver rules.

Use Target Leaves only in Allocations that distribute to the Management Ledger.

6.3.5.1.2 Creating a New Target Leaf

Continuing with the typical setup workflow, the following narrative assumes that you have added only one Key Leaf dimension. To add a Target Leaf, perform the following steps:

1. Select the Dimension you want to define as a **Target Leaf** from the **Add Leaf** drop-down list.
2. Select **Target**.
3. Click **Add Dimension**. The Target Leaf dimension is added under the Target Dimension section.
4. Click on the Hierarchy Browser icon that appears adjacent to your Target Leaf Dimension.
5. Select the Target Leaf values (the selection process is identical to the process of selecting Key Leaf values described above) from the Hierarchy Browser and click **OK**.

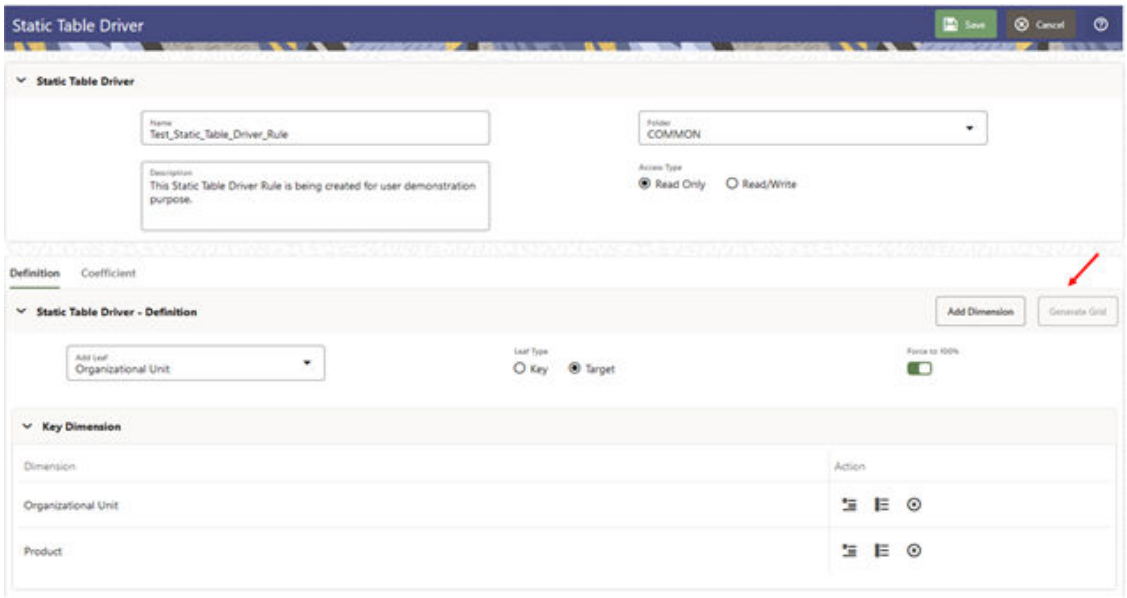
6. After you have clicked **OK** within the **Hierarchy Browser** window, that window closes and you are directed back to the **Static Table Driver** detail screen. However, while the screen still displays your Key Leaf values under the Key Dimension section as rows, it now displays your Target Leaf values under the Target Dimension section as rows.

6.3.5.1.2.1 Defining Coefficient Values

Once the Key and Target Leaf dimensions have been defined, the next step is to define the coefficients for the cross product of Key and Target dimensions.

Navigate to the top right of the **Definition** tab and click **Generate Grid** to generate the matrix of the cross product.

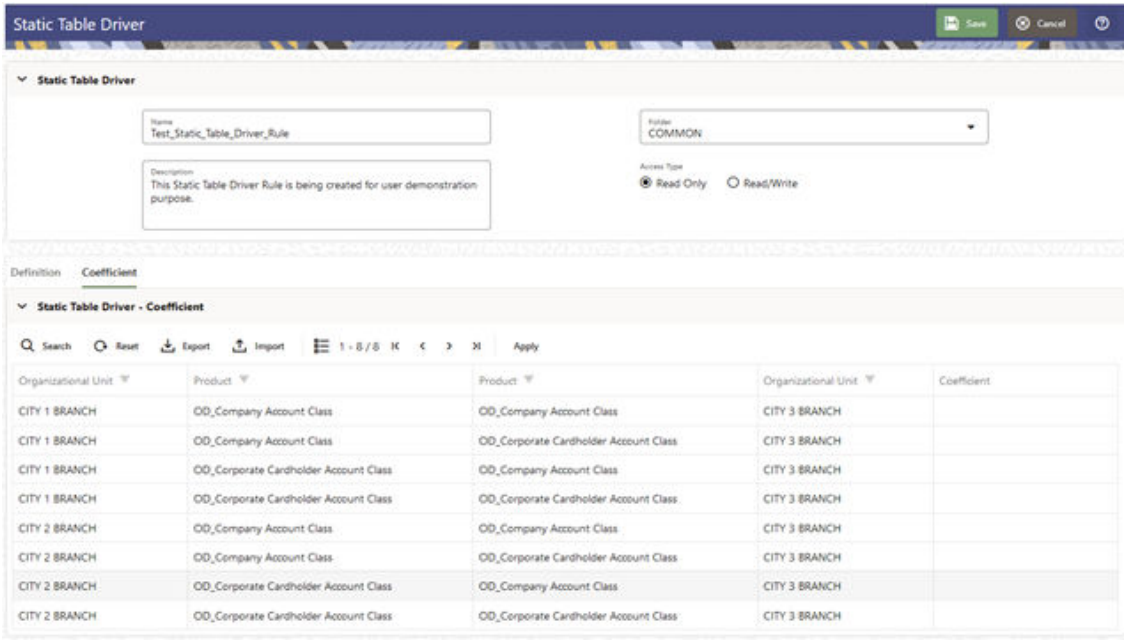
Figure 6-75 Static Table Driver – Definition Screen



After the matrix is generated, the user is automatically taken to the Coefficient tab that now displays a data entry table. Assign the coefficients to combinations of Key leaf (or node) values and Target leaf values.

You may toggle back and forth between the specification of valid combinations and the entry of coefficient values. You may also return to your Key Leaf dimension tab and modify its definition by adding or removing values. More generally, you are free to navigate at any time between any of your Key Leaf definitions, your Target Leaf definition, your “enabled combinations” definitions, and your coefficient values.

Figure 6-76 Static Table Driver – Coefficient Tab



After the coefficients are defined, click **Apply** to apply the changes. You can click on **Definition** tab to view or edit the Key Leaf and Target Leaf dimensions' definition. Once the definition is modified, the coefficient matrix needs to be re-generated by clicking **Generate Grid**.

Select **Yes** or **No** for the value of the Force to 100% allocation method (see the toggle button near the top right of the Definition tab). The default value for **Force to 100%** is **Yes**.

Static Driver Table rules are similar in many ways to Dynamic Driver rules. Select **Yes** for the value of Force to 100% when you want to perform a distribution using non-normalized statistics such as headcount, square footage of occupancy, and so on. If you are using a normalized set of driver statistics (statistics that sum to 1.00 or 100%) or if you are combining activity counts with activity rates, you need not use Force to 100%.

When you use Force to 100% in a Static Table Driver rule, balances are distributed on a percent-to-total basis within each row visible on your Coefficient data entry table.

For example, for the above coefficient values, balances are distributed from Company A to Cost Center 1 and Cost Center 2 in proportions of 10% and 90%; and balances would be distributed from Company B to Cost Center 2 and Cost Center 3 in proportions of 40% and 60%.

Click **Save** to validate and save your rule.

Click **Cancel** to close the rule without saving any changes you may have made. This control is only active when you are in Edit mode.

6.3.5.1.2.2 Excel Export

Use this feature to export your Static Table Driver data to a spreadsheet. Within the spreadsheet, you can update the coefficient values for any existing Key Target combination. Later, you can import your spreadsheet back into Profitability Management.

To export to a spreadsheet, perform the following steps:

1. Navigate to **Coefficient** tab. Click **Export**.

2. Open using Excel or save the file to the name and location of your choice.

6.3.5.1.2.3 Excel Import

Use the Excel import functionality for adding and editing leaf data in static table drivers.

To import a file, perform the following steps:

1. Navigate to **Coefficient** tab. Click **Import** to trigger a File Upload dialog.
2. Browse for the spreadsheet that you want to import.
3. Select the file and click **Open**.
4. Click **Upload File**.

6.3.5.1.2.4 Search

The Search option allows you to search the Leaf values that have coefficient values defined on the Static Table Driver Definition page. This functionality works only if the Coefficient option is enabled. You can export this extracted list using the Export functionality.

To perform the search, perform the following steps:

1. Apply Filter to your required column within the Coefficient matrix. You can apply filtering to any number of columns.
2. Click **Search**.
   The selected Leaf values that match the filtering conditions are displayed in the grid. You can also export this list using the Export functionality.
3. Click **Reset** to remove the filter.
   Reset: The Reset option on the Static Table Driver Definition page removes any coefficient you may have specified, and refreshes the screen. It also allows you to reset the Search on the Static Table Driver Definition page.

   Example: For other uses, you may want only a subset of all possible combinations of Key Leaf values and Target Leaf values. For example, you may wish to allocate a series of Management Ledger balances from a cost center to another cost center. If you wanted to allocate balances from Company A to Cost Centers 1 and 2; and if you wanted to allocate balances from Company B to Cost Centers 2 and 3, then the values would be as follows:

   - Key Leaf dimension would be Organizational Unit
   - Key Leaf values would be Company A and Company B
   - Target Leaf dimension would also be an Organizational Unit
   - Target Leaf values would be Cost Centers 1, 2, & 3
   - Enabled combinations would be A-1, A-2, B-2, and B-3

6.3.5.2 Working with Exported Static Table Driver Data

During the initial set up on the Definition tab, a Static Table Driver rule has a set of possible Key ' Target combinations equal to the cross product of each of the Key and Target leaves you have defined for your rule. For example, a Static Table Driver rule having one Key leaf dimension with 10 defined members and one Target leaf dimension with defined 100 members has a total of 1,000 possible Key ' Target combinations. Of these 1,000 possible combinations, you may have defined 75, or 125, or any number coefficient values up to 1,000.

The Excel Export feature exports "active" Key ' Target combinations, which are combinations where you have already established coefficients.

The structure of your exported Static Table Driver depends on how many Key dimensions and Target dimensions are used in your rule. The following example shows an exported data from a Static Table Driver having one Key leaf dimension and one Target leaf dimension with 11 defined coefficients.

Figure 6-77 Sample Illustration of Exported Static Table Driver Definitions

	A	B	C	D	E
1	F0_ID	F0_DESC	T1_ID	T1_DESC	COEFF
2	8100	Executive	8100	Executive	10
3	8100	Executive	8400	Facilities Managment	35
4	8100	Executive	8200	Finance Department	60
5	8100	Executive	8300	Human Resources	85
6	8100	Executive	8500	Information Technology Unit	110
7	8400	Facilities Managment	8100	Executive	135
8	8400	Facilities Managment	8400	Facilities Managment	160
9	8400	Facilities Managment	8200	Finance Department	185
10	8400	Facilities Managment	8300	Human Resources	210
11	8400	Facilities Managment	8500	Information Technology Unit	235
12	8200	Finance Department	8100	Executive	260

In this example, the first two columns (F0_ID and F0_DESC) contain the leaf identifiers and descriptions for the Key leaf dimension. For a Static Table Driver having a 2nd and 3rd Key leaf dimension, the exported spreadsheet would include ID's and descriptions for each Key leaf dimension (F0, F1, and F2 represent "from" dimensions, such as Key leaf dimensions, while T1, T2, and T3 represent your first, second, and third Target leaf dimensions).

Updating Exported Static Table Driver Data

You may update the coefficient value for any combination in the spreadsheet (yellow cells in the example above).

Adding New Combinations to Exported Data

The Import Excel functionality does not support for any new rows introduced in the Excel file, meaning the Import functionality does not support for new member combinations of existing Key/Target dimensions. It supports only for the member combination already selected through the Definition facility in the UI. Any additional rows introduced in the Exported Data will be ignored during the Import.

Validating the Imported Data

On Import, the system validates each row in your spreadsheet. Rows failing validation will not be imported. The validation requirements are as follows:

The spreadsheet structure must match the definition of the rule to which it is being imported. This is not an important restriction because the typical workflow for maintaining a Static Driver Table in a spreadsheet begins with an Export of the rule that you want to edit.

Each Key leaf value and each Target leaf value must be part of the definition of your Static Table Driver rule. In the example above, the Key leaf value of 8200 and the Target leaf value of 8400 must be included in the initial set up of the Static Table Driver rule (on the Definition tab).

> **Note:**
>
> You must define a Key ' Target combination on the Static Table Driver Definition tab before you can add that combination to your spreadsheet.

6.3.5.3 Large Cross Product Static Table Drivers

Static Table Drivers are generally used in a distributive fashion, and the Static Table Driver user interface is engineered for this typical use case. Some features of the user interface are limited for Static Table Drivers having large numbers of Key leaf values (or node values) in conjunction with large numbers of Target leaf values. For these cases, you must maintain your large Static Table Driver rules using Excel Export/Import functionality.

Limit on Large Cross Products

The Static Table Driver user interface is designed to allow you to specify coefficient values for any combination - or even for every combination - of your Key leaves and Target leaves. For example, a simple Static Table Driver having 50 Key Leaf values (in one Key Leaf dimension) and 100 Target Leaf values (in one Target Leaf dimension) could have as many as 5,000 "active" combinations (that is, combinations for which coefficients are defined). Typically, the number of defined combinations is a small fraction of the number of possible combinations.

The number of possible combinations is determined by the Cartesian product of the number of leaf values in each dimension in your Static Table Driver rule. For example, a Static Table Driver rule having 5,000 Key Leaf values (in one Key Leaf dimension) and 5,000 Target Leaf values (in one Target Leaf dimension) has a cross product of 25 million. The performance and response time of the Static Table Driver user interface can degrade with extremely large cross products. For this reason, the application applies a limit of 20 million on the size of the cross product. You may modify the default limit by manually updating SETUP_PARAMETERS_MASTER.STATIC_TABLEID_TEMP_TABLE_CROSS_JOIN_LIMIT. When you are working with a Static Table Driver whose cross product exceeds the cross-join limit, the Coefficients tab of the Static Table Driver user interface displays only the "defined" combinations, which are combinations where coefficients are previously established.

Managing Large Cross Product Static Table Drivers

To build a Static Table Driver that will have a very large cross product, follow the normal steps of building out your Key leaf (or node) values and your Target leaf values on the Static Table Driver Definition tab. If you start with a modest number of defined Key and Target leaves, the Coefficients tab operates normally, and you may save coefficients for any possible combination of Key and Target leaves that you have defined on the Definition tab. If you navigate to the Definition tab, add more Key leaves and Target leaves, and then return to the Coefficients tab, the Coefficients tab allows you to edit coefficients for any possible combination of your selected Key and Target leaves. This is applicable as long as you have not exceeded the cross-product limit. After you have added enough combinations on the Definition tab for the rule to exceed to cross-product limit, the Coefficients tab no longer shows the unmapped combinations. In this state, you can edit the coefficient values for any previously mapped combination, but you can no longer establish new combinations and coefficient values within the Coefficients tab.

> **Note:**
>
> Instead of starting the build process with a modest number of Key leaves and Target leaves, you might also begin by specifying a very large number of Key and Target leaf values. If you specify enough values in the Definition tab to exceed the cross product limit, then when you initially transition to the Coefficients tab it will appear blank. Regardless of whether your Static Table Driver rule begins as a small rule and evolves into a large cross product rule or your Static Table Driver rule was "large" at the time it was defined, the Coefficients tab only displays the "defined" combinations after you have exceeded the cross- product limit.

Editing Existing Coefficient Values

You can edit the coefficient value for any defined combination within the user interface. Alternatively, you can also export your data and edit coefficient values offline.

Adding New Combinations and Coefficients

To add new combinations and coefficients, perform the following steps:

1. Navigate to the Definition tab and add new Key & Target leaf values.
2. Navigate to the Coefficient tab and export your rule to a spreadsheet.
3. Add your new combinations and their coefficients to the spreadsheet.
4. Save and import the spreadsheet.

Removing Combinations and Coefficients

You can remove coefficients within the Coefficient tab by deleting the coefficient and saving the rule. After you have removed the coefficient for a combination of Key ' Target leaves, that combination is no longer updatable within the Coefficient tab. However, the combination remains defined (that is, you could still add a coefficient to this combination offline).

Navigate to the Definition tab to completely remove defined Key and Target leaf values, and remove the leaves that are no longer required.

6.3.5.4 Using Static Table Drivers

Static Table Drivers are declared as drivers in the Driver process tab for allocation rules of the type Static Driver Table.

(For more information, see Allocation Specification)

Static Drivers Table allocation rules are similar in many ways to Dynamic Driver allocation rules. Both are used to distribute balances, but while Dynamic Driver allocation rules obtain their driver data directly from your business data, Static Driver Table allocation rules obtain their driver data from a Static Table Driver rule.

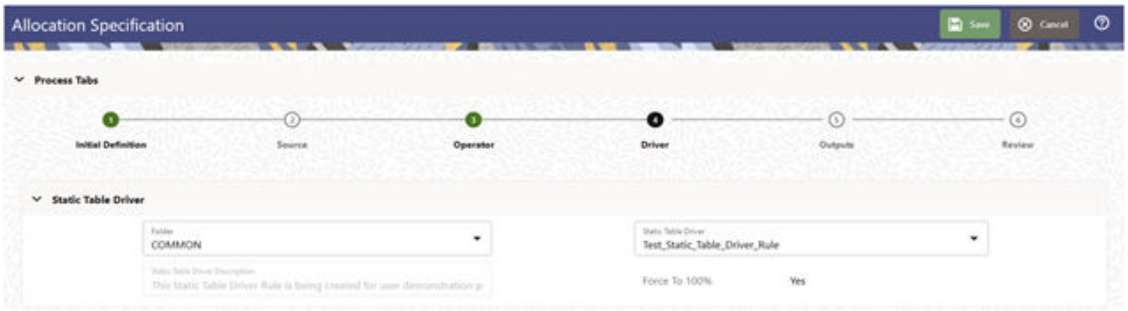
In the following example, your goal is to “product align” your Management Ledger data (your initial General Ledger data is aligned to Organizational Unit and General Ledger Account, but not to Product). You need to write allocation rules that distribute expenses within each cost center to the Product. In this example, you are focusing on expenses incurred in two rollup points within your Organizational Unit hierarchy: Mortgage Origination (a rollup point of multiple regional origination centers) and Statement Processing (a rollup point of multiple statement processing centers).

Your cost studies have told you that 55% of mortgage origination expense is attributable to your 30 Year Fixed Mortgage product, and 45% to your 15 Year Fixed product. At the same time, historical balance reports tell you that 55% of your retail deposits are Savings, and 55% are Time Deposits. On the assumption that balance ratios are a good way to distribute Statement Processing expense, you decide to use a 45-55 split.

To build this allocation, start by constructing a Static Table Driver rule that uses an Organizational Unit Key Leaf and a Product Target Leaf. Select the Mortgage Origination and Statement Processing rollup points from your organizational hierarchy for your Key Leaf values. Select the three mortgage products plus the Checking, Savings, and Time Deposits products as your Target Leaf values. Finally, enable the appropriate combinations of Key Leaf and Target Leaf and enter your coefficient values.

Next, build a new Static Driver Table allocation rule. In the Driver tab, select the Static Table Driver you just built.

Figure 6-78 Allocation Specification Edit screen - Driver tab

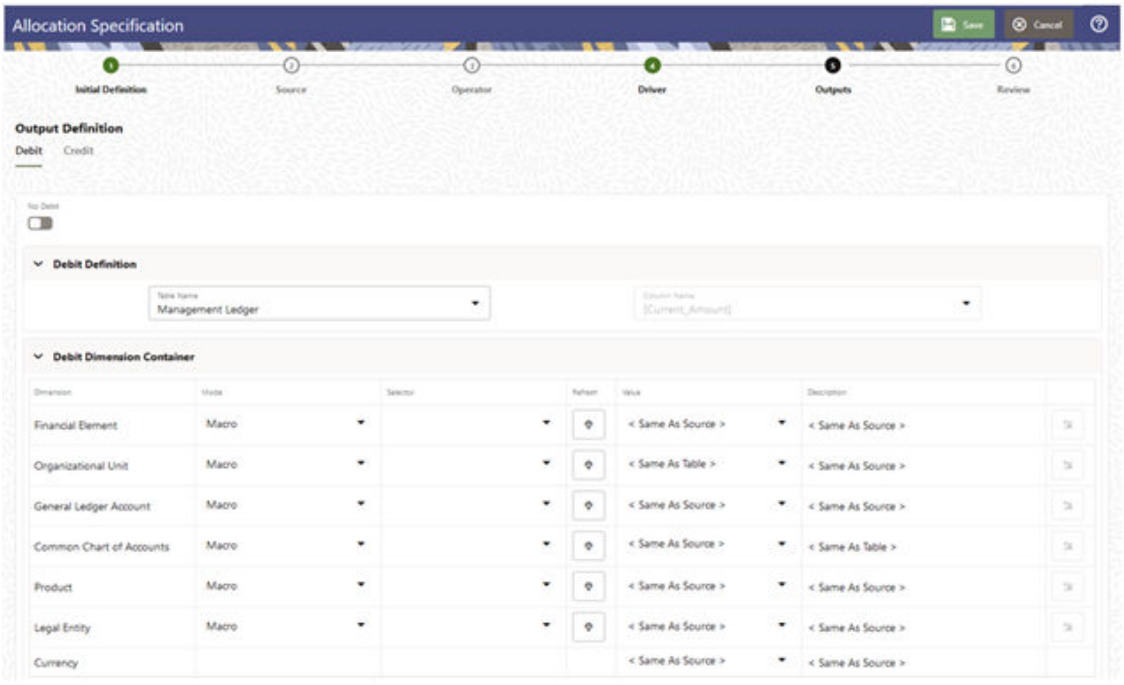


In the Source tab, constrain the General Ledger Account dimension with a rollup point whose meaning is Total Non-Interest Expense. Alternatively, you may specify the Financial Element Leaf value 457 – Non-Interest Expense.

Note that you could specify an Organizational Unit constraint in your Source specification narrowing the source data down to just the Mortgage Origination and Statement Processing rollup points. Doing so is not strictly necessary as the allocation rule insists on the matching of Source cost centers, Driver cost centers, and you have already constrained the Driver cost centers in your Static Table Driver rule.

In your allocation Output Debit, specify < Same as Table > for the Organizational Unit dimension and specify < Same as Source > for every other dimension.

Figure 6-79 Allocation Specification Edit screen - Outputs tab



Note the similarity between the Static Driver Table allocation rule defined above and a very similar allocation built using dynamic drivers. If the statistics we used in the Static Table Driver were available from an external source that we could load every month to the data model, we could achieve the same results with a Dynamic Driver allocation rule. The Output Debits in the following table show the values you would use for the two rule types.

Table 6-19 Static Table Driver - Output Debits

Dimension	Dynamic Driver Allocation Debit Definition	Static Table Driver Leaf Type	Static Driver Table Allocation Debit Definition
Organizational Unit	< Match Source and Driver >	Key Leaf	< Same as Source >
General Ledger Account	< Same as Source >	Not defined	< Same as Source >
Product	< Match Driver >	Target Leaf	< Same as Table >

6.3.6 Lookup Table

Lookup Tables are user-defined database tables that are created to hold user data to match Instrument level measures or attributes and thereby deduce a return factor.

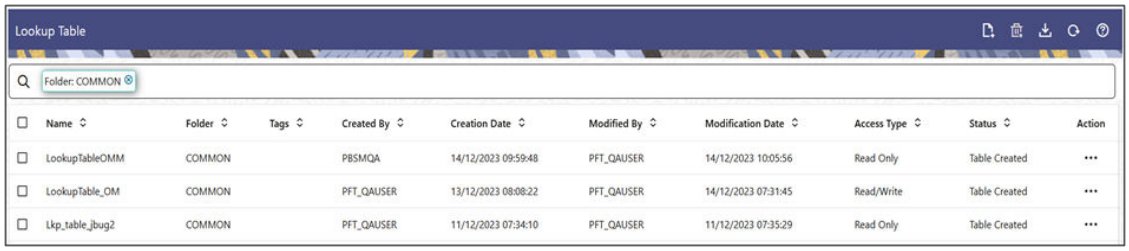
The user data is generally matched conditionally with the similar columns of a PBSMCS instrument table and a user specified value is returned that is stored under the return columns of the Lookup table.

A Lookup table by itself is a non executing component of the Profitability application. It is rendered meaning when used inside an allocation rule with the help of a Lookup Table Driver.

To open the summary page, from the LHS menu, select **Maintenance**, and then select **Lookup Table**. A summary screen is displayed showing a set of Lookup Table rules. Using

search criteria, you can control the set of rules displayed. When you Add, Edit, or View a rule, it displays a detailed screen.

Figure 6-80 Lookup Table - Summary page



The Lookup Table summary screen has two panes: Search and Lookup Table summary table.

The title bar of the summary page provides several actions for the user. They are:

- **Add**: Click the Add icon to build a new Lookup Table. The Add icon is disabled if any rows in the table are selected.
- **Multiple Delete**: Select one or more drivers in the table and then click the Multiple Delete icon at the top right of the summary page to delete more than one rule at the same time.
- **Export**: Click Export to download the displayed information in the summary table in .xls format.
- **Refresh**: Click the Refresh icon to refresh the summary page.
- **Help**: Click the Help icon to view the Lookup Table help.

Searching for a Lookup Table Rule

To search the Lookup Tables, follow these steps:

1. Click the **Search** icon on the search pane to collapse (display) the criteria window.
2. Enter the Lookup Table **Name** or **Description** and click **Search** to display the Lookup Tables that match the criteria.
3. Click **Cancel** to remove the filter criteria on the search window and refresh the window.

Lookup Table Summary Table

This section presents a table containing all of the Lookup Tables that meet your search criteria. The table displays the details of the already created Lookup Tables.

The Lookup Table Summary Table displays the following details:

- **Name**: Displays the Lookup Table's short name. Hovering over an Lookup Table name displays the Lookup Table's object code and the object ID.
- **Folder**: Displays the folder in which the driver rule has been created.
- **Tags**: Displays the tags associated with the rule.
- **Created By**: Displays the name of the user who created the Lookup Table rule.
- **Creation Date**: Displays the date and time at which an Lookup Table rule was created.
- **Modified By**: Displays the name of the user who last modified the Lookup Table rule.

- **Modification Date**: Displays the date and time at which an Lookup Table rule was last modified.
- **Access Type**: Displays the “Read/Write” or “Read Only” property of an Lookup Table rule. Only the creator of a rule may change its Access Type.
- **Status**: Displays the status of the Lookup table. The values that are possible as status are – ‘Creation in Progress’, ‘Table Created’, ‘Failed’ and ‘Deletion in Progress’.
- **Action**: Displays the following list of actions that can be performed on the Lookup Table rule.
  The Action column in the Lookup Table Summary table offers the following actions based on the status of the lookup table:

  1. If status is ‘Creation in Progress’, allowed action is only View.
  2. If status is ‘Table Created’, allowed actions are View, Save As, Delete, Check Dependencies and Table Data.
  3. If status is ‘Failed’, allowed actions are View and Delete.
  4. If status is ‘Deletion in Progress’, allowed action is only View.

  The ‘Creation in Progress’ status results into either a **Table Created** status or a **Failed** status, based on whether the physical lookup table creation in the database is successful or failed respectively.

  The following actions are available for the Lookup Table rule.

  – **View**: Click the View icon to open the created table in view mode. View is enabled for table status in (Creation in Progress, Table Created, Deletion in Progress, Failed).
  – **Save As**: Click on this option to create a copy of an existing Lookup Table rule. The Save As pop-up window allows you to enter the Name, Description, Folder, and Access Type details for the copy Lookup Table rule.
  – **Delete**: Click Delete to delete the Lookup Table rules you have selected.
    Delete is enabled for table status in (Table Created, Failed).

    For Failed state tables, Delete will delete the row from Summary.

    Once Delete is clicked, the status of the table becomes 'Deletion in Progress' and once delete operation is successfully completed (meaning, the table is dropped successfully from the database), the corresponding lookup table row is deleted from the Summary grid.

    If deletion operation fails due to any reason, the table appears in the Summary but now with status='Failed'.
  – **Check Dependencies**: This action button is to check for any dependency of the selected object with other objects in the application. Check Dependencies is enabled for table status only in (Table Created).
  – **Table Data**: Click Table Data to invoke the Lookup Table Data screen to view, add or delete the data residing in the lookup table. This is enabled for table status only in (Table Created).

You may select or de-select all of the Lookup Table rules in the summary table by clicking on the check box in the upper left-hand corner of the summary table directly to the left of the Name column header.

6.3.6.1 Navigation in the Detail Screen

When you Add, Edit or View a Lookup Table rule, the Lookup Table Detail screen is displayed.

In addition to Name, Description, Folder and Access Type, the definition of a Lookup Table includes the specification of a source table and defining the lookup table columns.

Specify the Lookup Table rule's Name and Description, select a Folder in which the Lookup Table rule is to be stored, and specify whether you want the Lookup Table rule to be “Read/ Write” or “Read Only” (Access Type). Naming your Lookup Table rule is required before you save it. The default values for Folder and Access Type are stored in User Preferences.

Figure 6-81 Lookup Table Details Pane

Lookup Table Source Selection Pane

Select a Source table to create your Lookup Table. The source table list is limited to the instrument tables available under PBSMCS. The Source column dropdown lists all the columns available in the selected source table, except the VARCHAR domain type columns.

Click on the ‘Add to Grid’ button to include the selected column into the grid.

Figure 6-82 Lookup Table Source Selection Pane

6.3.6.1.1 Lookup Table Grid

The Lookup Table Grid is essentially a table that displays the column type, the physical column name and the logical column name of the columns of the Lookup table.

The grid is displayed as blank in New mode while it displays the lookup table columns in View and Edit mode. The logical names of the columns are editable for user input.

The pane displays the physical database table name at the top of the grid.

The grid is populated by **Add to Grid** button available in the earlier pane.

Users can add return columns with the **Add Return Coulmn** button while any added column in the grid can be removed with the **Delete** button.

The user can feed in or view or delete lookup table data from the Lookup Table Data screen that can be invoked from the Detail screen using the **Table Data** button. The **Table Data** button is enabled only for Lookup tables in *Table Created* state and the detail screen mode being View.

Figure 6-83 Lookup Table Grid in New mode

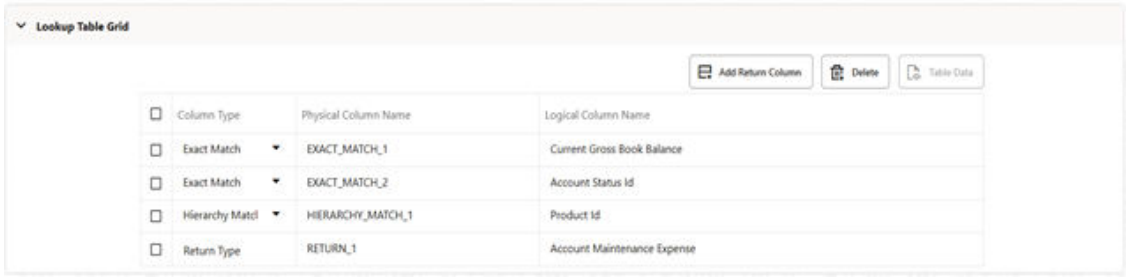
Once a instrument column has been added in the grid, the same column becomes un-selectable the next time the user wants to select and add to the grid.

The Lookup Table rule supports three column types:

- Range Lookup: for all instrument non-dimension columns.
- Exact Match: for all instrument columns – both dimension and non-dimension.
- Hierarchy Match: for all instrument dimension columns.

The default column type value for a non-dimension column is Exact Match, while the default column type value for a dimension column is Hierarchy Match.

Figure 6-84 Lookup Table Grid in View mode



6.3.6.1.2 Audit Info Pane

The Audit Trail pane is a standard footer pane for every OFSAA rule type.

The Audit Trail pane displays the following sections – Audit, Comments and Tags.

- **Audit Tab**: It shows the audit data for the object. The Audit tab contains details as:
  - Created By
  - Created Date
  - Modified By
  - Modified Date
  - Authorized By
  - Authorized Date

- **Comments Tab**: The Comments panel shows the existing comments for the object. Only the latest comment is editable and deletion of existing comments is not allowed. Users can also add new comments for the current object.
- **Tags Tab**: The Tags panel shows the tag associated with the object. The user can add new tags or remove the existing tags.

6.3.6.1.3 Lookup Table Column Types

A Range Lookup column type is to be used for columns that is meant to store a range of value from a minimum value to a maximum value. The minimum and the maximum values are stored in two separate Lookup columns in a Lookup column pair. The logical condition that relates to this column pair of values is: Range Lookup Minimum value =< matching instrument data <= Range Lookup Maximum value.

Range Lookups require that your lookup data do not have overlapping ranges as that would lead to ambiguous lookup values.

An Exact Match is a literal database join and is used for columns meant to store a single value that is to be related as: matching instrument data = Exact Match column value. Exact Match supports all instrument-level measures, attributes, and dimension members (numbers, dates, or strings).

A Hierarchy Match is to be used for columns that would store dimension leaf member values. A Hierarchy Match of a Lookup table Driver lets you to match on dimension member values from a source instrument table with any leaf member that belongs to a hierarchical rollup point of that leaf. Hierarchy matching supports only Key Processing dimensions.

A Lookup Table may contain one or multiple **Return Columns**. The Return columns are meant to hold the vaues that are expected to be returned in response to a match arrived with the source instrument table. The return values expected in the return columns are, in most cases, numeric values.

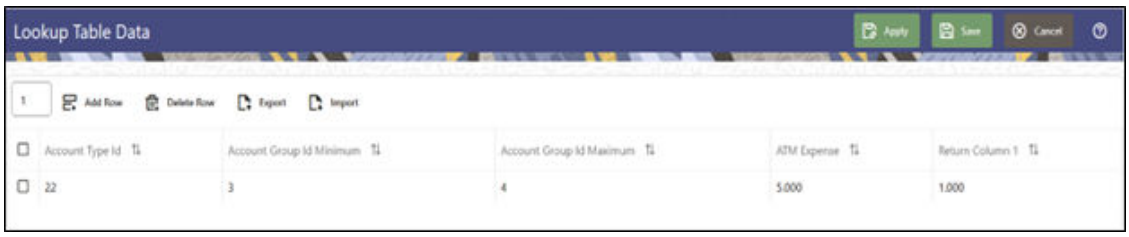
A Lookup table may contain any number of rows, each row having the values of the different column types used, including the return column types. A Lookup table does not hold a duplicate row.

The process to input user data into a Lookup table is to use the Lookup Table Data screen invoked through the Lookup Table Driver module. For more information, see the Lookup Table Driver section on the process to input of data . into a Lookup Table.

6.3.6.1.4 Table Data Screen

Click on the **Table Data** button in the Lookup Table grid to invoke the ‘Lookup Table Data’ window that displays the lookup table columns and the data contained in the lookup table. The actual columns of the table data depend on the Lookup Table selected.

Figure 6-85 Lookup Table Data screen



The Lookup Table Data screen allows several operations on the selected lookup table data.

- Enter the number of rows you want to add, and then click the **Add** icon to add the number of new rows to the Lookup table.
- Once the new rows are added, enter the values for the rows and click **Save**. This saves the values of the rows in the database for the lookup table, and then closes the screen.
- Alternatively, the you can click on **Apply** to save the values of the rows in the database for the lookup table but does not closes the screen.
- Click the Delete icon to delete a row(s) from the Lookup table.

Click the **Export** or **Import** icons to access the Export or Import functionality. While exporting, the data from this screen is exported as a .xls file.

6.3.6.1.5 Migration of Lookup Tables

- **SaaS version to SaaS version migration**:
  The scope of migration of lookup tables is limited to tables present with status='Table Created' and the utility does not migrate lookup tables present with ('Creation in Progress', 'Deletion in Progress', 'Failed') status.

  If the migration process is successful, the migrating table arrives at the target environment with status='Table Created' if the table creation in the target environment database is successful. If the table creation process has failed, the migrating table arrives at the target environment with status='Failed'.

  If the migration process has failed, there appears no entry in the target environment Lookup Table Summary for the migrating lookup table rule.

  Once the lookup tables are migrated, the user can proceed to migrate the Lookup Table Drivers and the Lookup Driver Table allocation rules and the Allocation Models containing any Lookup Driver allocation rule, in the same sequential order of object types.
- **Legacy (on-premise) version to SaaS version migration**:
  Lookup Tables are physical tables and not objects in the on-prem version and thus Lookup Tables are not in the scope of Legacy Object Migration into SaaS.

  Similarly, the Legacy Migration Export utility installed in on-premise version is configured to exclude the Lookup Table Driver and the Allocation Rules of the Lookup Driver Table allocation type from the list of object types available for migration.

  The SaaS users are expected to create from scratch, the Lookup Tables, the Lookup Table Drivers and the Lookup Driver Table allocation rules, in the same sequential order of object types in the target environment before proceeding to migrate the allocation models.

  The Allocation Models containing Lookup Driver allocation rules are in the scope for On-prem to SaaS Migration. An allocation model will only be migrated successfully if all the rules present in the model meta data is successfully migrated into Target. An allocation model will not be migrated if any of the rules present in the model meta data are not migrated successfully into Target.

6.3.7 Lookup Table Driver

Lookup Table Driver rules are used in conjunction with Allocation rules (of the Lookup Driver Table type) to match Instrument level data with data from user-defined lookup tables. Each Instrument table row retrieved within the Allocation rule's Source definition is matched with your lookup table to return a lookup table factor. For each row, the resulting lookup table factor is arithmetically combined (typically multiplied) with the column specified in the Allocation rule's Source definition to update another column within the same row. A very typical use case might

be the allocation of Loan Loss Reserves, Economic Loan Loss Provision, or Credit Risk Capital to each of your commercial loan instruments as a function of Product, Remaining Term to Maturity, and Credit Rating. Static Driver Table rules also support this kind of “matching”, but only for key processing dimensions (only for Product in this example). Lookup Table Driver rules extend the functionality of Static Table Driver rules by allowing you to match on Instrument level measures or attributes (Remaining Term to Maturity and Credit Rating in this example).

Additional examples of how you might use a Lookup Table Driver rule include the following kinds of assignments:

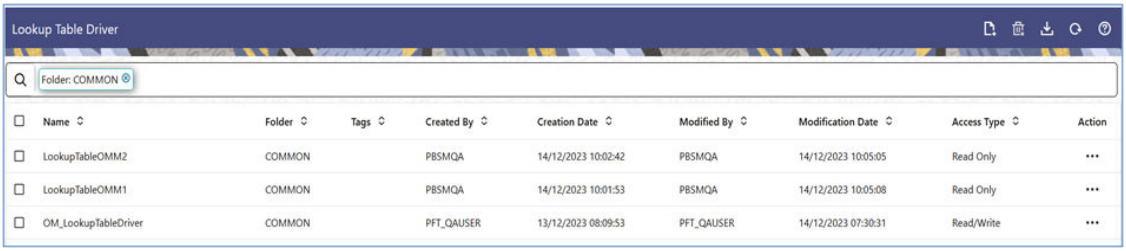
- Risk equity as a function of Product (a dimension), Division (a rollup point within a dimension), Credit Score (an instrument-level attribute), and Remaining Term to Maturity (also an instrument-level attribute).
- Loan Loss Reserve or Economic Provision (expected loss) as a function of Product (a dimension), Amortization Type (an instrument-level attribute), and Loan to Value Ratio (also an instrument-level attribute).
- Account Maintenance Expense as a function of Product (a dimension) and Current Net Book Balance (an instrument-level measure).

6.3.7.1 Summary and Detail Screens

To open the Summary page, select **Profitability Management Cloud Service**, select **Maintenance**, and then select **Lookup Table Driver**.

A summary screen is displayed showing a set of Lookup Table Driver rules. Using search criteria, you can control the set of rules displayed. When you Add, Edit, or View a rule, it displays a detailed screen.

Figure 6-86 Lookup Table Driver Summary screen



When you navigate to the Lookup Table Driver summary screen, the rules stored within your current Default Folder are presented in a summary table.

The title bar of the summary page provides several actions for the user. They are:

- **Add**: Click Add icon to build a new Lookup Table Driver. The Add icon is disabled if any rows in the table are selected.
- **Multiple Delete**: Select one or more drivers in the table and then click the (-) icon at the top right of the summary page to delete more than one rule at the same time.
- **Export**: Click Export to download the displayed information in the summary table in .xls format.
- **Refresh**: Click Refresh to refresh the summary Page.

- **Help**: Click Help icon to view the Lookup Table Driver help.

The Lookup Table Driver summary can be divided under two sections – the Search section and the summary table.

Search

To search the Lookup Table Drivers, follow these steps:

1. Click the **Search** icon on the Search pane to collapse (display) the criteria window.
2. Enter the Lookup Table Driver **Name** or **Description** and click **Search** to display the Lookup Table Drivers that match the criteria.
3. Click **Cancel** to remove the filter criteria on the search window and refresh the window.

Lookup Table Driver Summary Table

This section presents a table containing all of the Lookup Table Drivers that meet your search criteria. The table displays the details of the already created Lookup Table Drivers.

The Lookup Table Driver summary table displays the following details:

- **Name**: Displays the Lookup Table Driver's short name. Hovering over a Lookup Table Driver name displays the Lookup Table Driver's object code.
- **Folder**: Displays the folder in which the driver rule has been created.
- **Tags**: Displays the tags associated with the rule.
- **Created By**: Displays the name of the user who created the Lookup Table Driver rule.
- **Creation Date**: Displays the date and time at which an Lookup Table Driver rule was created.
- **Modified By**: Displays the Name of the user who last modified the rule.
- **Modified Date**: Displays the Date and Time when the rule was modified last.
- **Access Type**: Displays the "Read/Write" or "Read Only" property of a Lookup Table Driver rule. Only the creator of a rule may change its Access Type.
- **Action**: Displays the list of following actions that can be performed on a selected rule.
  - **View**: Click the View icon to view the contents of a Lookup Table Driver rule on a read-only basis as the user is launched into the Lookup Table Driver Detail screen in view mode.
  - **Edit**: Click the Edit icon to modify a previously saved Lookup Table Driver as the user is launched into the Lookup Table Driver Detail screen in edit mode.
  - **Save As**: Click on this option to create a copy of an existing Lookup Table Driver rule. The Save As pop-up window allows you to enter the Name, Description, Folder, and Access Type Details for the copy Lookup Table Driver rule.
  - **Delete**: Click Delete to delete the Lookup Table Driver rules you have selected.
  - **Check Dependencies**: This action button is to check for any dependency of the selected object with other objects in the application. On click of this action, the Dependent Information window is displayed with the Object Name, Object Type, Object Subtype, and the Version of the dependent objects. The 'Higher Order Dependency' states if the selected object has an upstream objects dependency and is to be treated as the actual dependency of the selected object. While the 'Lower Order Dependency' displays the downstream objects dependency of the selected object. If an object has a Higher Order Dependency, then the object cannot be deleted without removing the dependency first.

You may select or de-select all of the Lookup Table Driver rules in the summary table by clicking on the check box in the upper left-hand corner of the summary table directly to the left of the Name column header.

6.3.7.1.1 Navigation in the Detail Screen

When you Add, Edit or View a Lookup Table Driver rule, the Lookup Table Driver Detail screen is displayed. In addition to Name, Description, Folder and Access Type, the definition of a Lookup Table Driver includes the specification of a source table and a lookup table, the mapping of source columns to lookup table columns, a lookup table filter or a lookup table expression (both filters and expressions are optional), and a lookup table return column.

The Audit Trail pane is a standard footer pane for every OFSAA rule type. The Audit Trail pane displays the following sections – Audit, Comments and Tags.

The Audit tab contains the audit data of an object as:

- Created By
- Created Date
- Modified By
- Modified Date
- Authorized By
- Authorized Date

The Comments tab shows the existing comments for the object. Only the latest comment is editable, and the deletion of existing comments is not allowed. Users can add new comments for the current object.

The Tags tab shows the tags associated with the object. We can add new tags or remove the existing tags.

Lookup Table Driver Details Pane

Specify the Lookup Table Driver rule's Name and Description, select a Folder in which the Lookup Table Driver rule is to be stored, and specify whether you want the Lookup Table Driver rule to be “Read/Write” or “Read Only” (Access Type). Naming your Lookup Table Driver rule is required before you save it. The default values for Folder and Access Type are stored in User Preferences.

Source and Lookup Selection Pane

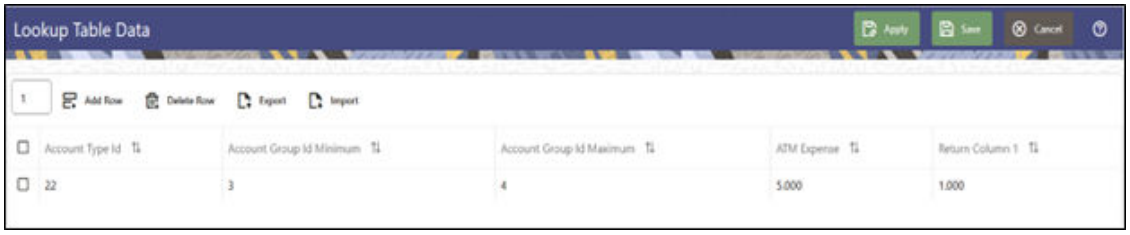
Select a Source table and a Lookup table. The source table list is limited to the instrument tables under PBSMCS. The tables available in the Lookup drop-down list are limited to lookup tables that have been created through the Lookup Table user interface.

Figure 6-87 Source and Lookup Tables Pane

Lookup Table Data Screen

Click on the **Table Data** button in the Source and Lookup Selection pane to invoke the 'Lookup Table Data' window that displays the lookup table columns and the data contained in the lookup table. The actual columns of the Table Data depend on the Lookup Table selected.

Figure 6-88 Lookup Table Data



The Lookup Table Data screen allows several operations on the selected lookup table data.

- Enter the number of rows you want to add, and then click the **Add** icon to add the number of new rows to the Lookup table.
- Once the new rows are added, enter the values for the rows and click **Save**. This saves the values of the rows in the database for the lookup table, and then closes the screen.
- Alternatively, the user can click on **Apply** to save the values of the rows in the database for the lookup table but does not closes the screen.
- Click the **Delete** icon to delete a row(s) from the Lookup table.
- Click the **Export** or the **Import** icons to access the Export or Import functionality. While exporting, the data from this screen is exported as a .xls file.

Source – Lookup Mapping Grid

When you select a Lookup table in the Source and Lookup Selection pane, the Source – Lookup Mapping Grid responds by displaying one row for each lookup column within your selected lookup table. Thus, the number of rows in the Mapping Grid is dynamic and gets structured based on the columns present in the selected lookup table.

Lookup Table Driver rules support three types of matching:

- Range Lookup
- Exact Match
- Hierarchy Match

Figure 6-89 Source - Lookup Mapping Grid

The mapping grid container has a table structure consisting of four columns. The grid maps the columns from the selected lookup table with the columns from the selected source instrument table. The column Hierarchy Level is used only for Hierarchy Match lookup type and stores the folder name containing the hierarchy, the hierarchy's name, and the hierarchy level name.

The Lookup types in the first column gets inherited from the Lookup table selected. An Exact Match displays all the columns of the source table in the second column of the grid, the Source Table Column dropdown. Similarly, a Range Lookup type displays all the columns of the source table in the Source Table Column drop-down. A Hierarchy Match displays only the dimension columns of the source table in the Source Table Column dropdown.

- **Range Lookup**: One of the options in defining a lookup table is to define a minimum column and a maximum column that you can employ in a "Range Lookup" against each row of selected instrument data. For example, you may wish to assign an Account Maintenance fee against certain checking account products as a function of balances ranges, such as one fee amount for accounts having balances between 0 and 1,000 and a different fee amount for balances between 1,000 and 5,000, and a third fee amount for accounts having balances greater than 5,000.
  If the lookup table you chose in the "Source and Lookup Table" pane includes range lookup columns, a Range Lookup row (this is a row whose Lookup Type is Range Lookup) is automatically generated within the Source – Lookup Mapping pane. Within this automatically generated row, select the source column that you want to compare to the Range Lookup columns from your lookup table. In the example described above, you might want to compare the Average Net Book Balance for each account with the range values from your lookup table. Range Lookup supports all instrument-level measures, attributes, and dimension members (numbers, dates, or strings).

  > **Note:**
  >
  > Range Lookups require that your lookup data not have overlapping ranges that would lead to ambiguous lookup values.

- **Exact Match**: An exact match is a literal database join. Exact Match supports all instrument-level measures, attributes, and dimension members (numbers, dates, or strings).
- **Hierarchy Match**: Similar to Static Table Drivers, Lookup Table Drivers allow you to match leaf values from a Source instrument table with any leaf member that belongs to a hierarchical rollup point of that leaf. You might have, for example, sets of driver statistics

that vary by region where regions are defined as rollup points in an Organizational Unit hierarchy. If you had North, South, East, and West regions, you could store your lookup data in four regional sets. If there were 300 cost centers in the West region, by using Hierarchy Match functionality, you avoid the repetition of 299 sets of otherwise identical driver data for the West region. Hierarchy matching supports only Key Processing dimensions.

Lookup Table Filters Pane

You may constrain the data within your selected lookup table by applying a Lookup Table Filter. Choose No Filter, Data Filter, or Group Filter. If you have chosen either Data Filter or Group Filter, continue by selecting a Folder and a Filter Name. Note that the Filter Name drop-down list will only display filters that apply to your chosen lookup table.

Figure 6-90 Lookup Table Filters Pane

Lookup Return Value

Specify a Column or an Expression within your lookup table from which to return a value for each Lookup.

Figure 6-91 Lookup Table Return Value

Lookup tables may contain multiple lookup columns. For example, you may define a lookup table called Risk Factors that contains return columns for Credit Risk Factor, Operating Risk Factor, Economic Loan Loss Provision Factor, and Loan Loss Reserve Factor. In this example, you could subsequently define four separate Lookup Table Driver rules to be used within four separate Allocation rules (one Lookup Table Driver rule and one Allocation rule for each defined lookup column). In this example, each of your Allocation rules might utilize the same instrument column source (as defined in each Allocation rule's Source definition), for example, Average Balance.

As another example, you might define a lookup table called Expense Factors that contains return columns for Account Maintenance Expense, Account Origination Expense, ATM Transaction Unit Cost, and Check Processing Unit Cost. In this example, you might develop four Lookup Table Driver rules and four Allocation rules. Here, you would probably utilize different Source columns within your Allocation rule definitions. For maintenance expense and origination expense, you might choose to allocate a flat amount for each account (for example, use the value of 1.00 for each account; you may accomplish this using Record Count as the Source column since the Record Count column within Instrument tables is typically set to 1). For ATM expense and Check Processing expense, you might utilize Instrument source columns of ATM Transaction Count and Number of Checks Processed.

Alternatively, the user can use an user-defined Expression as a return type for the Lookup.

> **Note:**
>
> Lookup table driver supports all types of expressions as return types except any expression involving an aggregate function.

7

Operations and Processes

This chapter covers the following topics:

1. Scheduler Services: The Scheduler Service is a service that automates behind-the-scenes work that is necessary to sustain various enterprise applications and functionalities. This automation helps the applications to control unattended background jobs program execution.
2. Object Migration: Object Migration is the process of defining, exporting and importing objects across environments (prod and non-prod)/instances. This feature also facilitates to migrate within the same setup or different setups.
3. Changing Object Ownership: This topic lists the instructions to request the change of object ownership.

7.1 Scheduler Services

Scheduler Services automates behind-the-scenes work that is necessary to sustain various enterprise applications and their operations. Using Scheduler Services, applications can control unattended background jobs program execution.

Scheduler Service operations:

- **Define Batch** - A Batch contains a group of background tasks that are executed together, on a specific date and time during which the resources are available for batch processing.
- **Define Task** - A batch job is a piece of a program meant to meet specific and business-critical functions. The program is a REST API used in a batch.
- **Schedule Batch** - Schedule batch jobs, to automate tasks that are processed on a regular basis but do not need to occur during the day or require human intervention. Jobs that happen on a regular basis are incorporated into batch schedules. You can also edit pre-conditions for batch group execution and pause scheduled executions.
- **Monitor Batch** - Track and access the real-time feedback on the status of the current encoding job and lists the jobs pending in the batch. You can also **Cancel** or **Restart** the service when required.
- **Scheduler Service Dashboard** - The Scheduler Service Dashboard gives the complete status of the Executed Runs, Successful Runs, Failed Runs, Ongoing Runs, Interrupted Runs, and the Upcoming Runs.

7.1.1 Accessing Scheduler Services

Using the Scheduler Services, you can create and execute batches and schedules to run various tasks and also monitor them.

To access Scheduler Services:

- Log in to the Service Console and from the left navigation pane in the Service console, click **Operations and Processes > Scheduler**.

7.1.2 User Roles and Functions

You require specific user roles and functions, to use Scheduler Services, and to create and manage batches and tasks.

Table 7-1 User Role Codes and Function Codes

Role Codes	Function Codes
BATCH_READ	BATCH_ADD
BATCH_WRITE	BATCH_DEL
BATCH_ADV	BATCH_MOD
BATCH_AUTH	BATCH_VIEW
BATCH_OPER	BATCH_SCH
BATCH_MAINT	BATCH_SUMM
	BATCH_AUTH
	BATCH_PURGE
	BATCH_MON
	BATCH_EXEC
	BATCH_COPY
	LOGVIEW

7.1.3 Scheduler Service Dashboard

View the task executions based on the execution status in the Scheduler Service Dashboard.

To access the **Scheduler Service Dashboard** page, from the left Navigation pane in the Service console, click **Operations and Processes** > **Scheduler** > **Dashboard**.

You can access the following details related to batch/batch group execution from the Dashboard:

- The batches/batch groups are categorized based on their execution status - **Executed Runs**, **Successful Runs**, **Failed Runs**, **Ongoing Runs**, **Interrupted Runs**, and **Upcoming Runs** tabs. Click the respective tab to view the details of the batches/batch groups based on their execution status. For example, click **Ongoing Runs** to view the details of the batches that are currently running.
- The run time, schedule name and the MISDATE associated with each batch/batch group.
- The batch execution summary for all the batches executed in the last 7, 30 and 120 days. The summary is displayed in the form of a color-coded bar graph with legend for the various execution statuses.
- To view the list of all task executions associated with a specific batch/batch group, select the required execution status tab, select Batch/Batch Group and select the required batch/batch group.
- To view the task executions within a specific date range, select the required execution status tab, select Batch/Batch Group and select the required batch/batch group. Specify both the start and end dates.

7.1.4 Define Batch

You can use batch and batch groups to group a set of background tasks to be executed together.

A Batch contains a group of background tasks that are executed together, on a specific date and time during which the resources are available for batch processing.

Batch Groups consist of batches that need to be executed together. Batch groups help to process date and time-based background tasks based on a defined period when resources are available for batch processing.

To access the list of existing batches and batch groups click **Batch** or **Batch Group** tab respectively. You can also view following details related to each batch/batch group.

- **Batch ID** - The unique alphanumeric code assigned to a specific batch/batch group.
- **Name** - The unique batch/batch group name.
- **Description** - The brief description of the batch/batch group.
- **Last Modified** - The last modified By user, date and time details.

To search for a specific batch/batch group, enter the keywords in the **Search** field and click **Search**. You can search based on **Name**, **Code**, and **Description**. You can also sort the batch/batch group list based on **Code**, **Name**, **Created Date**, and **Last Modified Date**.

Perform one of the following operations, to manage batch/batch group, from the **Scheduler Service (Define Batch)** page.

- Create New Batch/Batch Group
- Edit a Batch/Batch Group
- Copy a Batch/Batch Group
- Delete a Batch/Batch Group

7.1.4.1 Creating a Batch/Batch Group

Create a batch/batch group, to execute a group of background tasks together, on a specific date and time, when the resources are available for batch processing.

To create a batch/batch group from the **Scheduler Service (Define Batch)**:

1. In the **Create Batch** page, enter the following **Batch Details**:
   - **Code** - Enter a unique alphanumeric code for the new batch/batch group.
     The code must start with alphabets, should not contain any spaces, and must not exceed 60 characters. Special characters are not allowed except **underscore (_)**.
   - **Name** - Enter a unique name for the new batch/batch group.
     The name should start with alphabets, should not contain any spaces, and must not exceed 60 characters. Special characters are not allowed except **underscore (_)**.
   - **Description** - The description/details for the batch/batch group.
     The description should start with an alphabet and must not exceed 250 characters.
   - Select **Batch** to create a new batch or **Batch Group** to create a new batch group.
   - For new batch groups,select the **Batches** to be added to the batch group.
   - Select the **Service URL name** from the drop-down list, if it is available.

To add a new service URL, enter a name to identify the new Service URL Name and enter the proper Service URL. You can give partial URL here and the complete URL in the Task Service URL.

- Enter the complete **Cleanup URL** and enable the check box, to activate the cleanup URL, before you initiate a batch/batch group restart.
  The complete Cleanup URL : `http://fccm-utility-service:8080//fccm-utility-service/cleanupExecutionWatcher`
- Select one of the following options, to get an email notification, based on the selected batch execution status.
  Based on the selected option, an email is sent to the email ID of the logged in user, mentioned in the IAM console.
  - **Every Time** : An e-mail is triggered irrespective of the batch execution status.
  - **Never** : No e-mail will be triggered.
  - **On Error only** : (Default). An e-mail is triggered only when the batch execution has failed.
  - **On Interrupt only** : An e-mail is triggered if the batch execution is successfully interrupted.
  - The system automatically sends an email to all users mapped to the BATCH_NOTIFY_FUNT function and BATCH_NOTIFY_ROLE role. If a batch is mapped to a user (and their email ID), the batch email notifications will be sent only to that configured batch user. If no batch user is configured, the system follows the default email notification process.

> **Note:**
>
> Ensure you have the BATCH_ADMIN function code to use this option. You can configure a maximum of five user mappings per batch or batch group.

2. For new batches, after entering the Batch Details, provide the following batch parameters.

   From the **Batch Parameters** pane, click **Add** to add a new batch parameter, in the following format.

   - **Parameter Name** - A valid parameter name for the new Batch parameter.
   - **Parameter Value** - A valid parameter value required for Batch execution.

   > **Note:**
   >
   > Enclose the parameter Value for a Run time with `$` symbol. For example, `$paramName$`.

   By default, **$FICMISDATE$** and **$BATCHRUNID$** are added as batch Parameters.

   By default, **$BATCHDATE$**, **$BATCHRUNID$** and **$RUNSKEY$** are added as batch Parameters.

> **Note:**
>
> **$RUNSKEY$** parameter is added only if you are creating a new batch or copying from an existing batch. It is not supported for existing batches.

To delete a batch parameter, click **Delete** next to that parameter details.

3. Enter the following **Header Parameter** details:
   - **Parameter Name** - A valid parameter name for the new header parameter.
   - **Parameter Value** - A valid parameter value required for batch execution.
4. Click **Save**. The new batch/batch group is created and displayed in the **Scheduler Services (Define Batch)** page.

   To view the dependent tasks and their components, click the **Dependency Check** icon. Upon clicking this icon, the **Object Dependency** window appears and displays the following:
   - Higher Order Dependencies – Components/batch group that the selected batch depends on. Example: Batch in a batch group will have Batch group as the higher order dependency.
   - Lower Order Dependencies – Any task which is created under a batch and the dependency is established will be shown under this tab.

7.1.4.2 Editing a Batch/Batch Group

Edit the batch/batch group details such as **Description** and also add new **Batch Parameters** to a batch,along with adding new **batches** to the batch group.

Seeded batches cannot be edited.

To modify a batch/batch group:

1. In the **Scheduler Services (Define Batch)** page, click **Edit** corresponding to the batch/batch group you want to modify.
2. Modify the required details, in the **Edit Batch** page.
3. Click **Save** to save the edited batch/batch group.

   The edited batch will be updated in the **Scheduler Services (Define Batch)** page.

7.1.4.3 Copying a Batch/Batch Group

Copy a batch/batch group that you want to clone to create a new batch/batch group.

To copy a batch/batch group:

1. In the **Scheduler Services (Define Batch)** page, click **Copy** corresponding to the batch that you want to copy.
2. In the **Copy Batch** page, modify the required Batch details to create a new batch/batch group.
3. Click **Save** to add the copied batch to the **Scheduler Services (Define Batch)** page.

7.1.4.4 Deleting a Batch/Batch Group

Delete a batch/batch group that is no longer required in the system from the Define Batch page.

> **Note:**
>
> You cannot delete seeded batches.

To delete a batch/batch group:

1. From the **Scheduler Services (Define Batch)** page, click **Delete** corresponding to the batch/batch group you want to delete.
2. Click **OK** to confirm deletion.

> **Note:**
>
> After confirmation, any active schedules associated with the batch will also be deleted.

7.1.5 Define Tasks

The Define Tasks page lists tasks associated with a specific Batch Definition. You can create new tasks, and edit or delete existing tasks.

To access the **Define Task** page:

- Select Batch/Batch Group from the drop-down list and select the particular batch/batch group to access the list of tasks associated with it.

  You can view the following details related to each task:

  - **Task ID** - The unique identifier for the task.
  - **Name** - The name of the task..
  - **Parent Task** - The parent task associated with the task.
  - **Component** - The seeded/custom component associated with the task.
  - **Created Date** - The task creation date.
  - **Last Modified** - The last modification date.

  To search for a specific task, enter the keywords in the **Search** field and click **Search**. You can search based on the **Task Name**, **Code** and **Description**. You can also sort the Task list based on **Code**, **Name**, **Precedence**, **Component**, **Created Date**, and **Last Modified Date**.

Using the **Preview** option, you can view the complete task execution sequence for a specific batch/batch group.
Perform the following operations to manage a Task, from the **Scheduler Service (Define Task)** page.

- Add a task
- Modify a task

- Define a task precedence
- Delete a task

7.1.5.1 Adding a Task

Add new tasks to a selected Batch Definition.

To add new task:

1. In the **Scheduler Service (Define Task)**, select the Batch for which you want to add a new task from the drop-down list.
2. Click **Actions** on the page and then click **Add** to access the **Add Task** page.
3. Enter the following details:
   - **Task Code** - Enter a unique alphanumeric code for the new task.
     The code must begin with letters, should not include spaces, and has a maximum limit of 60 characters. Special characters except **underscore (_)** are not allowed.
   - **Task Name** - Enter a unique name for the new task.
     The name should start with letters, not contain spaces, and have a maximum limit of 60 characters. Special characters except **underscore (_)** are not allowed.
   - **Task Description** - The description/details for the task.
     The description should begin with a letter and not exceed 250 characters. Avoid using phrases like "Select From" or "Delete From" in the description.
   - **Task Type** - Select the task type from the drop-down list.
   - **Component** - Select the custom or the seeded component associated with the task.
4. By default, all Batch Level Parameters are added and enabled as task parameters in the **Task Parameters** pane.

   > **Note:**
   >
   > You can edit the parameters only for custom components.

   a. Enter the Parameter name in the **Param Name** field.
   b. Enter the Parameter value in the **Param Value** field.

   To delete a parameter, click on **Delete** next to the respective parameter.
5. Click **Save** to add the new task to task summary in the **Define Task** page.

   > **Note:**
   >
   > Sync task will remain active if execution time is more than 15 minutes at target service and till acknowledge status is generated from target API after the execution.

7.1.5.2 Modifying a Task

Modify details such as Task Description and Task Type in existing tasks.

You can also add a new task parameter and enable or disable existing task parameters.

To modify a task:

1. From the **Define Task** page, select the Batch to modify the task details from the drop-down list.
2. Click **Edit** corresponding to the Task you want to modify.
3. Modify the required Task Details, in the **Edit Task** page.
4. Click **Save** to update the changes.

   The modified task is added to the **Define Task** page.

7.1.5.3 Define Task Precedence

Task Precedence indicates the execution-flow of a batch. Task Precedence Value helps to determine the order in which the specific tasks of a batch are executed.

For example, consider a Batch consisting of four tasks. The first three tasks lack define precedence and hence will be executed simultaneously during batch execution. However, Task 4 has a precedence value as Task 1, indicating that Task 4 is executed only after the successful completion of Task 1.

You can set Task Precedence between Tasks or define to run a Task after a set of other tasks. While, multiple tasks can be executed simultaneously, cyclical execution is not permitted. Tasks without defined precedence execute immediately upon Batch Execution.

> **Note:**
>
> The **Task Precedence** option is disabled if a batch has only one associated task.

To define task precedence:

1. Click **Add or Remove Precedence** corresponding to the task requiring precedence, to access the **Precedence Mapping** list.
   a. Select a batch to execute before the current task, from the **Available Tasks** pane and click **Move Selected**.

      To move all the batches, click **Move All**.

   b. To remove a batch from the task precedence sequence, select the task from the **Selected Tasks** pane and click **Remove**.

      To remove all the selected batches, click **Remove All**.
2. Click **Save** to update Task Precedence in the batches.
3. Click **Preview** to view the precedence information.

7.1.5.4 Deleting a Task

Remove any tasks that that are no longer required in the system, from a Batch Definition.

To delete a task:

1. From the **Define Task** page, select the Batch from the drop-down list.
2. Click **Delete** corresponding to the Task you want to delete.
3. Click **OK** in the confirmation dialog to confirm deletion.

7.1.6 Schedule Batch

Schedule Batch enables users to manage batch/batch group executions.

All the batch/batch group schedules are listed. You can sort this list based on code, name, Task Precedence, Components, and dates, to access a specific schedule.

From the **Schedule Batch** page, you can perform the following operations related to the execution and scheduling of batches/batch groups

- Execute batch/batch groups instantaneously
- Edit dynamic parameters
- Automate batch/batch group executions using the various scheduling options
- Re-run a batch/batch group execution
- Re-start a batch/batch group execution

7.1.6.1 Execute Batch/Batch Group

Use the Execute Batch to run a batch/batch group instantaneously.

To execute a Batch/Batch Group:

1. In the **Schedule Batch** page, select **Batch** or **Batch Group** to execute from the drop-down list.
2. Select the **Batch /Batch Group** for execution.
3. Click **Execute** to access the **Execution Schedule** page.
4. Click **Exclude Tasks** to add/remove tasks from the execution list.
5. Click **Hold Tasks** to pause/release tasks during execution.
6. Click **Edit Dynamic Parameters** to modify the dynamic parameters.
7. Click **Execute**.

   The Batch is executed, and the associated unique Run ID is displayed in the format `<BATCH_CODE>_<MIS_DATE>_<ITERATION-COUNT>`.
   You can always click preview to view the PMF process sequence used to execute the selected batch/batchgroup.

7.1.6.2 Adding Pre-Conditions For Batch Group Execution

Pre-conditions help to execute batches associated with a batch group, on specific days, based on the set frequency and selected days.

You can set pre-conditions for a batch group, to execute specific batches on selected days based on the set frequency interval. This enables to wisely use the available resources for execution.

To set pre-conditions for batch group execution:

1. Click **Schedule** from the Header panel.
2. In the **Schedule Batch** page, select **Batch Group** and the **Batch Group Name**.
3. Click **Pre-Conditions** to set the pre-conditions for task execution.
4. Select the **Batch** to set the pre-condition.

5. Set the execution frequency to Weekly, Monthly, or specific interval and set one of the following conditions:
   - **Weekly** - Select the weekdays to execute the batch. You can select multiple days.
   - **Monthly** - Select the days of the month to execute the batch. You can select multiple days.
   - **Interval** - Select the recurrence frequency to execute the batch.
6. Click **Add** to add another pre-condition.
7. After adding all the required pre-conditions, Click **Save**.

   The pre-conditions are saved and the batch group will be executed based on the set pre-conditions.

> **Note:**
>
> The batch group is always get executed based on the pre-condition and any schedule associated with the batch group will not be considered for processing.

7.1.6.3 Edit Dynamic Parameters

Modify the dynamic parameters set for a batch/batch group.

You can modify the batch parameters, batch header parameters, task parameters, and the task header parameters associated with a batch/batch group.

To edit the dynamic parameters from the **Schedule Batch** page:

1. Select **Batch/Batch group** and then select the specific batch/batch group.
2. Click **Edit Parameters** to access the **Edit Dynamic Params** page.

   You can also edit the dynamic parameters while configuring the scheduling options.
3. Click the batch/batch group name to access all the parameters.
4. Set the **$BatchDate$** to set the batch execution date: :
   - Set the batch date to SYSDATE (system date). The batch execution date is set to SYSDATE by default.
   - Toggle and select **MISDATE** to select a particular batch execution date.
5. Enter **$BATCHRUNID$** to set the batch run ID in the format: `<BATCH_CODE>_<MIS_DATE>_<ITERATION-COUNT>`.
6. Edit the batch header parameters and the task parameters.
7. Click **Save** to update the batch/batch group parameter values.
8. After updating the changes, execute the batch/batch group or configure the scheduling settings.

7.1.6.4 Scheduling and Automating Batch/Batch Group Execution

Automate batch/batch group execution.

Using the various scheduling options, you can automate batch/batch group execution to run based on the specified scheduling parameters.

To automate batch/batch execution:

1. Click **Schedule** from the Header panel.
2. In the **Schedule Batch** page, select from the following options:
   - **Once** - Run only once.
   - **Daily** - Run daily.
   - **Weekly** - Run weekly on selected days and time.
   - **Monthly** - Run monthly on selected days and time.
   - **Quarter** -Run every quarter on selected days and time.
   - **Cron Expression** - A Cron Expression is a string comprising of six or seven fields separated by white space. Fields can contain any of the allowed values, along with various combinations of the allowed special characters for that field.
     To execute a batch/batch group using a Cron expression, enter the Cron Expression for your schedule. For more information about the Cron Expression, click **Information** next to the Cron Expression field.
3. Enter the following generic information and the parameters:
   - **Batch/Batch Group** - Batch/batch group for execution.
   - **Batch/Batch Group Name** - The specific batch/batch group to be executed.
   - **Schedule Name** - The unique schedule name.
4. Provide the following scheduling parameters based on the selected schedule option.

   For Cron Expression based scheduling, enter the required Cron expression.

Table 7-2 Scheduling Options

Details	Once	Daily	Weekly	Monthly	Quarter
Start Date to begin execution.	Yes	Yes	Yes	Yes	Yes
End Date to stop the execution	No	Yes	Yes	Yes	Yes
Run Time to execute the batch/ batch group	Yes	Yes	Yes	Yes	Yes
Days of the week you want to execute the batch/batch group. You can select multiple days.			Yes	Yes	Yes
Months of the Year you want to execute the batch/batch group. You can select multiple months.				Yes	Yes
Day of the Month to execute batch/batch group				Yes	Yes
First Months of the Year to calculate the year beginning and each quarter beginning.					Yes
Select Quarters to execute batch/batch group You can select multiple quarters.					Yes
Days of Quarter - Select the days to execute the batch/batch group. You can select first day, mid day, last day, First N days, or last N days					Yes

Table 7-2 (Cont.) Scheduling Options

Details	Once	Daily	Weekly	Monthly	Quarter
No. of Days - If you select first N days or last N days, select the number of days to execute the batch/batch group at the beginning or end of the selected quarter					Yes

5. **Exclude Tasks** to add/remove tasks from the execution list.
6. **Hold Tasks** to pause/release tasks during execution.
7. Click **Edit Dynamic Parameters** to modify the dynamic parameters.
8. Use the following filters to dynamically export only the relevant records:
   - Additional Filter
   - Placeholder Filter

   Set the filters in the following format:

   DATA_TABLE.AS_OF_DATE = $FICMISDATE$ AND DATA_TABLE.EXECUTION_ID = $BATCHRUNID$

   Where:

   - DATA_TABLE: Data table from which to export relevant record
   - AS_OF_DATE: MIS Date
   - EXECUTION_ID: Execution ID

   Example: FSI_ALM_CASHFLOW_OUTPUT_HIST.AS_OF_DATE = $FICMISDATE$ AND FSI_ALM_CASHFLOW_OUTPUT_HIST.EXECUTION_ID = $BATCHRUNID$
9. Click **Schedule** to add the new schedule for execution.

   You can set pre-conditions to process batch groups. When a batch group has an associated pre-condition, the execution schedule will not be considered for processing.
10. To manage schedules associated with a specific batch:
    a. In the **Select Batch** page, select **Batch** and select the **Batch Name** to view the associated schedules.
    b. Click **View Schedule** to access the list of all the schedules associated with the batch.

       You can perform the following tasks:

       - Click **Edit** to modify the schedule.
       - Click **Pause** and enter the **Start Date** and **End Date** to pause the schedule from execution. Click **Add** to apply the pause.
         To remove the pause, click **Delete** next to the specific pause.

7.1.6.5 Re-run Batch/Batch Group

Re-running a batch/batch group facilitates you to run the batch/batch group irrespective of the previous execution state.

When you re-run a batch/batch group that has been previously executed, a new Run ID is generated, and the batch/batch group is executed as if it were a new run.

To re-run a batch::

1. Click **Schedule Batch** from the Header panel.
2. In the **Schedule Batch** page, select the **Re-run** tab.
3. Select **Batch/Batch Group**.
4. Select the **Batch or Batch group Name** you want to re-run.
5. Select the **Batch Run ID**.
6. Click **Re-run**.

7.1.6.6 Re-start Batch/Batch Group

Re-start a batch/batch group that has not executed successfully or has been explicitly interrupted, canceled, or put on hold during the execution process.

Restarting a batch/batch group enables you to continue execution directly from the point of interruption or failure, allowing you to complete executing the remaining tasks.

> **Note:**
>
> Before restarting a batch/batch group, ensure to provide the complete cleanup URL and also to enable invoking the cleanup URL before restarting the execution.

To re-start a batch/batch group:

1. Click **Schedule Batch** from the Header panel.
2. From the **Schedule Batch** page, select the **Re-start** tab.
3. Select **Batch/Batch Group**.
4. Select the **Batch or Batch group** you want to schedule daily from the drop-down list.
5. Select the **Batch Run ID**.
6. Click **Re-start**.

7.1.7 Monitor Batch/Batch Group

Using Monitor Batch/Batch Group, you can view the status of executed batches/batch groups, along with the tasks details.

Monitoring enables users to track and identify issues at regular intervals, ensuring smoother batch execution. Both a visual representation and a tabular view of the status of each task in the batch are available.

To monitor a batch/batch group:

1. Click **Monitor Batch** from the Header panel.
2. Select the **Batch/Batch Group** and the **Batch/Batch Group Name** to monitor the execution.
3. **Set Refresh Frequency Time Interval and duration** in seconds.

   By default, the refresh interval is set to **5 seconds** and duration is set to **5 minutes**. This indicates that the monitor progress will be refreshed every 5 seconds for the next 5 minutes.

   The refresh interval ranges between 5 to 60 seconds and the duration ranges between 5 to 180 seconds.

4. Select the **MISDATE** to view the list of Batch Run IDs executed on a specific date.
5. Select the **Batch Run ID** you want to monitor.
6. Click **Start Monitor** to view the results in **Visualization** and **List View** tabs.

   The **Visualization** tab displays execution status graphically, while the **List View** tab provides the details in a tabular form, including:

   - **Status**: Task execution status - **Not-Started**, **On-going**, **Aborted**, **Successful**, **Failed**, **Interrupted**, **Excluded** and **Undefined**.

     > **Note:**
     >
     > When the task execution status is **Aborted**, the batch execution will still be **On-going**. The task status will be set to **Ongoing**, when it is triggered again.

   - **Start Time**: Task execution start time.
   - **End Time**: Task execution end time.
   - **Task Details**: Mouse-over the task to display its status and details.
7. At any point, select **Stop Monitor**, to stop monitoring.

   You can download the task execution summary in PDF or Excel, with or without the task logs, from the **Monitor Task** page.

   > **Note:**
   >
   > You can download the task execution summary only if the **BATCH_OPER** role is mapped to the **LOGVIEW** function.

8. (Optional). To rerun, restart, or interrupt execution, click **Actions** and select the required option.

   You can also reset the search criteria using **Actions**.
9. (Optional). Click **View Execution Parameters** adjacent to a batch/batch group, to access the list of tasks and task parameters such as **Runskey ID**, **Misdate**, associated with that batch/batch group.

7.2 Object Migration

Object Migration is the process to define, export and import objects across environments (prod and non-prod)/instances. This feature also facilitates to migrate within the same setup or different setups.

Objects refer to the various metadata definitions defined for various domains. You may want to migrate objects for several reasons such as manage global deployments on multiple environments or to create multiple environments so that you can separate the development, testing, and production processes.

For example, you can use the object migration feature to define PMF process object such as balance computation on your testing environment. After successful testing, you can use this feature to export the object to production/non-production environment.

You can migrate the following object types:

- **Schedule** - Schedule provides the instruction to schedule the execution of defined processes. When a schedule is migrated, the associated batch is also migrated.
- **Batch** - Batch is a group of jobs. When a batch is migrated, the batch and the associated pipeline information are also migrated. Note that the dependent objects used in the batch are not exported. All the objects used in the batch must be present in the target environment before the batch definition is imported.
- **Batch_Group** - A set of individual batches are consolidated to form a single Batch_Group. When we migrate a Batch_Group all the batches, tasks and pipeline information associated with that Batch_Group are also migrated.
- **Pipeline** - A pipeline is an embedded data processing engine that runs inside the application to filter, transform, and migrate data on-the-fly. Pipelines are a set of data processing elements called widgets connected in series, where the output of one widget is the input to the next element.
- **Threshold** - The threshold limit associated with set variables values for scenarios in FCCM Cloud Service. These threshold values are set when scenarios are created or installed and can be changed, if required.
- **Job** - Jobs provide set of instructions to execute Workflow Pipelines, based on the set threshold values.
- **Roles** - Roles are used to map functions to a defined set of groups to ensure user access system security.
- **Groups** - Groups are used to map Roles. Specific User Groups can perform only set of functions associated with that group.
- **CM_ADMIN** - The CM_ADMIN object type refers to all the case management related admin screens. Under this object type, you can export case management related admin metadata and settings for Business Domain, Case Actions/Statuses, Case Priority, Case Rules, Case System Parameters, Case Types, Jurisdictions and Security Mapping.

> **Note:**
>
> System can successfully import any object if both Code/Name do not exist in the target. If either code or name of the object being migrated is already available in target, import will fail.
> Even if overwrite option is selected, object will only be overwritten in target if both object code/name matches in target environment.
>
> For example, if an interest rate curve is being migrated, and either code or name is already available in target environment, import will fail.

7.2.1 Migration Object Types

You can create Object Export and Import definitions for the following object types using Object Export/Import feature.

The Migration object types are categorized as follows:

Asset Liability Management

- Standardized_IRRBB_Shock
- Static_deterministic_process

- Time_bucket
- Dynamic_deterministic_process
- Forecast_balances
- Multi_dimensional_balance_sheet
- Pricing_margin
- Product_characteristics
- Behaviour_pattern_rule
- Discount_methods
- Forecast_rates
- Prepayment_model
- Prepayment_rules
- Transferring_Price_Rules

Cash Flow Edits

- Cash_flow_edits_rule
- Cash_flow_edits

Cash Flow Engine

- Cashflow_Process

Common Objects

- Batch

> **Note:**
>
> Ensure to have BATCH_SUMM, BATCH_VIEW and BATCH_ADD riles to view, export and import batches.

- Batch_group

> **Note:**
>
> Ensure to have BATCH_SUMM, BATCH_VIEW and BATCH_ADD riles to view, export and import batches.

- Currency
- Datamodel_extension_dimension
- Data_file_specification
- Dimensions

> **Note:**
>
> Dimension definitions should be migrated before migrating the dependent object definitions. The source and the target dimension of the dependent objects should be the same.

- Expressions
- Filters
- Folder
- Hierarchy

> **Note:**
>
> Dimension definitions should be migrated before migrating the Hierarchy associated with it. The Dimension should be the same in both source and target environments.

- Holiday_calendar
- Job
- Pipeline
- Schedule

> **Note:**
>
> Ensure to have BATCH_SUMM, BATCH_VIEW and BATCH_ADD riles to view, export and import batches.

- Slowly Changing Dimensions

Data Maintenance Interface (DMI)

- Excel Upload
- Data Entry
- Data Exporter

> **Note:**
>
> Ensure that the definitions are in **Approved** status before migrating.

Funds Transfer Pricing

- Add-on Rate Rule
- Alternate_Rate_Output_Mapping
- Replicating Portfolio
- Standard_Process

Identity Management

- **Groups** - For more information, refer to Groups Summary in Admin Console.
- **Roles** - For more information, refer to Roles Summary in Admin Console

Patterns

- Behaviour_pattern
- Payment_pattern
- Reprice_pattern

Profitability Management

- Allocation Model
- Lookup Table
- Allocation Specification
- Static_Table

Profitability Analytics

- Financial Element Mapping
- Segmentation Mapping
- Line Item Display Order
- Geography Mapping

Rate Management

- Interest Rates
- Economic_indicator
- Volatility_surface

7.2.2 Accessing Object Export and Object Import Features

Using the Object Export and Import features, you can create Export and Import Object definitions.

Business Objects - To access Object Export and Import feature for Business Objects: From the left navigation pane in the PBSM applications console, click **Operations and Processes > Object Administration** and:

- To access Object Export feature, click **Export Object**.
- To access Object Import feature, click **Import Object**.

Identity Management Objects - To access Object Export and Import feature for Identity Management Objects: From the Admin Console, click **Identity Management** and

- To access Object Export feature, click **Object Migration (Export)** tile.
- To access Object Import feature, click **Object Migration (Import)** tile.

7.2.3 Export Object

Object Export Definition is a collection of objects that can be exported across environments.

You can view the list of object export definitions that are already created in the **Object Export Summary**. You can also view the following details about each object definition.

- **Name** - The unique name assigned to the collection when the export definition was created.
- **Object Migration Status** - The export status of a specific object definition.
  - **Success** - Indicates that the export is completed successfully.
  - **Failed** - Indicates that the export was not successful. You can reintiate the migration of the specific object definition.
  - **Saved** - Indicates that the object definition is created successfully and is yet to be exported.
  - **In Progress** -Indicates that the export is in progress. Once the export is complete, the status will change to Success/Failed.
- **Last Modified By** - The ID of the Last Modified by user who has modified the definition. On mouse over, the Last Modified Time and Date are displayed.

To filter the list and view specific Object Definition, use one of the following search options:

- To search for a specific Export Object Definition, type the first few letters of the export definition that you want to search in the Search Box and click **Search**. The search results display the names that consist of your search string in the list of available definitions.
- Enter the number of records to be viewed in a single page, in the **Records** box, at the bottom of the page. You can increase or decrease the number of entries that are displayed using the up and down arrows.
- You can navigate between pages in the **View** bar, use the navigation buttons present at the bottom of the page.

7.2.3.1 Creating Export Definitions

You can create export Meta data objects using the System Configuration tab in Admin Console.

For more information about the supported object types, refer to Migration Object Types. Refer to the following steps, to create a migration export object.

1. Click **Add** in the **Object Export Summary** Page to view the **Migration Definition** page.
2. Enter the following details, in the **Migration Definition** page.
   - **Migration Name**: Enter the code of the export of objects to be migrated definition. This is a unique identifier.
   - **File Name**: The system auto-creates the file name of the objects that can be used to export the definition in the following format:
     - **For Business Objects**: Migration Name_BO_Time Stamp (MMDDYYY HHMMSS)
     - **For Identity Objects:** Migration Name_IDM_Time Stamp (MMDDYYY HHMMYY)
3. Click **Apply** to save the details and view the **Object Selection** Page.
4. Click **Add** to include Migration objects to the definition.

5. select the required **Object Type** from the Object Types drop-down list.
6. Select the objects to be added to the Migrate Definition and click **Save**, to create a new migration object.

   A confirmation message is displayed, when the definition is saved successfully. The new migration definition is listed in the Object Export Summary Page and the status is set to **Saved**.

   You can also click **Export**, to export the object.

7.2.3.2 Editing Export Object Definitions

You can edit the Export Object definitions that are not exported and their status is **Saved** or **Failed**.

If the definitions is already exported and the status is set to **Success**, you cannot edit that definition.

To edit an Export Object definition, follow these steps.

1. In the Object Export Summary page, highlight the definition and click **Menu**, and select **Edit**.

   The **Object Selection** page is displayed.
2. Modify the following details, if required, and click **Save** to changes.
   - Select the required **Object Type** from the Object Types drop-down list.
   - Select the objects to be added to/deleted from the definition.
3. After adding/deleting all the required objects, click **Save**.

   The Export definition is saved successfully and a confirmation message is displayed. The new definition is listed in the Object Export Summary page and the status is set to **Saved**.
4. If you want to Save and Export the Definition, click **Export**.

7.2.3.3 Exporting Object Definition

After creating the object definitions, you can export them for migrating between environments, using Object Migration (Export) feature.

You can export object definitions in **Saved** or **Failed** state from the object Summary page.Refer to the following steps, to export definitions.

1. In the Object Summary Page, highlight the migration definition and click **Menu**.
2. Select **Export** from the menu.

   After you export, the following Export status types are displayed:
   - **Success** - Indicates that the definition is exported successfully.
   - **Failed** - Indicates that the definition was not exported. Right-click and select **Export**, to reintiate the export process.
   - **In Progress** -Indicates that the export is in progress. Once the export is completed, the status will change to Success/Failed.

7.2.3.4 Viewing Export Object Details

Using the **View** option, you can view the list of objects and the dependancies added to an Object definition. You can also view the object details.

1. Highlight the Export definition and click **Menu**.
2. Select **View**. The object types, list of objects and the dependent objects added to the export definition are listed in the left pane.
3. Double-click an object to view the object attribute details.

7.2.3.5 View Object Definition Export Log Details

View log facilitates you to view the export log information of the object definition with the migration status.

> **Note:**
>
> The View Log page for an object definition with status **Saved** will be empty.

To view the log details of object with migration status **Success** or **Failed**, follow these steps.

1. In the Object Export Summary page, mouseover the object definition and click **Menu**.
2. Select **View Log** from the drop-down menu, to access the **View Log** page.

   The migration status of the objects with following details is displayed.

   - **Object Migration ID** - The migration ID associated with the definition.
   - **Object Type** - The object type of the definition.
   - **Object Code** - The object code associated with the definition.
   - **Creation Date** - The date of creation of the definition.
   - **Created By** - The User Id of the User who created the definition.
   - **Status** - The migration status of the definition.
     - **Success** - Indicates that the export migration was completed successfully.
     - **Failed** - Indicates that the export migration did not complete.
     - **Export Status Message** - The complete export status message.

     > **Note:**
     >
     > Export status message currently not supported for GL reconcilation.

3. Click **OK** to close the page, after viewing the log details.

7.2.3.6 Downloading Dump File

You can download the export dump file for exported definitions to a local directory, using Download Dump file option.

The downloaded export dump file can be used to upload objects to a different environment.

> **Note:**
>
> This option is enabled, only if the definition is exported successfully and the **Migration Status** is set to **Success**.

To download a export dump file, refer to the following procedure.

1. Mouseover a migrated object and select **Menu**.
2. Select **Download Dump File** from the drop-down menu, to download the associated dump file and store it to the local directory.

7.2.3.7 Deleting Export Object Definition

You can delete only definitions that are set to **Saved** or **Failed** status.

To delete a export object definition, follow these steps.

1. In the Object Export Summary page, mouseover the definition to be deleted and click **Delete** .
2. Click **Yes** to confirm and proceed with the deletion.

7.2.4 Import Object

Object Import Definitions is a collection of objects that can be imported across environments. .

You can view the list of Object Import Definitions that are already created in the **Object Import Summary**. You can also view the following details about each Object definition.

- **Name** - The unique name assigned to the collection when the Import definition was created.
- **Object Migration Status** - The import status of a specific Object definition.
  - **Success** - Indicates that the import is completed successfully.
  - **Failed** - Indicates that the import was not successful. You can reintiate the migration of theSpecific Object Definition.
  - **Saved** - Indicates that the Object Definition is created successfully and is yet to be imported.
  - **In Progress** -Indicates that the import is in progress. Once the import is complete, the status will change to Success/Failed.
- **Last Modified By** - The ID of the Last Modified by user who has modified the definition. On mouse over, the Last Modified Time and Date are displayed.

To filter the list and view Specific Object Definition, use one of the following search options.

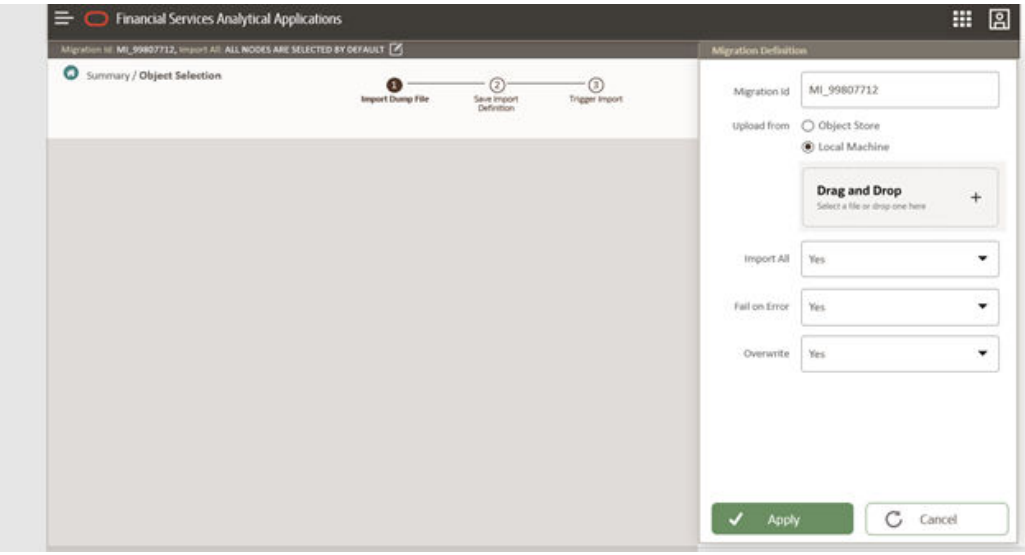
- To search for a Specific Import Object definition, type the first few letters of the Import definition that you want to search in the Search box and click **Search**. The search results display the names that consist of your search string in the list of available definitions.
- Enter the number of records to be viewed in a single page, in the **Records** box, at the bottom of the page. You can increase or decrease the number of entries that are displayed using the up and down arrows.
- You can navigate between pages in the **View** bar, use the navigation buttons present at the bottom of the page.

7.2.4.1 Creating Object Import Definitions

You can create Import definitions and add Import Objects using the Object Migration (Import) feature.

1. Click **Add** in the **Object Import Summary** page to view the **Migration Definition** page.
2. Enter the following details, in the **Migration Definition** page.
   - **ID** - The Unique Name for the New Import Object definition.
     The migration ID should not contain any space and exceed 30 characters. Underscore (_) and hyphen (-) are allowed.
   - **Dump File** -Select the .DMP file to be uploaded for creating the Import definition.

Figure 7-1 Importing Dump File



You can select the dump file using one of the following options:

- Select the option **Object Store**, to select the dump file (.DMP file) from the list of dump files available in the same environment.
- Select the option **Local Machine** and click **Drag and Drop**, to add a .DMP file, from the local directory. You can only Add Dump file that are downloaded using Download Dump file option.

> **Note:**
>
> - Uploading a dmp file either created or edited locally will generate an error.
> - You can rename the .DMP file, if required. Ensure to follow the naming convention. For more information, refer toFile Naming Conventions for Migrate Objects.

- **Import All** - Select an option to import the objects that are associated with the selected object type. You can edit this option if required, in the **Object Selection** page.
  - **Yes** - Imports all the objects that are included in the dump file.
  - **No** - Imports only those objects that you can select in the **Object Selection** page.
- **Fail on Error** - Select an option to proceed with the definition creation in case of an error. You can edit this option if required, in the **Object Selection** page.
  - **Yes** - Stops the creation process, if error is generated.
  - **No** - Creates the import definition even when error is generated. The object with the error is not included in the object creation.
- **Overwrite** - Select an option to overwrite the existing definition. You can edit this option if required, in the **Object Selection** page.
  - **Yes** - Replaces the existing Import definition.
  - **No** - Creates a new Import definition.

3. Click **Apply** to save the details.

   The Import definition is created and **Object Selection** page is displayed. You can add objects to this import definition.
4. Click **Add** to include objects to the definition.
5. Select the required **Object Type** from the Object Types drop-down list.

   Objects that are defined in the environment with respect to the selected object type are are listed. For example, if Schedule is selected as the Object Type, all the Objects defined with respect to Schedule, in the environment are only listed.

   You can also enter the first few letters of the object name in the Search Field, to narrow down the search.
6. Click the check box adjacent to each object, to include the objects associated with a specific object type, to the import definition.
7. Repeat steps 4, 5 and 6, to include objects associated with various object types.
8. After adding all the required objects, click **Save**.

   The Import definition is saved successfully and a confirmation message is displayed. The new definition is listed in the Object Import Summary page and the status is set to **Saved**.
9. If you want to Save and Export the Definition, click **Import**.

7.2.4.2 Editing Import Definitions

You can edit the Import definitions that are not imported and their status is **Saved** or **Failed**.

If the definitions is already imported and the status is set to **Success**, you cannot edit that definition.

To edit an Import definition, follow these steps.

1. In the Object Import Summary page, highlight the definition and click **Menu**, and select **Edit**.

   The **Object Selection** page is displayed.
2. Edit the following details, if required, and click **Save** to changes.
   - Select the required **Object Type** from the Object Types drop-down list.

- Select the objects to be added to/deleted from the definition.

3. After adding/deleting all the required objects, click **Save**.

   The import definition is saved successfully and a confirmation message is displayed. The new definition is listed in the Object Import Summary page and the status is set to **Saved**.

4. Click **Save** to update the changes.
5. If you want to Save and import the Definition, click **Import**.

7.2.4.3 Importing Object Definitions

After creating the object definitions, you can export them for migrating between environments, using Object Migration (Import) feature.

You can import object definitions in **Edited** state from the object Summary page. Refer to the following steps to import Object definitions.

> **Note:**
>
> Comments and Documents attached to an Issue/Action will not be migrated.

1. In the Object Summary Page, mouse-over the definition and click **Menu**.
2. Select **Import** from the drop-down menu.

   After you import, the following Import status types are displayed:

   - **Success** - Indicates that the definition is imported successfully.
   - **Failed** - Indicates that the definition was not imported. Right-click and select **Import**, to restart the import process.

     > **Note:**
     >
     > If the Process code is not unique and if the **Overwrite** flag is set as **No** while importing the object definition, the migration request fails and when you view the logs, the following error is displayed "**Process code is not unique, Migration Request Failed**"

   - **In Progress** -Indicates that the import is in progress. Once the import is completed, the status will change to Success/Failed.

7.2.4.4 Viewing Import Object Details

Using the **View** option, you can view the list of objects and the dependancies added to an Object definition. You can also view the object details.

1. Mouseover the migration definition and click **Menu**.
2. Select **View**. The object types, list of objects and the dependent objects added to the export definition are listed in the left pane.
3. Double-click an object to view the object attribute details.

7.2.4.5 Viewing Object Import Log Details

View log facilitates you to view the log information of the object definition with the migration status.

> **Note:**
>
> The View Log page for a definition with migration status **Saved** will be empty.

To view the log details of definition with migration status **Success** or **Failed**, follow these steps.

1. In the Object Import Summary window, mouseover the migration definition and click **Menu**.
2. Select **View Log** from the drop-down menu, to access the **View Log** page.

   The migration status with following details is displayed.

   - **Object Migration ID** - The migration ID associated with the import object.
   - **Object Type** - The object type of the import object.
   - **Object Code** - The object code associated with the import object.
   - **Creation Date** - The date of creation of the import object.
   - **Created By** - The User Id of the User who created the import object.
   - **Status** - The import status of the specific object.
     - **Success** - Indicates that the specific object was imported successfully.
     - **Failed** - Indicates that the specific object was not imported.
   - **Import Status Message** - The complete import status message.

     > **Note:**
     >
     > Import status message currently not supported for GL reconcilation.

3. Click **OK** to close the page, after viewing the log details.

7.2.4.6 Deleting Import Definition

You can delete only definitions that are set to **Saved** or **Failed** status.

To delete an import definition, follow these steps.

1. In the Object Import Summary page, mouseover the definition to be deleted and click **Delete** .
2. Click **Yes** to confirm and proceed with the deletion.

7.3 Changing Object Ownership

Access Type for most objects can be defined as ‘Read Only’ and ‘Read/Write’. When it is defined as ‘Read Only’ the user who created owns it i.e., another user will be able to only view it. For any reason if the owner of object is not available then no one else will be able to modify it.

This functionality helps you to change the ownership of objects from one user to another user(s).

Changing the ownership of object is generally required when the users of the application move across different teams or leave the organization. In this case, the ownership of the objects created by a particular user remain on that user's name and they need to be transferred to different user to enable them to operate on them.

To change the ownership of objects, you must raise a Service Request with the Oracle Support Team with the following information. Oracle Support Team will coordinate with the Operations team to change the ownership.

- The existing username who created the object.
- The new username to which the ownership must be transferred.

8
Reports & Analytics

Profitability and Balance Sheet Planning Cloud Service (PBSM) Analytics User Guide describes the features and functions of PBSM's Analytics is intended for the use of Administrators, Analysts, Reporting Analysts, and Administrators.

Profitability Management Reports & Analytics: Oracle Analytics is a scalable and secure Oracle Cloud Service that provides a full set of capabilities to explore and perform collaborative analytics for you, your workgroup, and your enterprise.

8.1 Profitability Management Cloud Service Reports & Analytics

Profitability and Balance Sheet Planning Cloud Service (PBSM) Analytics User Guide describes the features and functions of PBSM's Analytics is intended for the use of Administrators, Analysts, Reporting Analysts, and Administrators.

Profitability and Balance Sheet Management (PBSM) Could Service utilizes the power of Oracle Analytics to generate the Business Intelligence Reports.

Oracle Analytics is a scalable and secure Oracle Cloud Service that provides a full set of capabilities to explore and perform collaborative analytics for you, your workgroup, and your enterprise.

With Oracle Analytics Cloud, you also get flexible Service Management capabilities, including fast setup, easy scaling and patching, and automated lifecycle management.

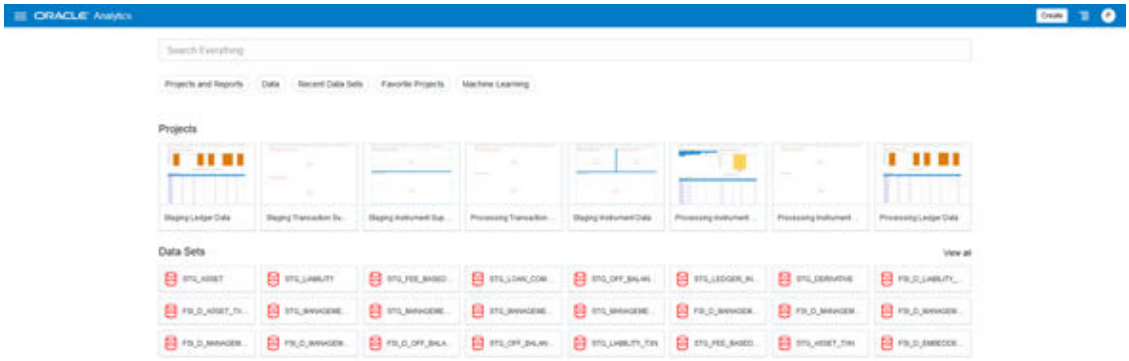
For more information, see the Oracle Analytics Cloud documentation.

8.1.1 Access Business Intelligence (BI) Reports

This section describes the steps to access the Business Intelligence (BI) Reports.

To access the Oracle Financial Services Profitability Management Cloud Service BI Reports, from the LHS Menu, select **Analytics**, and then select **Home Page**.

Figure 8-1 Analytics Home Page



8.1.2 SQL Query Browser

Data Sets are self-service Data Models that you build specifically for your Data Visualization and Analysis requirements.

A Data Set can be based on one Table, Spreadsheet, or a File. Alternatively, a Data Set can be a self-service Data Model that contains multiple Tables with relationships defined between the Tables.

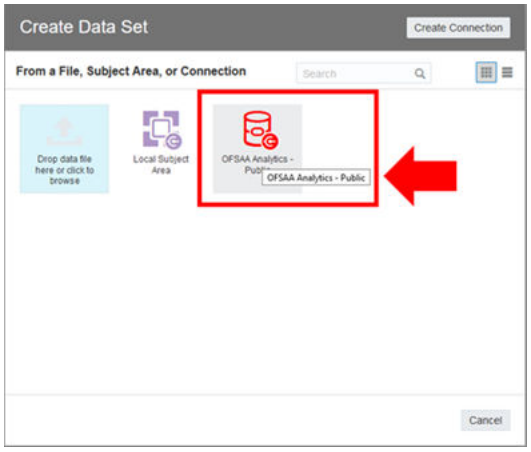
A Data Set contains Data Source Connection Information, Tables, the Columns you specify, and the Data Enrichments, and Transformations that you apply.

For more information, see Visualizing Data and Building Reports in Oracle Analytics Cloud.

To access the SQL Query Browser and prepare Data, follow these steps:

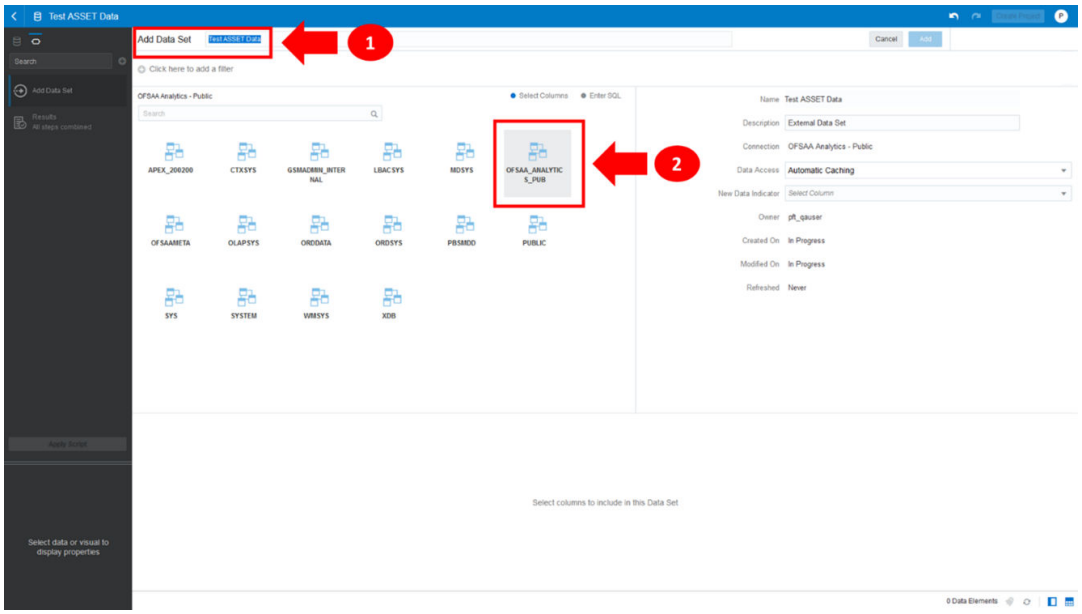
1. From the LHS Menu, select Analytics, and then select SQL Query Browser.
   The SQL Query Browser allows you to use an existing Database Connector named OFSAA Analytics – Public to interact with the underlying available Database Structures.

Figure 8-2 Create Data Set Screen



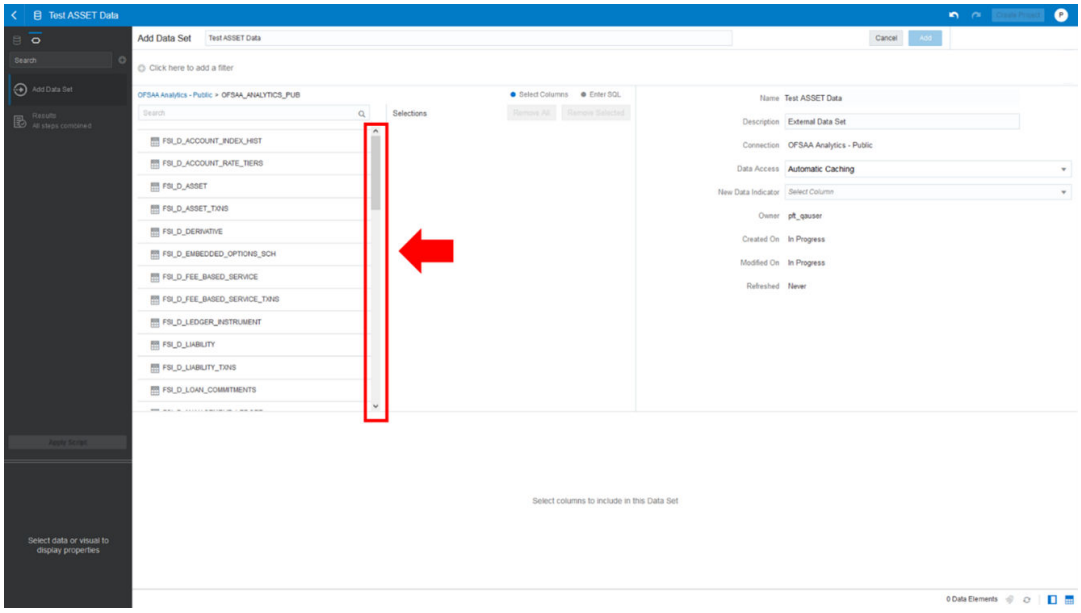
2. After selecting the Database Connector, you must select the Database Schema named OFSAA_ANALYTICS_PUB to proceed to the next step of Database Object Selection.

Figure 8-3 Add Data Set



3. Provide a meaningful name to the Data Set, which will be generated from this process and be used for the SQL Query Analysis.
4. You can search for a Database Object from the available options. You can either scroll down or search the Database Objects displayed in alphabetical order.

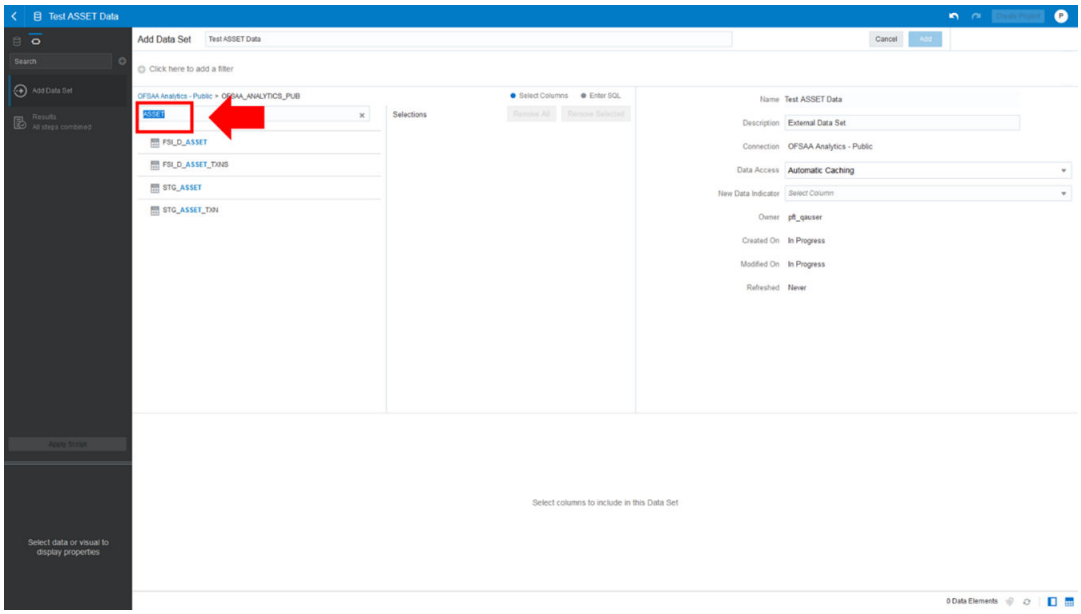
Figure 8-4 Add Data Set – Search from the List



Or

Type the Database Object Name to filter the list with Description.

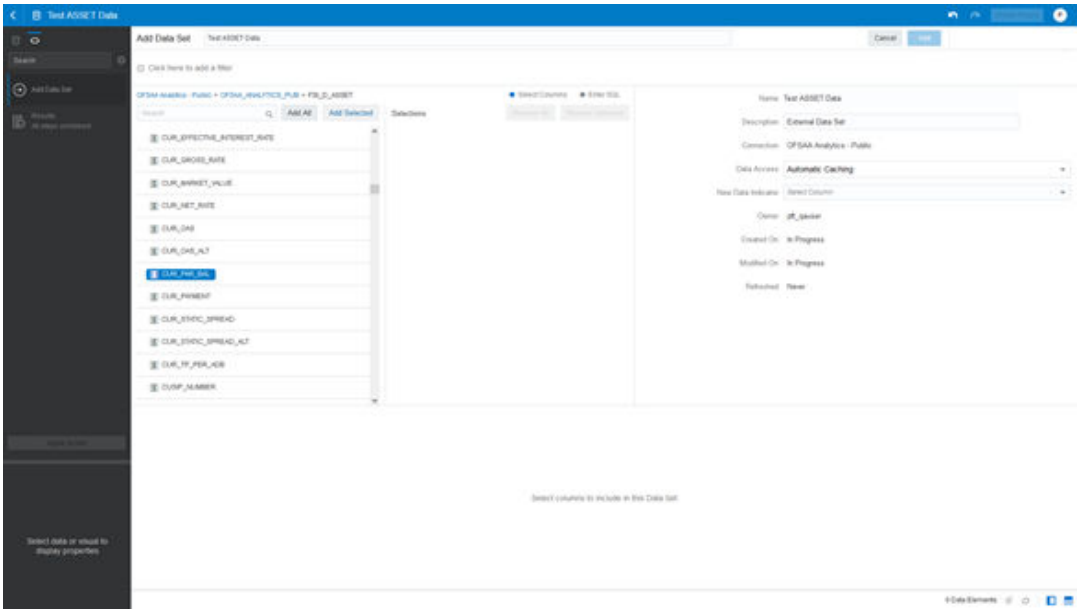
Figure 8-5 Add Data Set – Search by Name



After you select the Object that want, you can proceed to the next step.

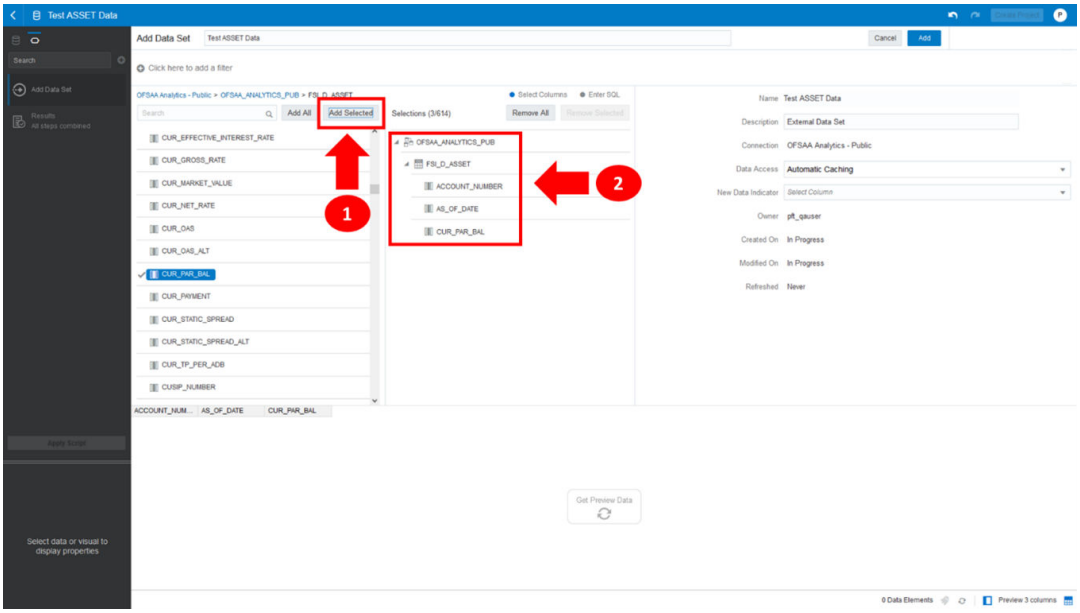
5. You search the Columns that are available for the selected Database Object by scrolling.

Figure 8-6 Add Data Set – Search Columns



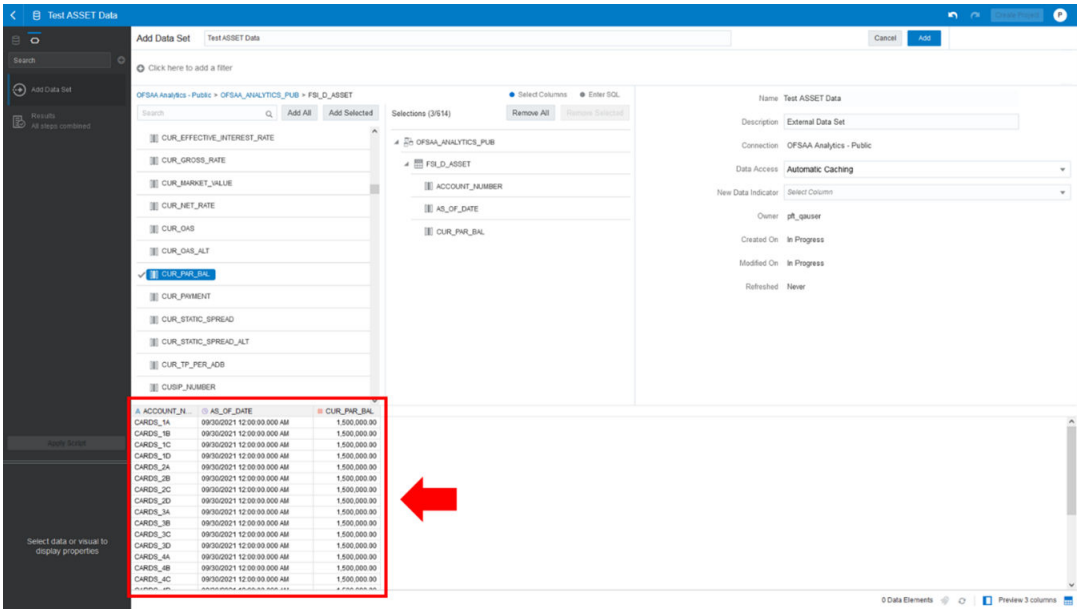
6. Add the Database Object Column as required.

Figure 8-7 Add Data Set – Adding the Database Object Column



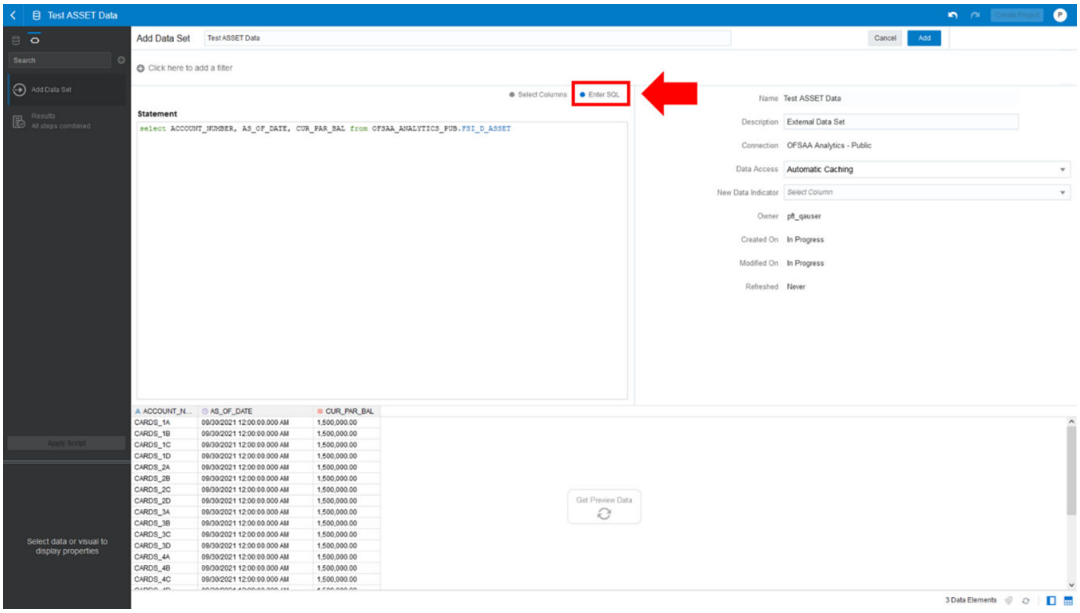
7. Click Get Preview Data to display the retrieved Data Results.

Figure 8-8 Data Results



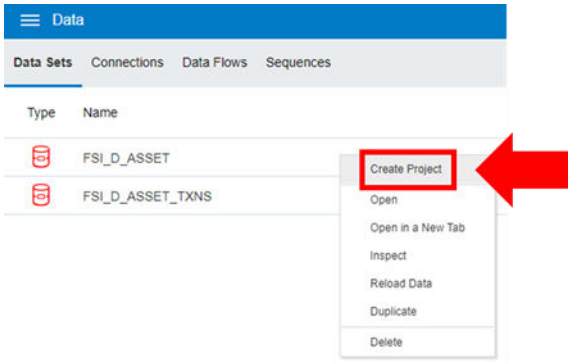
8. In addition, you can switch to the Enter SQL Pane Editor. You can change the auto-generated SQL Query at any time and click Get Preview Data to retrieve the results based on the modified SQL Query.

Figure 8-9 Data Results based on modified SQL Query



9. Click **Add** to save the SQL Data.
10. Click **Data** on the LHS Menu and click **Data Sets** to display the available Data Sets for usage.
11. Right-click on the Data Set name to display the options as shown:

Figure 8-10 Data Set Options



12. In the menu that is displayed, click **Create Project**.

8.1.3 Creating Adhoc Reports and Analysis

The Profitability and Balance Sheet Management Ad-hoc Analysis is provided inside a Shared Folder. Users can use this folder for saving any ad-hoc reports which need to be shared across respective teams. When any patch is applied these reports will not be replaced or purged.

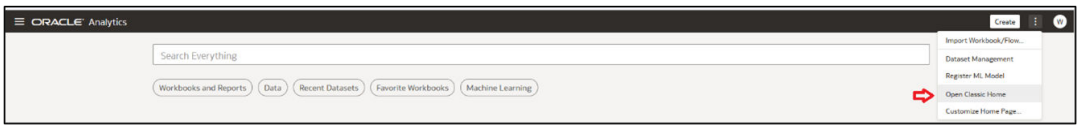
8.1.3.1 Amend Out-of-the-Box Reports

A user with DV Content Author privileges will have access to amend and save the out-of-the-box reports.

To amend and save the reports:

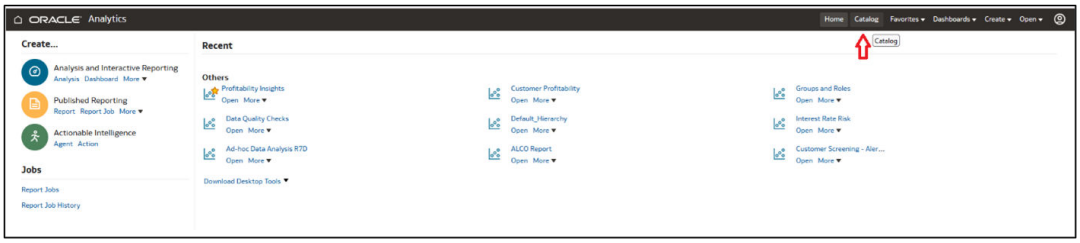
1. To open the ORACLE Analytics page, from the **Home Page**, select **Home Page**, and then from the **Page Menu** on the top-right corner, select **Open Classic Home**.
A new window will open with Classic Home.

Figure 8-11 Classic Home Page



2. Click **Catalog**.

Figure 8-12 Catalog



3. Navigate to **Shared Folders** and select the dashboard and subsequently the report from the available list that you want to edit and right click on your mouse. You will find the Copy option as indicated in the below illustration.

Figure 8-13 Copy Option

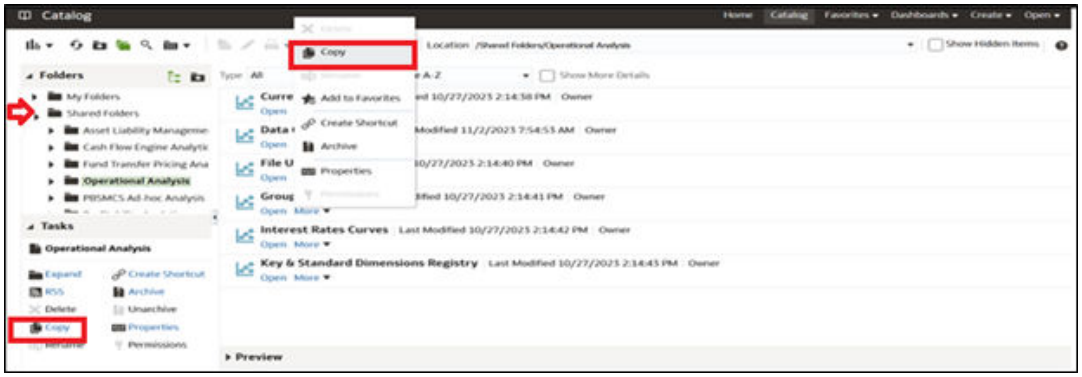
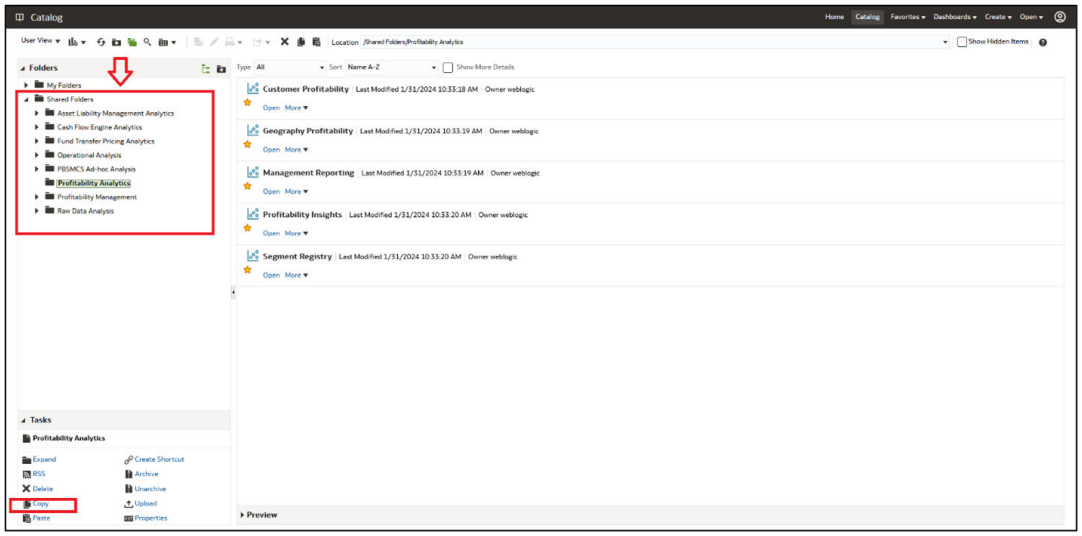
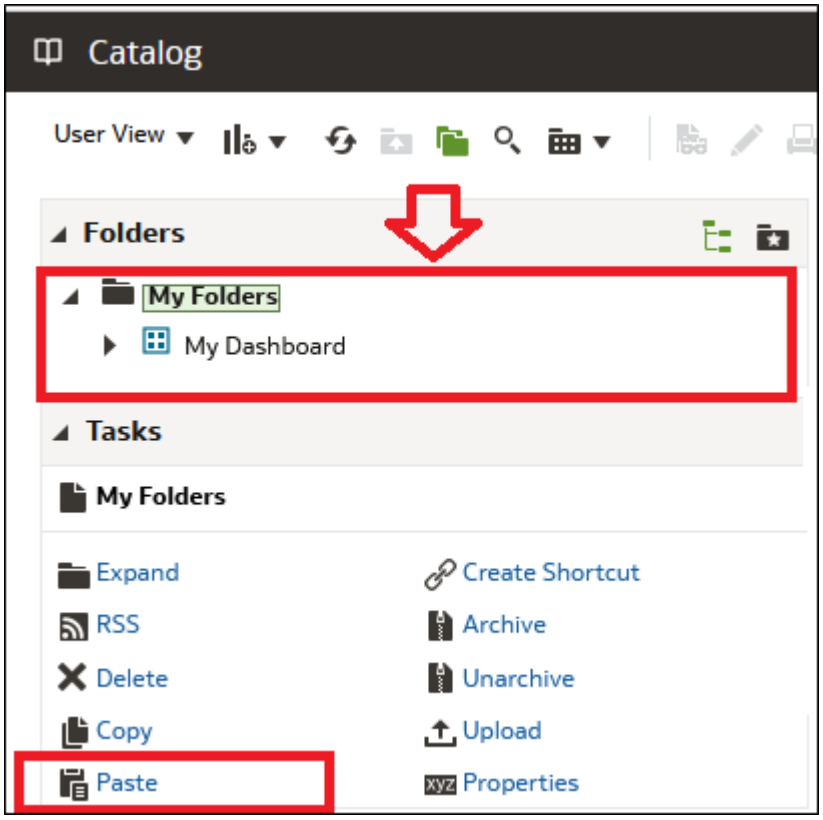


Figure 8-14 Folders



4. Navigate to **My Folders**.

Figure 8-15 My Folders

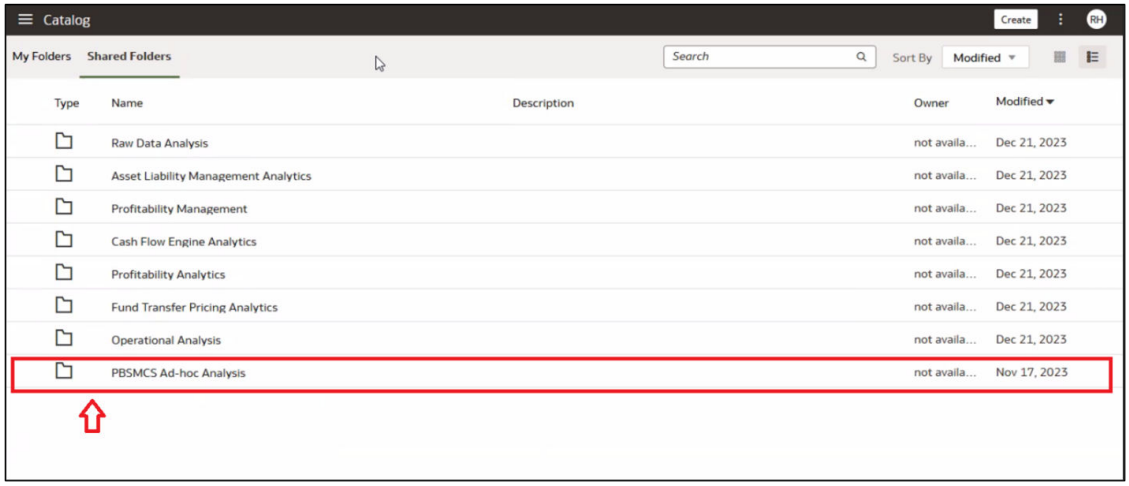


5. Paste the report.
You will be able to edit the Report which is saved inside My Folder.

8.1.3.2 Ad-hoc Analysis Folder

This Folder can be used by the customers to share the reports across the organization.

Figure 8-16 Ad-hoc Analysis folder



The out-of-the-box reports can be edited and saved inside Adhoc analysis folder. The reports inside these folders will not be updated or refreshed when any provisioning happens.

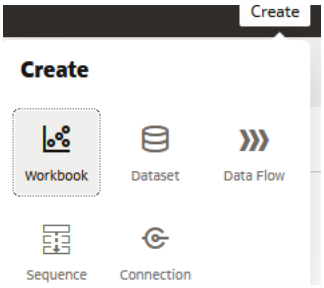
8.1.3.3 Working with Out-of-the-Box Subject Area

A user with DV Content Author credentials will have access to create new reports. The DV Consumer will have Read Only access.

To work with OOTB Subject Area:

1. To open the ORACLE Analytics page, from the **Home Page**, select **Home Page**.
2. Click the **Create** button and select **Workbook** as shown below.

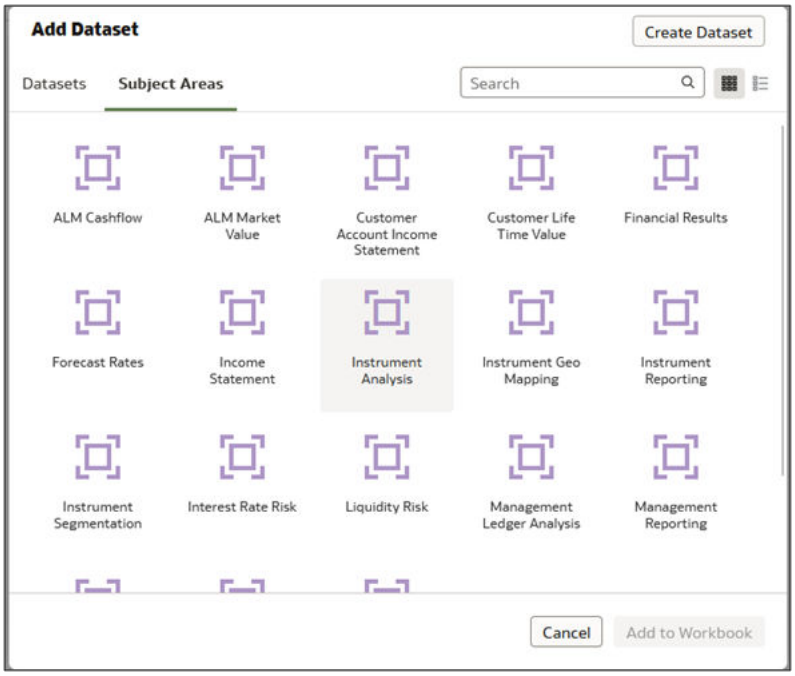
Figure 8-17 Create



This opens the Add Dataset window.

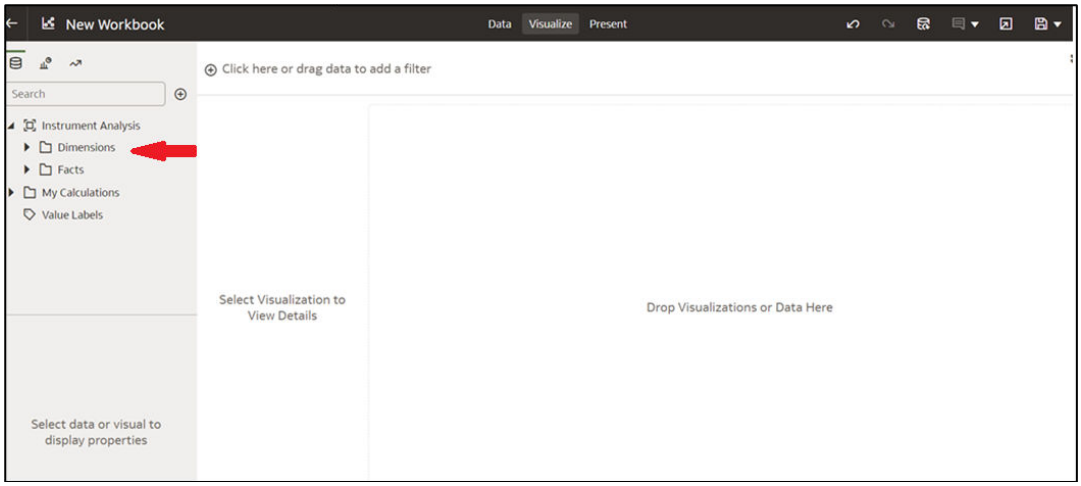
3. Select the **Subject Areas** tab. You will find all the relevant subject areas listed as follows.

Figure 8-18 Subject Areas



4. You can double click to select a particular Subject Areas and a new canvas will open up with the elements of the selected subject area.

Figure 8-19 New Workbook



5. Expand the **Dimensions** and **Facts** and drop the relevant items on to the canvas. By default the best visualization/ chart type for the given data is displayed.

8.1.4 Raw Data Analysis

To access the Raw Data Analysis Screen, from the LHS Menu, select Analytics, and then select Raw Data Analysis.

The following table lists the Raw Data Analysis Reports. You can select any report that you want.

Table 8-1 Raw Data Analysis Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Staging Instrument Data	Instrument	STG Staging	STG_ASSET STG_LIABILITY STG_DERIVATIVE STG_FEE_BASED_SERVICE STG_LOAN_COMMITMENTS STG_OFF_BALANCE_SHEET STG_LEDGER_INSTRUMENT	Stage Asset Instruments Stage Liability Instruments Stage Derivative Contracts Stage Fee Based and Other Services Stage Loan Commitments Stage Off Balance Sheet Contracts Stage Ledger Instrument	Assets Liabilities Derivative Contracts Fee Based Services Loan Commitments Off Balance Sheet Items Ledger - Instruments

Table 8-1 (Cont.) Raw Data Analysis Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Staging Instrument Supplementary Data	Instrument Supplementary	STG Staging	STG_ACCOUNT_INDEX_HIST STG_ACCOUNT_RATE_TIERS STG_EMBEDDED_OPTIONS_SCH STG_PAYMENT_SCHEDULE	Stage Account Index History Stage Account Rate Tiers Stage Embedded Options Schedule Stage Payment Schedule	Account Index History Account Rate Tiers Embedded Options Schedule Payment Schedule
Staging Ledger Data	Ledger	STG Staging	STG_MANAGEMENT_LEDGER STG_MANAGEMENT_LEDGER_01 STG_MANAGEMENT_LEDGER_02 STG_MANAGEMENT_LEDGER_03 STG_MANAGEMENT_LEDGER_04 STG_MANAGEMENT_LEDGER_05	Stage Management Ledger Stage Placeholder Management Ledger 01 Stage Placeholder Management Ledger 02 Stage Placeholder Management Ledger 03 Stage Placeholder Management Ledger 04 Stage Placeholder Management Ledger 05	Management Ledger Management Ledger 01 Management Ledger 02 Management Ledger 03 Management Ledger 04 Management Ledger 05
Staging Transaction Summary Data	Transaction Summary	STG Staging	STG_ASSET_TXN STG_LIABILITY_TXN STG_FEE_BASED_SERVICE_TXN STG_OFF_BALANCE_SHEET_TXN	Stage Asset Transaction Summary Stage Liability Transaction Summary Stage Fee Based and Other Services Transaction Summary Stage Off Balance Sheet Transaction Summary	Assets Transaction Summary Liabilities Transaction Summary Fee Based Services Transaction Summary Off Balance Sheet Transaction Summary

Table 8-1 (Cont.) Raw Data Analysis Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Processing Instrument Data	Instrument	FSI Processing	FSI_D_ASSET FSI_D_LIABILITY FSI_D_DERIVATIVE FSI_D_FEE_BASED_SERVICE FSI_D_LOAN_COMMITMENTS FSI_D_OFF_BALANCE_SHEET FSI_D_LEDGER_INSTRUMENT	Asset Instruments Liability Instruments Derivative Contracts Fee Based and Other Services Loan Commitments Off Balance Sheet Contracts Ledger Instrument	Assets Liabilities Derivative Contracts Fee Based Services Loan Commitments Off Balance Sheet Items Ledger Instruments
Processing Instrument Supplementary Data	Instrument Supplementary	FSI Processing	FSI_D_ACCOUNT_INDEX_HIST FSI_D_ACCOUNT_RATE_TIERS FSI_D_EMBEDDED_OPTIONS_SCH FSI_D_PAYMENT_SCHEDULE	Account Index History Account Rate Tiers Embedded Options Schedule Payment Schedule	Account Index History Account Rate Tiers Embedded Options Schedule Payment Schedule
Processing Ledger Data	Ledger	FSI Processing	FSI_D_MANAGEMENT_LEDGER FSI_D_MANAGEMENT_LEDGER_01 FSI_D_MANAGEMENT_LEDGER_02 FSI_D_MANAGEMENT_LEDGER_03 FSI_D_MANAGEMENT_LEDGER_04 FSI_D_MANAGEMENT_LEDGER_05	Management Ledger Placeholder Management Ledger 01 Placeholder Management Ledger 02 Placeholder Management Ledger 03 Placeholder Management Ledger 04 Placeholder Management Ledger 05	Management Ledger Management Ledger 01 Management Ledger 02 Management Ledger 03 Management Ledger 04 Management Ledger 05

Table 8-1 (Cont.) Raw Data Analysis Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Processing Transaction Summary Data	Transaction Summary	FSI Processing	FSI_D_ASSET_TXNS FSI_D_LIABILITY_TXNS FSI_D_FEE_BASED_SERVICE_TXNS FSI_D_OFF_BALANCE_SHEET_TXNS	Asset Transaction Summary Liability Transaction Summary Fee Based and Other Services Transaction Summary Off Balance Sheet Transaction Summary	Assets Transaction Summary Liabilities Transaction Summary Fee Based Services Transaction Summary Off Balance Sheet Transaction Summary

8.1.4.1 Staging Instrument Data

You can use this report to perform the analysis on the Staging Area Tables related to Instrument Data. The report contains specifically the following Staging Database Objects:

Table 8-2 Staging Instrument Data Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Staging Instrument Data	Instrument	STG-Staging	STG_ASSET STG_LIABILITY STG_DERIVATIVE STG_FEE_BASED_SERVICE STG_LOAN_COMMITMENTS STG_OFF_BALANCE_SHEET STG_LEDGER_INSTRUMENT	Stage Asset Instruments Stage Liability Instruments Stage Derivative Contracts Stage Fee Based and Other Services Stage Loan Commitments Stage Off Balance Sheet Contracts Stage Ledger Instrument	Assets Liabilities Derivative Contracts Fee Based Services Loan Commitments Off Balance Sheet Items Ledger - Instruments

8.1.4.1.1 Assets

The Assets Report provides the Analysis Capability on the Stage Asset Instrument Table.

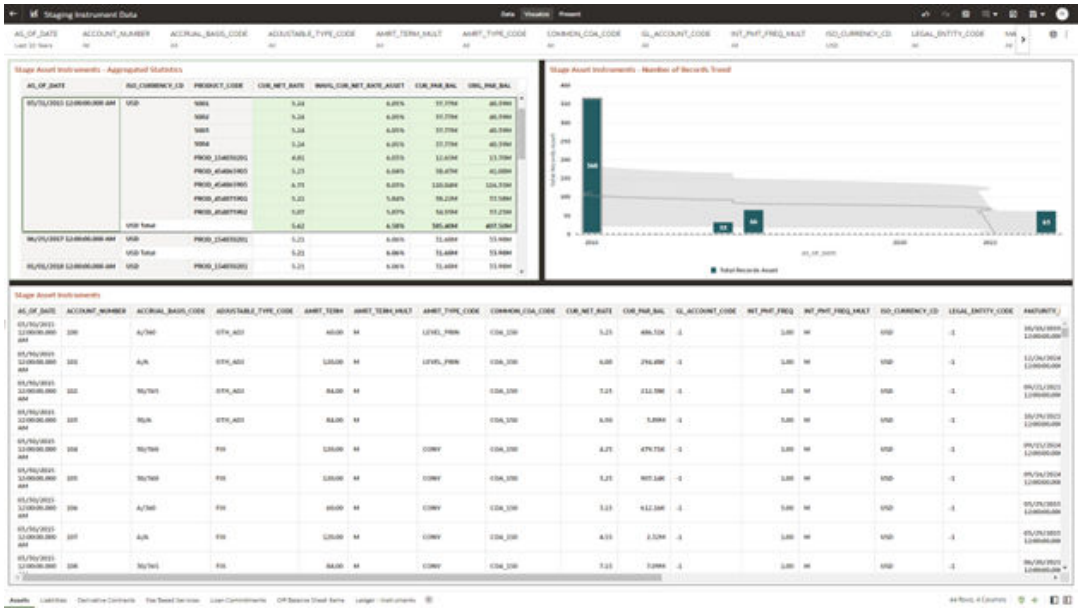
You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Asset Instruments - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_CODE.

  In addition, for CUR_NET_RATE, the Additional Balance Weighted Rate, WAVG_CUR_NET_RATE_ASSET, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Stage Asset Instruments - Number of Records Trend
  Total Records Asset aggregated by AS_OF_DATE.
- Stage Asset Instruments
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-20 Staging Instrument Data - Assets



8.1.4.1.2 Liabilities

The Liabilities Report provides the Analysis Capability on the Stage Liability Instrument Table.

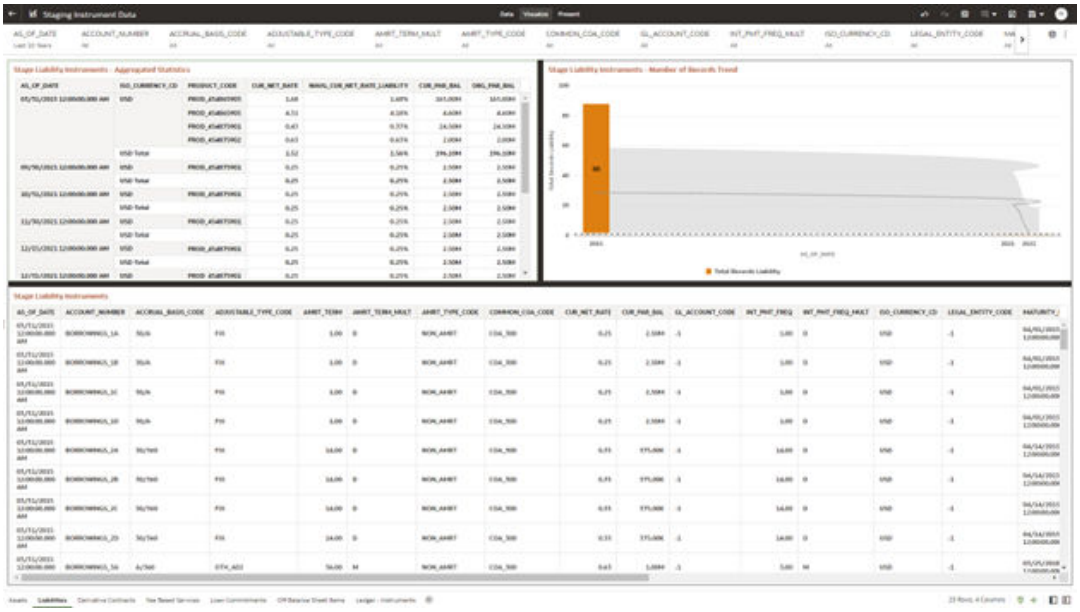
You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Liability Instruments - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_CODE.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_LIABILITY, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Stage Liability Instruments - Number of Records Trend
  Total Records Liability aggregated by AS_OF_DATE.
- Stage Liability Instruments
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-21 Staging Instrument Data - Liabilities



8.1.4.1.3 Derivative Contracts

The Derivative Contracts Report provides the Analysis Capability on the Stage Derivative Contracts Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

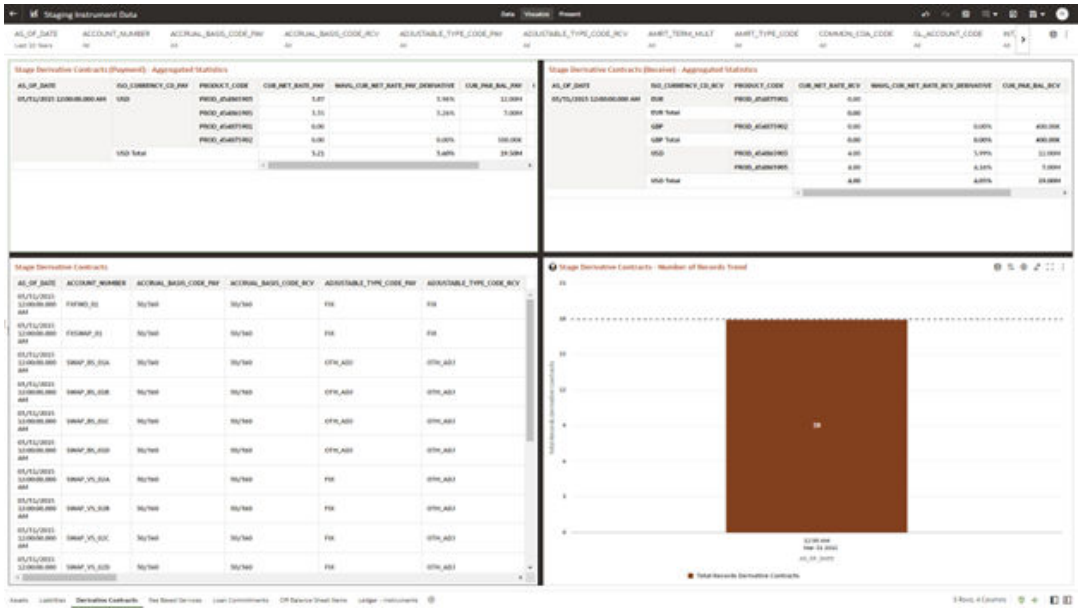
The report displays the underlying data according to the following Charts' logic:

- Stage Derivative Contracts (Payment) - Aggregated Statistics
  Aggregation for CUR_PAR_BAL_PAY (sum), ORG_PAR_BAL_PAY (sum) and CUR_NET_RATE_PAY (avg) by AS_OF_DATE, ISO_CURRENCY_CD_PAY and PRODUCT_CODE.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_PAY_DERIVATIVE, is calculated as the Weighted AVG by CUR_PAR_BAL_PAY.
- Stage Derivative Contracts (Receive) - Aggregated Statistics
  Aggregation for CUR_PAR_BAL_RCV (sum), ORG_PAR_BAL_RCV (sum) and CUR_NET_RATE_RCV (avg) by AS_OF_DATE, ISO_CURRENCY_CD_RCV and PRODUCT_CODE.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_RCV_DERIVATIVE, is calculated as the Weighted AVG by CUR_PAR_BAL_RCV.
- Stage Derivative Contracts - Number of Records Trend
  Total Records Derivative Contracts aggregated by AS_OF_DATE.
- Stage Derivative Contracts
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-22 Staging Instrument Data – Derivative Contracts



8.1.4.1.4 Fee Based Services

The Fee Based Services Report provides the Analysis Capability on the Stage Fee Based and Other Services Table.

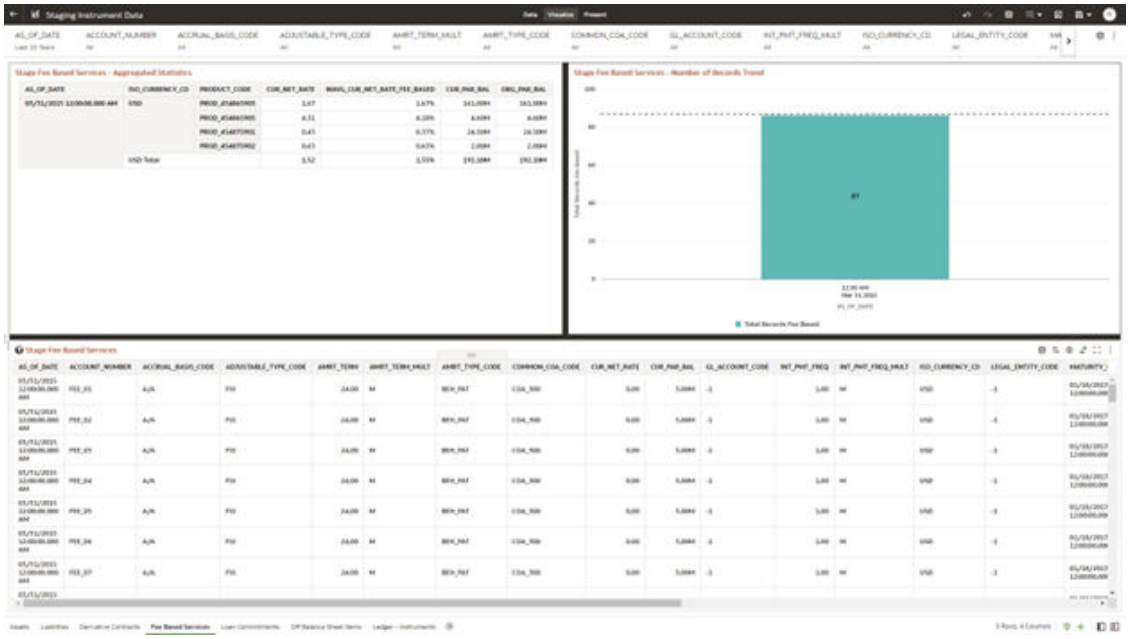
You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Fee Based Services - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_CODE.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_FEE_BASED, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Stage Fee Based Services - Number of Records Trend
  Total Records Fee Based aggregated by AS_OF_DATE.
- Stage Fee Based Services
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-23 Staging Instrument Data – Fee Based Services



8.1.4.1.5 Loan Commitments

The Loan Commitments Report provides the Analysis Capability on the Stage Loan Commitments Table.

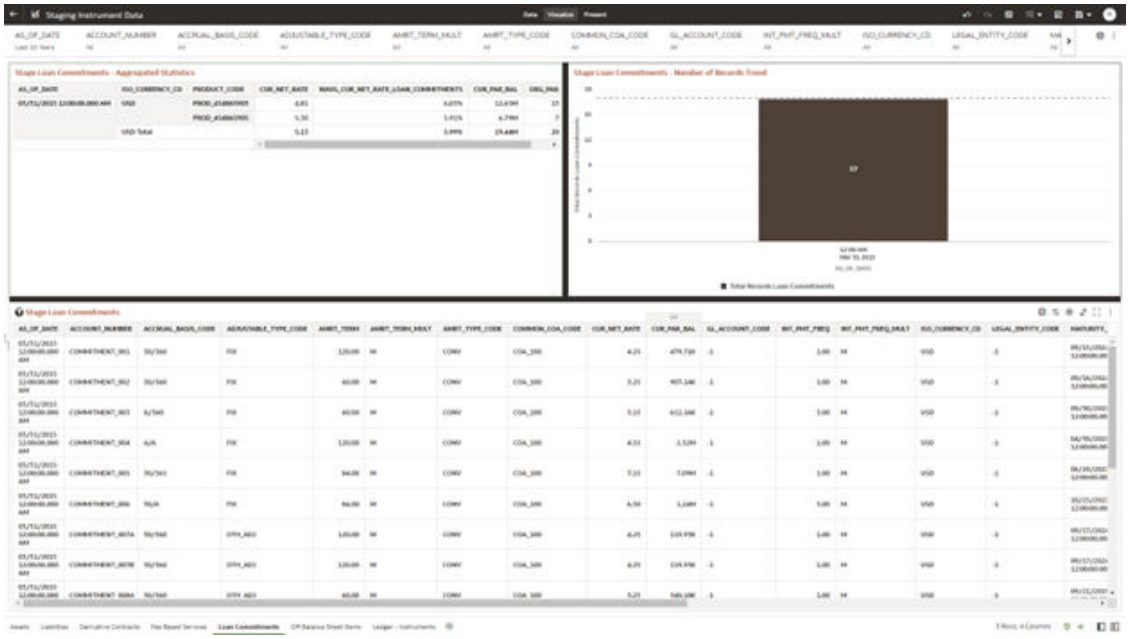
You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Loan Commitments - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_CODE.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_LOAN_COMMITMENTS, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Stage Loan Commitments - Number of Records Trend
  Total Records Loan Commitments aggregated by AS_OF_DATE.
- Stage Loan Commitments
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-24 Staging Instrument Data – Loan Commitments



8.1.4.1.6 Off Balance Sheet Items

The Off Balance Sheet Items Report provides the analysis capability on the Stage off Balance Sheet Contracts Table.

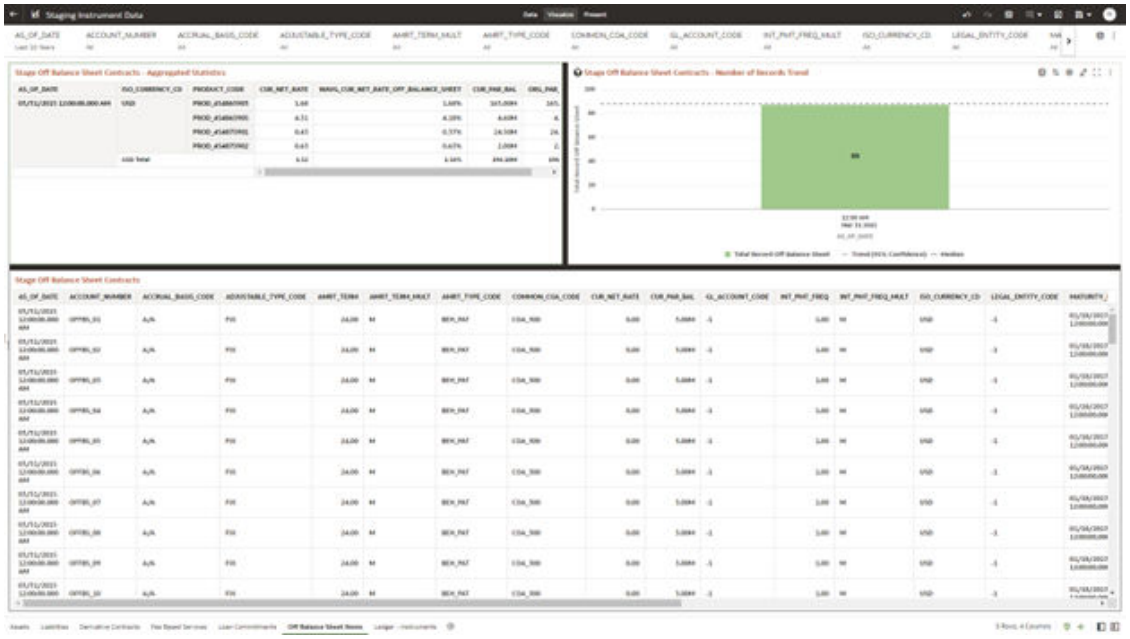
You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Off Balance Sheet Contracts - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_CODE.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_OFF_BALANCE_SHEET, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Stage Off Balance Sheet Contracts - Number of Records Trend
  Total Record off Balance Sheet aggregated by AS_OF_DATE.
- Stage Off Balance Sheet Contracts
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-25 Staging Instrument Data – Off Balance Sheet Items



8.1.4.1.7 Ledger - Instruments

The Ledger – Instrument Report provides the analysis capability on the Stage Ledger Instrument Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Ledger Instrument - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_CODE.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_LEDGER_INSTRUMENTS, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Stage Ledger Instrument - Number of Records Trend
  Total Records Ledger Instruments aggregated by AS_OF_DATE.
- Stage Ledger Instrument
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-26 Staging Instrument Data – Ledger - Instruments

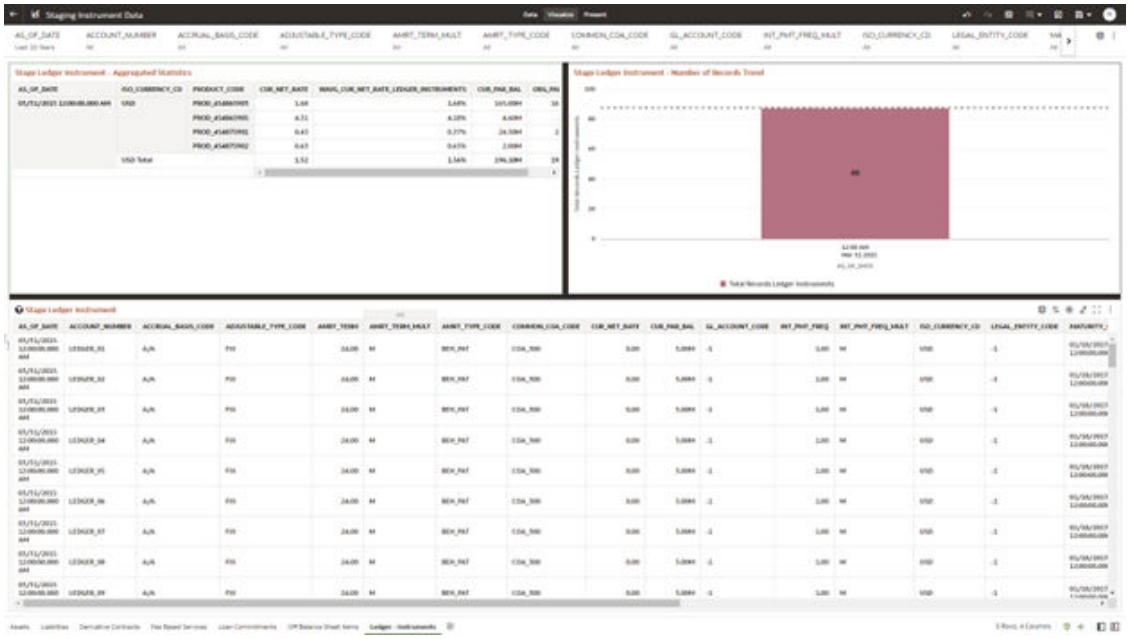
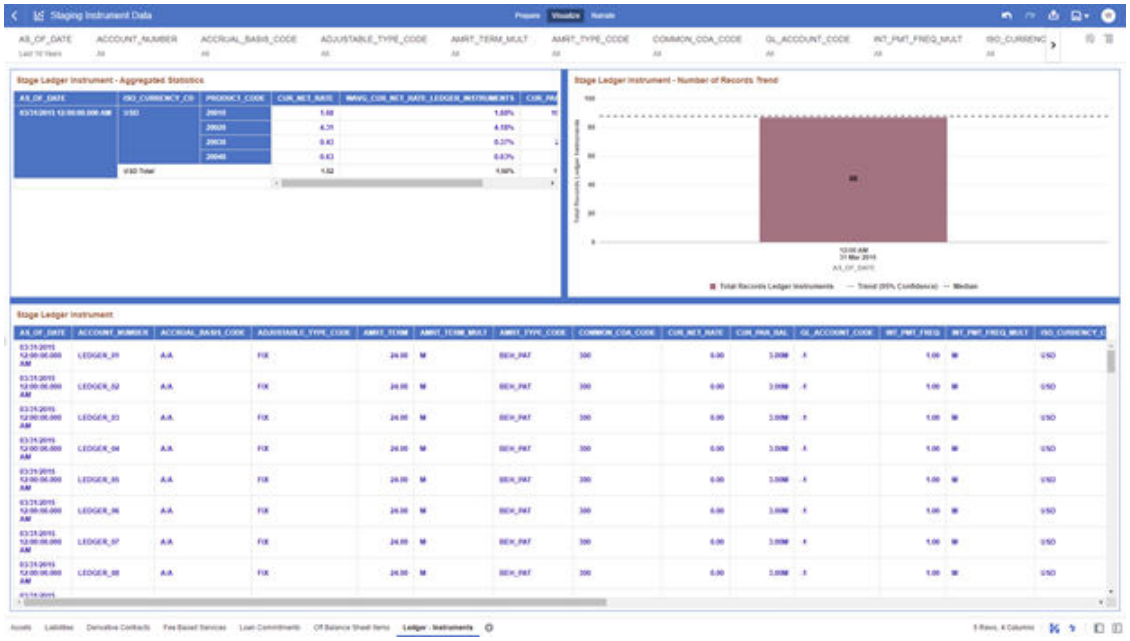


Figure 8-27 Staging Instrument Data – Ledger - Instruments



8.1.4.2 Staging Instrument Supplementary Data

You can use the Staging Instrument Supplementary Data Report to perform the analysis on the Staging Area Tables related to Instrument Supplementary Data. The report contains specifically the following Staging Database Objects:

Table 8-3 Staging Instrument Data Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Staging Instrument Supplementary Data	Instrument Supplementary	STG-Staging	STG_ACCOUNT_INDEX_HIST	Stage Account Index History	Account Index History
			STG_ACCOUNT_RATE_TIERS	Stage Account Rate Tiers	Account Rate Tiers
			STG_EMBEDDED_OPTIONS_SCH	Stage Embedded Options Schedule	Embedded Options Schedule
			STG_PAYMENT_SCHEDULE	Stage Payment Schedule	Payment Schedule

8.1.4.2.1 Account Index History

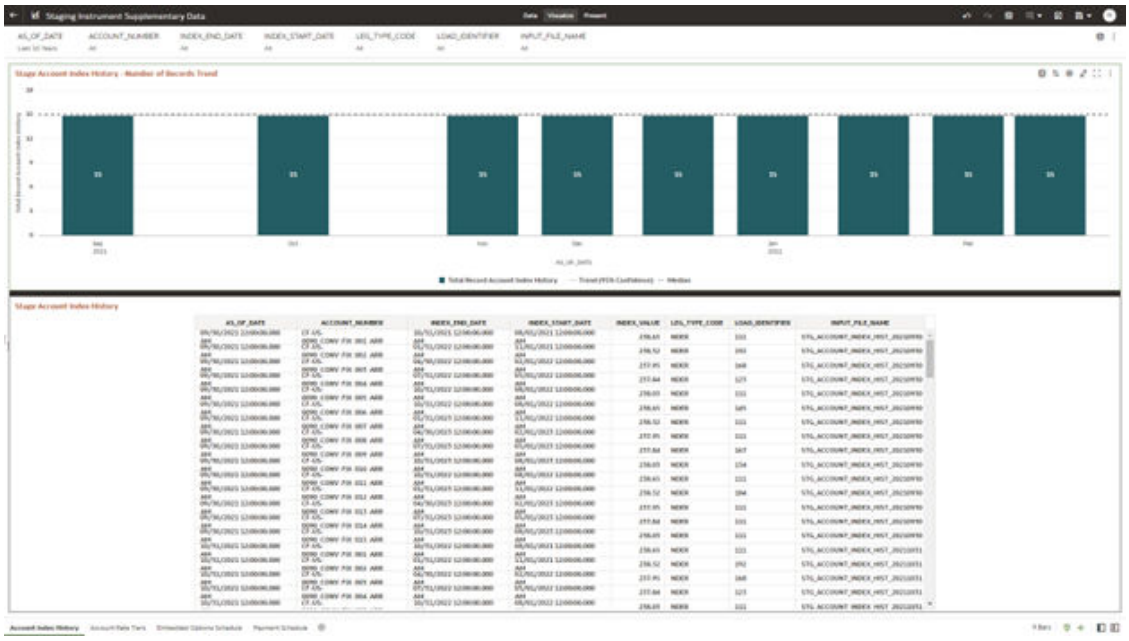
The Account Index History Report provides the analysis capability on the Stage Account Index History Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Account Index History - Number of Records Trend
  Total Records Account Index History aggregated by AS_OF_DATE.
- Stage Account Index History
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-28 Staging Instrument Supplementary Data – Account Index History



8.1.4.2.2 Account Rate Tiers

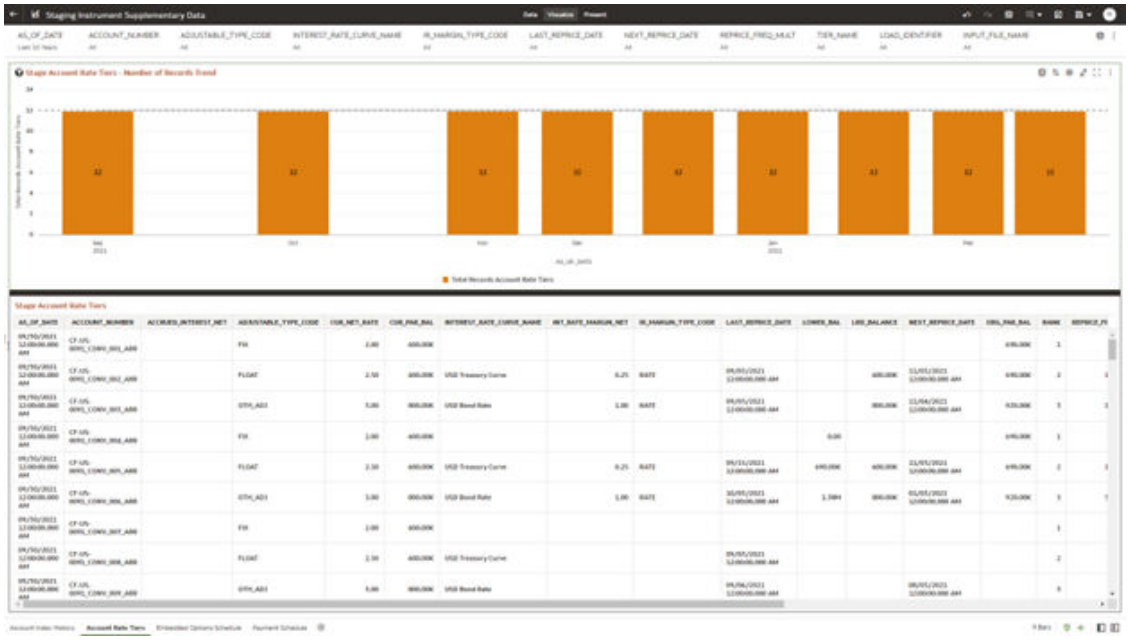
The Account Rate Tiers Report provides the analysis capability on the Stage Account Rate Tiers Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Account Rate Tiers - Number of Records Trend
  Total Records Account Rate Tiers aggregated by AS_OF_DATE.
- Stage Account Rate Tiers
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-29 Staging Instrument Supplementary Data – Account Rate Tiers



8.1.4.2.3 Embedded Options Schedule

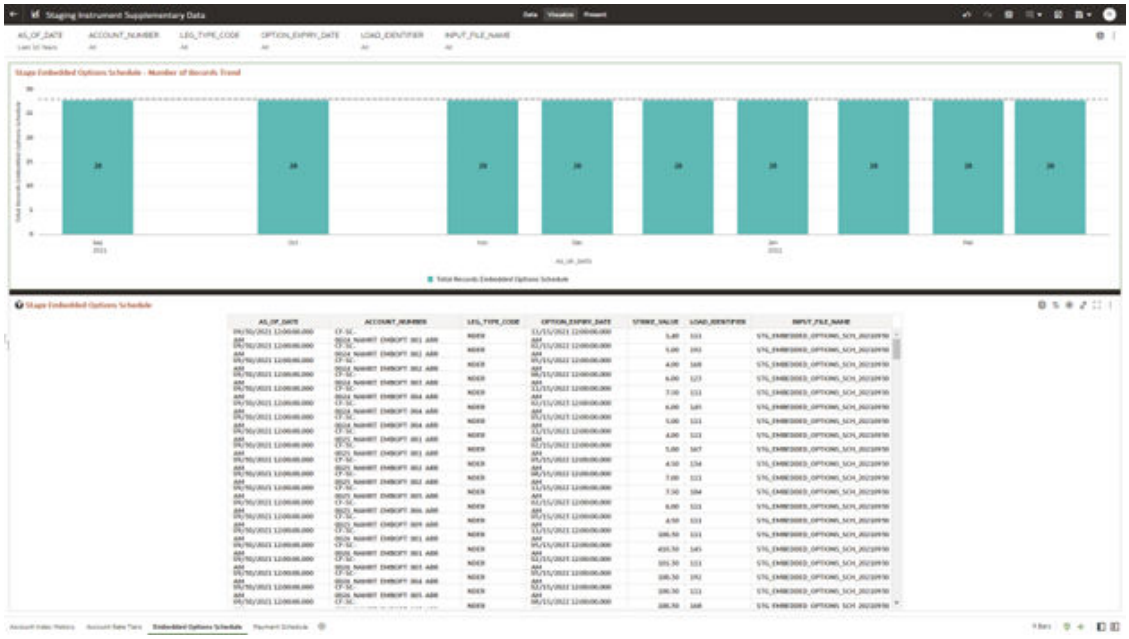
The Embedded Options Schedule Report provides the analysis capability on the Stage Embedded Options Schedule Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Embedded Options Schedule - Number of Records Trend
  Total Records Embedded Options Schedule aggregated by AS_OF_DATE.
- Stage Embedded Options Schedule
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-30 Staging Instrument Supplementary Data – Embedded Options Schedule



8.1.4.2.4 Payment Schedule

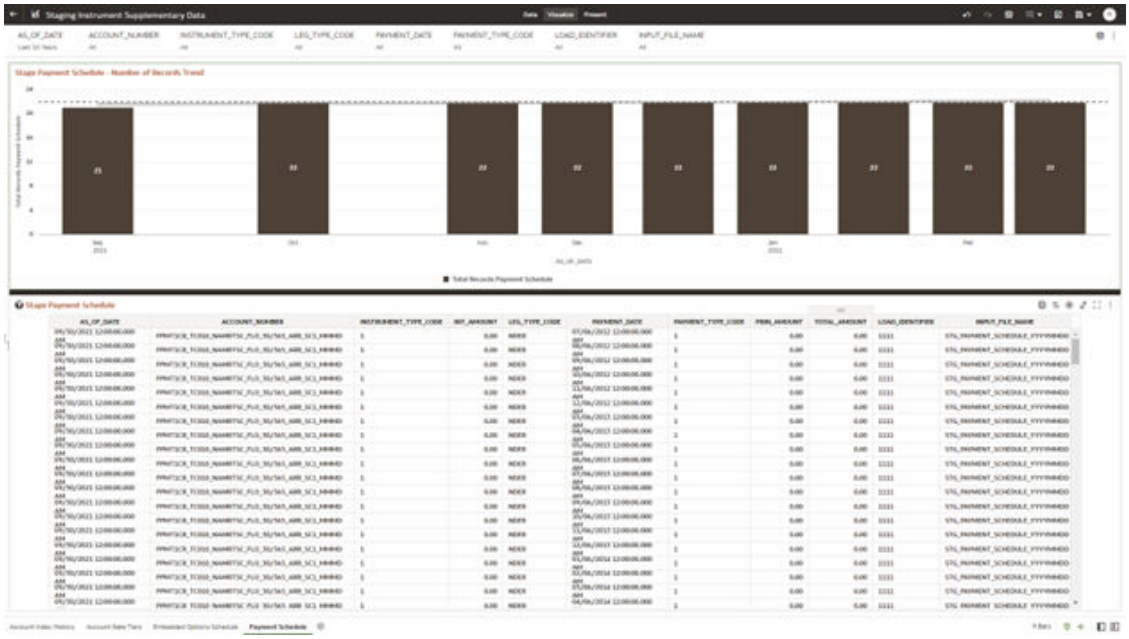
The Payment Schedule Report provides the analysis capability on the Stage Payment Schedule Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Payment Schedule - Number of Records Trend
  Total Records Payment Schedule aggregated by AS_OF_DATE.
- Stage Payment Schedule
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-31 Staging Instrument Supplementary Data – Payment Schedule



8.1.4.3 Staging Ledger Data

You can use this report to perform the analysis on the Staging Area Tables related to Ledger Data. The report contains specifically the following Staging Database Objects:

Table 4:

Table 8-4 Staging Ledger Data Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Staging Ledger Data	Ledger	STG-Staging	STG_MANAGEMENT_LEDGER STG_MANAGEMENT_LEDGER_01 STG_MANAGEMENT_LEDGER_02 STG_MANAGEMENT_LEDGER_03 STG_MANAGEMENT_LEDGER_04 STG_MANAGEMENT_LEDGER_05	Stage Management Ledger Stage Placeholder Management Ledger 01 Stage Placeholder Management Ledger 02 Stage Placeholder Management Ledger 03 Stage Placeholder Management Ledger 04 Stage Placeholder Management Ledger 05	Management Ledger Management Ledger 01 Management Ledger 02 Management Ledger 03 Management Ledger 04 Management Ledger 05

8.1.4.3.1 Management Ledger

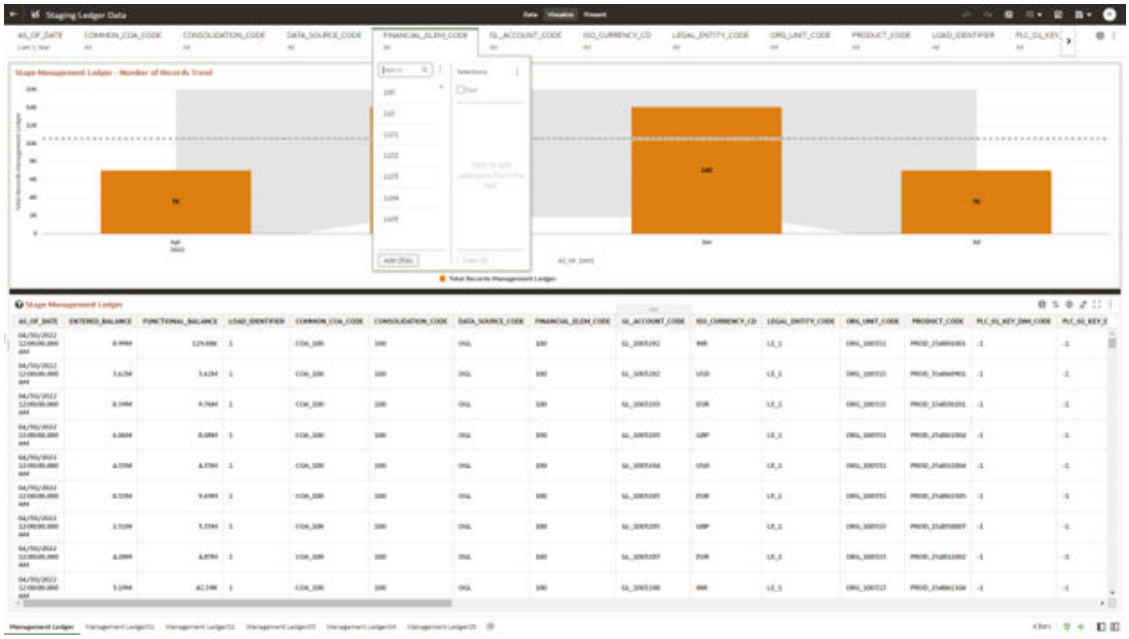
The Management Ledger Report provides the analysis capability on the Stage Management Ledger Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Management Ledger - Number of Records Trend
  Total Records Management Ledger aggregated by AS_OF_DATE.
- Stage Management Ledger
  Granular table records at FINANCIAL_ELEM_CODE level.

Figure 8-32 Staging Ledger Data – Management Ledger



8.1.4.3.2 Management Ledger01

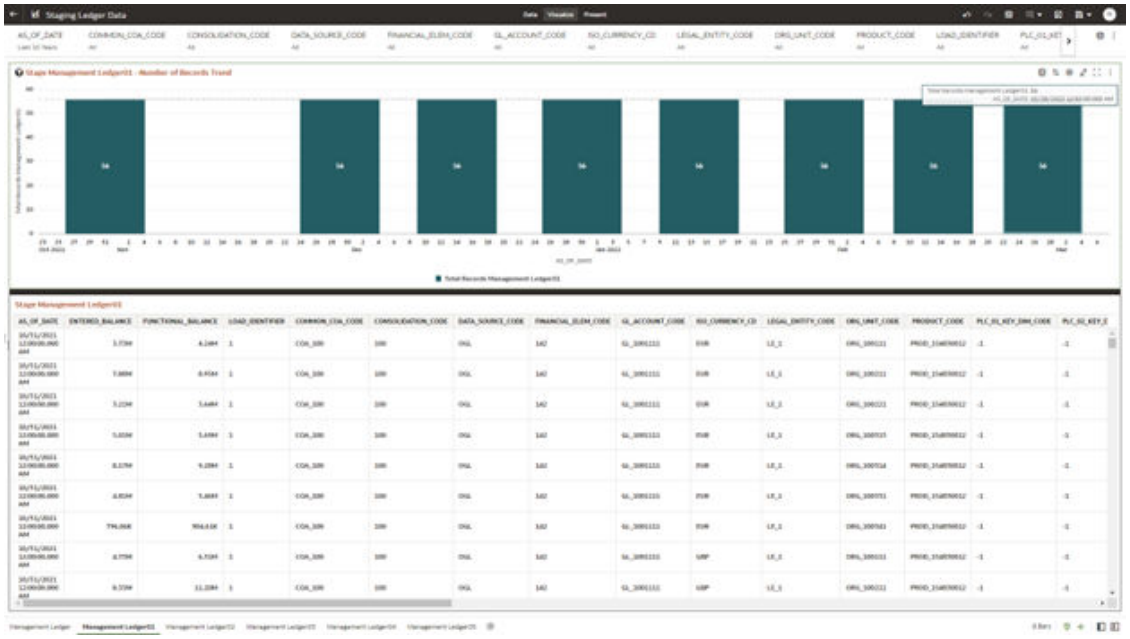
The Management Ledger01 Report provides the analysis capability on the Stage Placeholder Management Ledger 01 table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Management Ledger01 - Number of Records Trend
  Total Records Management Ledger01 aggregated by AS_OF_DATE.
- Stage Management Ledger01
  Granular table records at FINANCIAL_ELEM_CODE level.

Figure 8-33 Staging Ledger Data – Management Ledger01



8.1.4.3.3 Management Ledger02

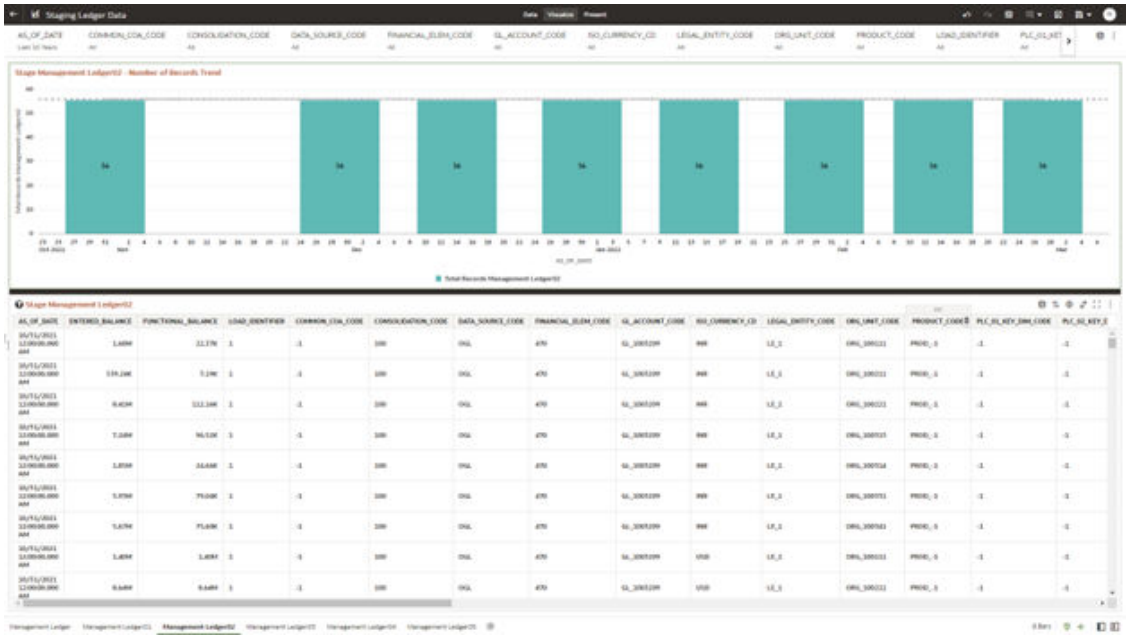
The Management Ledger02 Report provides the analysis capability on the Stage Placeholder Management Ledger 02 table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Management Ledger02 - Number of Records Trend
  Total Records Management Ledger02 aggregated by AS_OF_DATE.
- Stage Management Ledger02
  Granular table records at FINANCIAL_ELEM_CODE level.

Figure 8-34 Staging Ledger Data – Management Ledger02



8.1.4.3.4 Management Ledger03

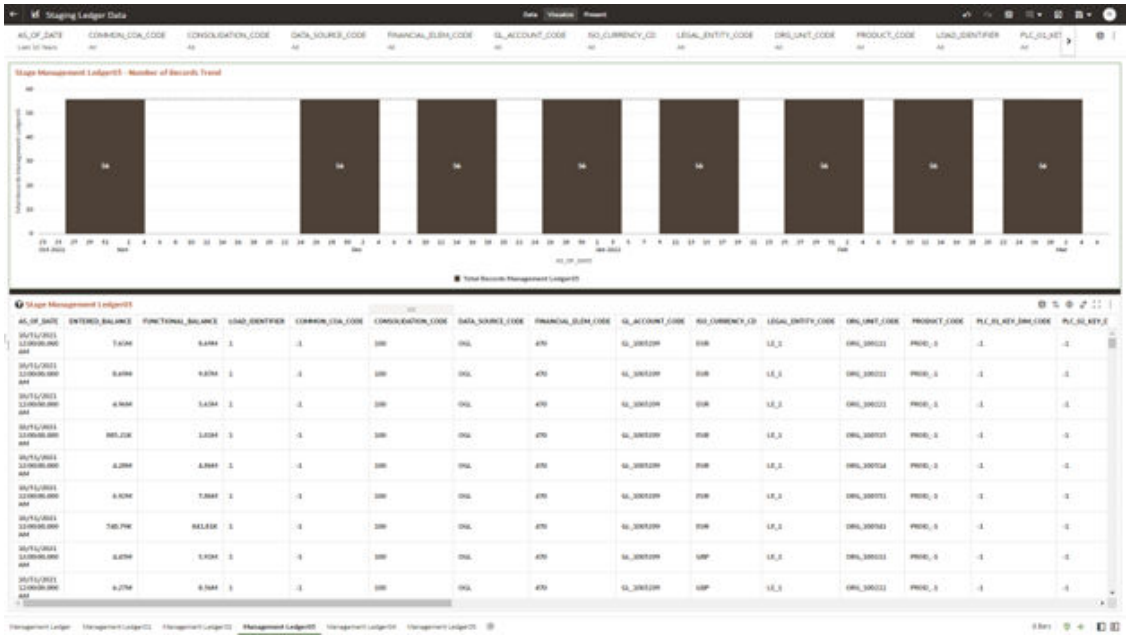
The Management Ledger03 Report provides the analysis capability on the Stage Placeholder Management Ledger 03 table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Management Ledger03 - Number of Records Trend
  Total Records Management Ledger03 aggregated by AS_OF_DATE.
- Stage Management Ledger03
  Granular table records at FINANCIAL_ELEM_CODE level.

Figure 8-35 Staging Ledger Data – Management Ledger03



8.1.4.3.5 Management Ledger04

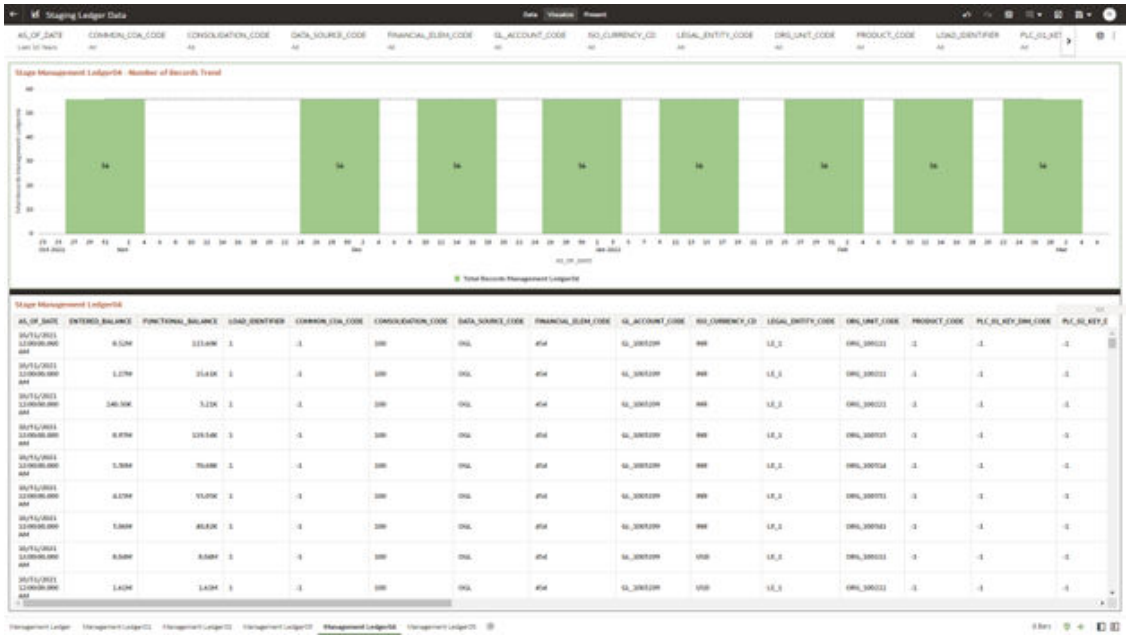
The Management Ledger04 Report provides the analysis capability on the Stage Placeholder Management Ledger 04 table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Management Ledger04 - Number of Records Trend
  Total Records Management Ledger04 aggregated by AS_OF_DATE.
- Stage Management Ledger04
  Granular table records at FINANCIAL_ELEM_CODE level.

Figure 8-36 Staging Ledger Data – Management Ledger04



8.1.4.3.6 Management Ledger05

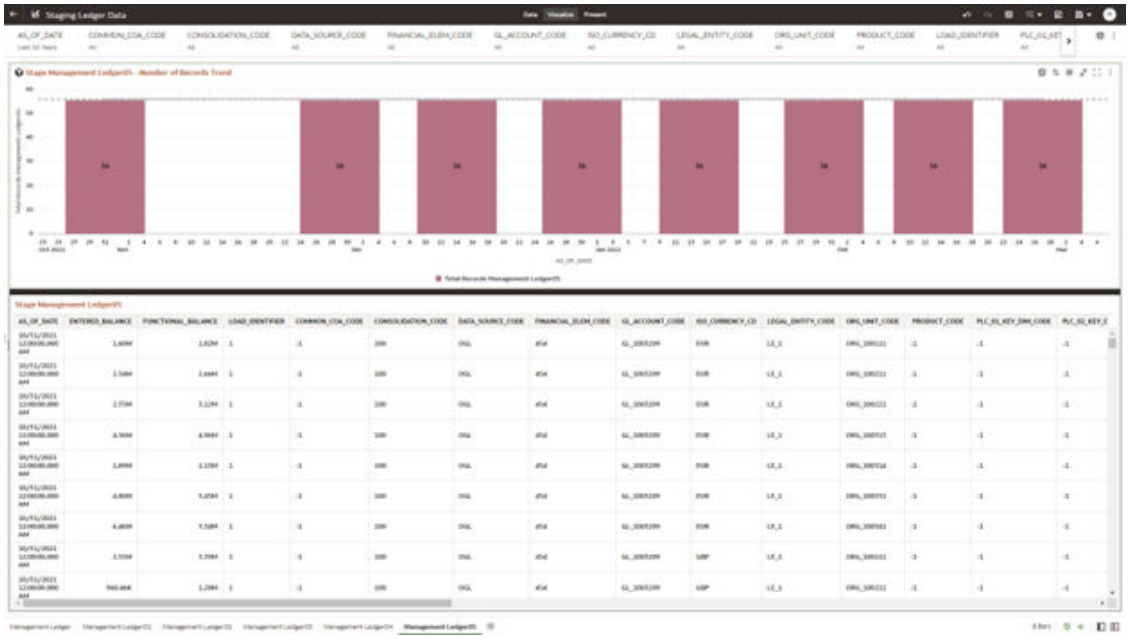
The Management Ledger05 Report provides the analysis capability on the Stage Placeholder Management Ledger 05 table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Management Ledger05 - Number of Records Trend
  Total Records Management Ledger05 aggregated by AS_OF_DATE.
- Stage Management Ledger05
  Granular table records at FINANCIAL_ELEM_CODE level.

Figure 8-37 Staging Ledger Data – Management Ledger05



8.1.4.4 Staging Transaction Summary Data

You can use this report to perform the analysis on the Staging area tables related to Transaction Summary Data. The report contains specifically the following Staging Database Objects:

Table 8-5 Staging Ledger Data Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Staging Transaction Summary Data	Transaction Summary	STG–Staging	STG_ASSET_TXN STG_LIABILITY_TXN STG_FEE_BASED_SERVICE_TXN STG_OFF_BALANCE_SHEET_TXN	Stage Asset Transaction Summary Stage Liability Transaction Summary Stage Fee Based and Other Services Transaction Summary Stage Off Balance Sheet Transaction Summary	Assets Transaction Summary Liabilities Transaction Summary Fee Based Services Transaction Summary Off Balance Sheet Transaction Summary

8.1.4.4.1 Asset Transaction Summary

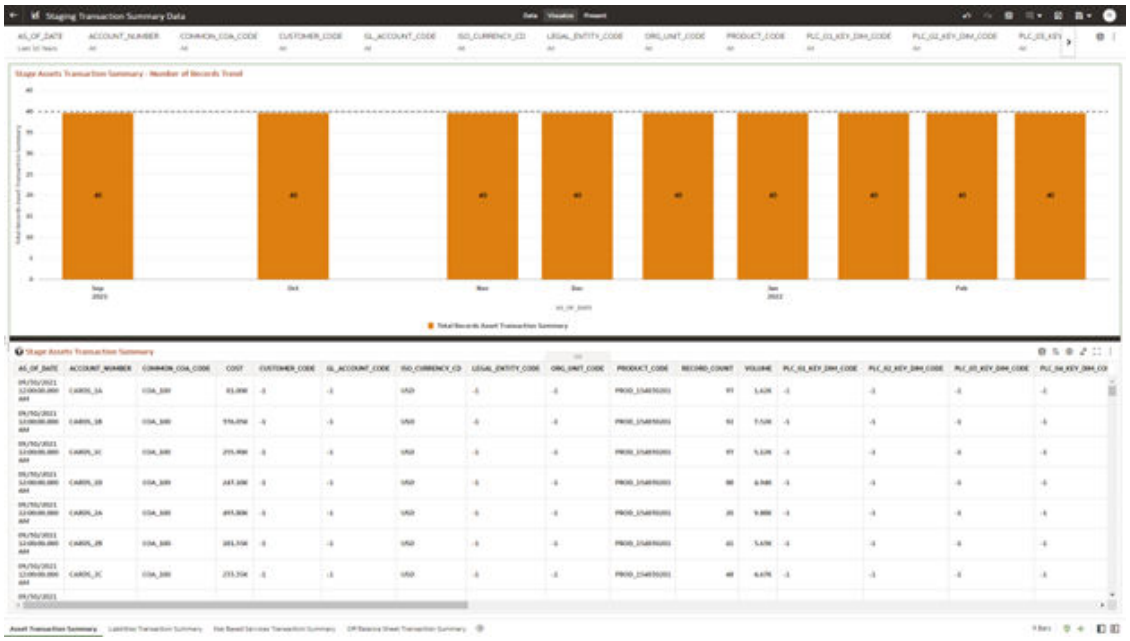
This report provides the analysis capability on the Stage Assets Transaction Summary Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Assets Transaction Summary - Number of Records Trend
  Total Records Assets Transaction Summary aggregated by AS_OF_DATE.
- Stage Assets Transaction Summary
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-38 Staging Transaction Summary Data – Asset Transaction Summary



8.1.4.4.2 Liabilities Transaction Summary

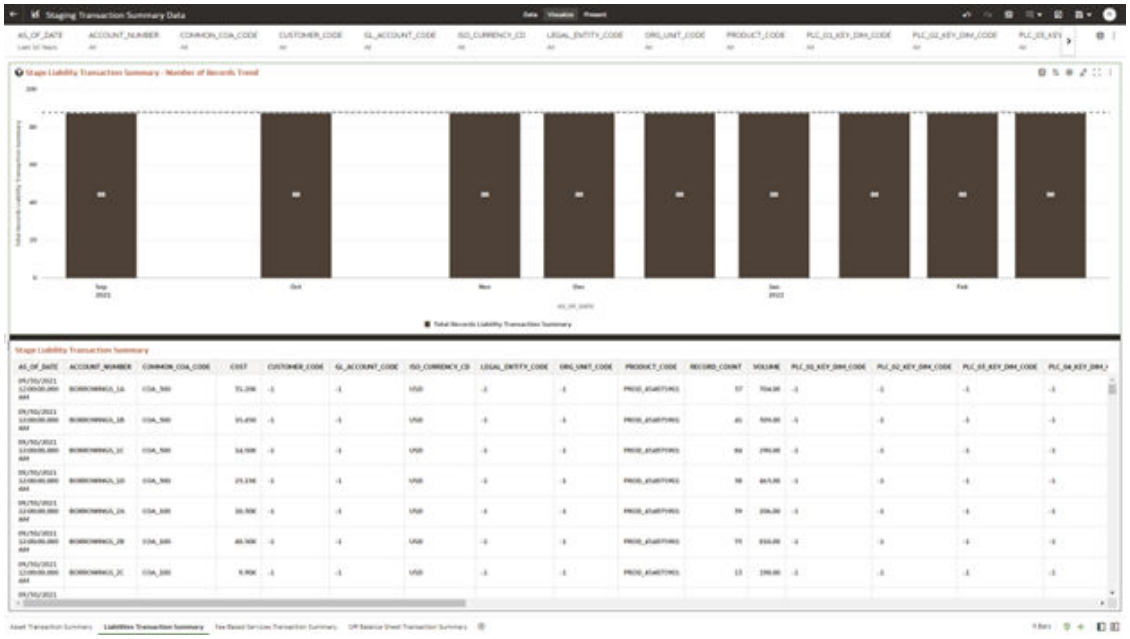
The Liabilities Transaction Summary Report provides the analysis capability on the Stage Liability Transaction Summary Table.

You can use a series of Report Prompts to filter the data according to functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Liability Transaction Summary - Number of Records Trend
  Total Records Liability Transaction Summary aggregated by AS_OF_DATE.
- Stage Liability Transaction Summary
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-39 Staging Transaction Summary Data – Liabilities Transaction Summary



8.1.4.4.3 Fee Based Services Transaction Summary

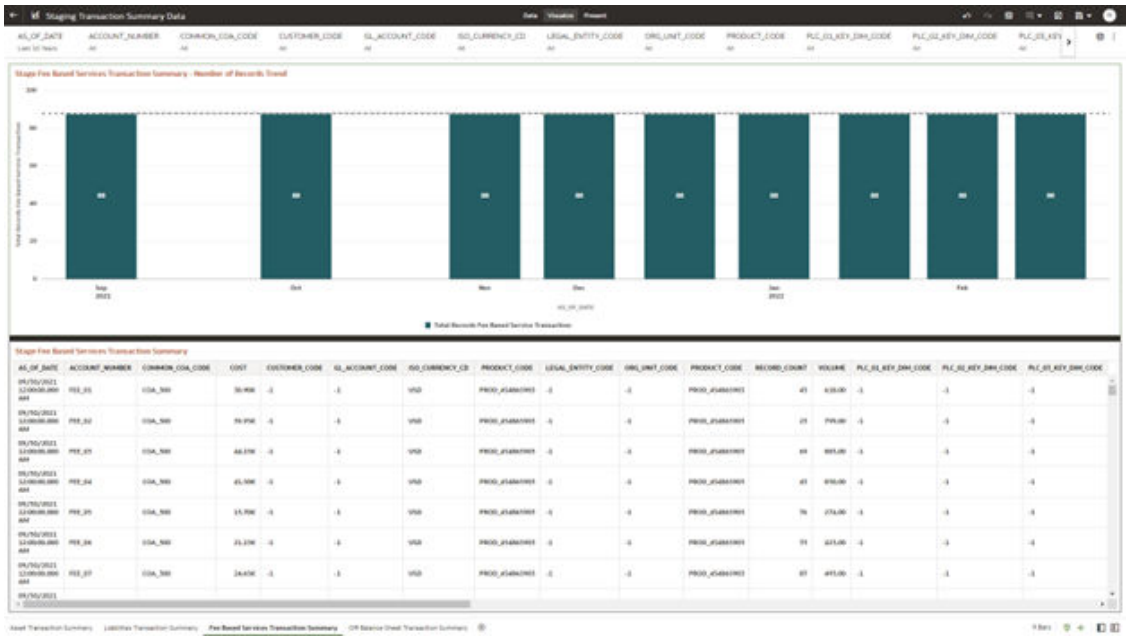
The Fee Based Services Transaction Summary Report provides the analysis capability on the Stage Fee Based and Other Services Transaction Summary Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Fee Based Services Transaction Summary - Number of Records Trend
  Total Records Fee Based Service Transaction aggregated by AS_OF_DATE.
- Stage Fee Based Services Transaction Summary
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-40 Staging Transaction Summary Data – Fee Based Services Transaction Summary



8.1.4.4.4 Off Balance Sheet Transaction Summary

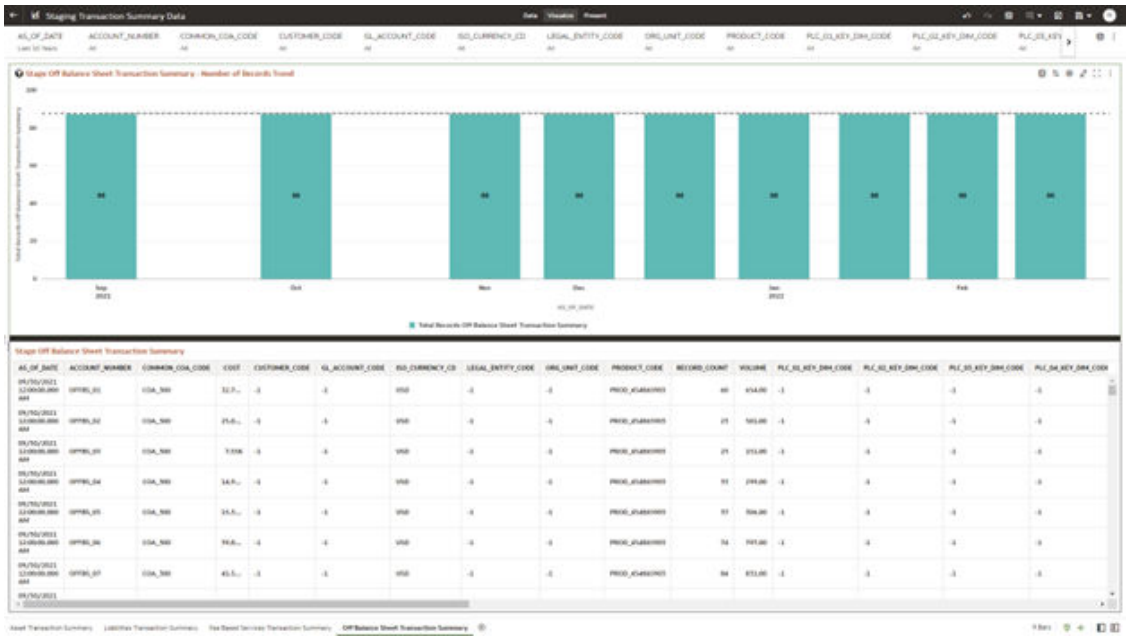
The Off Balance Sheet Transaction Summary Report provides the analysis capability on the Stage Off Balance Sheet Transaction Summary Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Stage Off Balance Sheet Transaction Summary - Number of Records Trend
  Total Records Off Balance Sheet Transaction Summary aggregated by AS_OF_DATE.
- Stage Off Balance Sheet Transaction Summary
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-41 Staging Transaction Summary Data – Off Balance Sheet Transaction Summary



8.1.4.5 Processing Instrument Data

You can use this report to perform the analysis on the Processing Area Tables related to Instrument Data. The report contains specifically the following Processing Database Objects:

Table 5:

Table 8-6 Processing Instrument Data Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Processing Instrument Data	Instrument	FSI-Processing	FSI_D_ASSET FSI_D_LIABILITY FSI_D_DERIVATIVE FSI_D_FEE_BASED_SERVICE FSI_D_LOAN_COMMITMENTS FSI_D_OFF_BALANCE_SHEET FSI_D_LEDGER_INSTRUMENT	Asset Instruments Liability Instruments Derivative Contracts Fee Based and Other Services Loan Commitments Off Balance Sheet Contracts Ledger Instrument	Assets Liabilities Derivative Contracts Fee Based Services Loan Commitments Off Balance Sheet Items Ledger - Instruments

8.1.4.5.1 Assets

The Assets Report provides the analysis capability on the Asset Instrument Table.

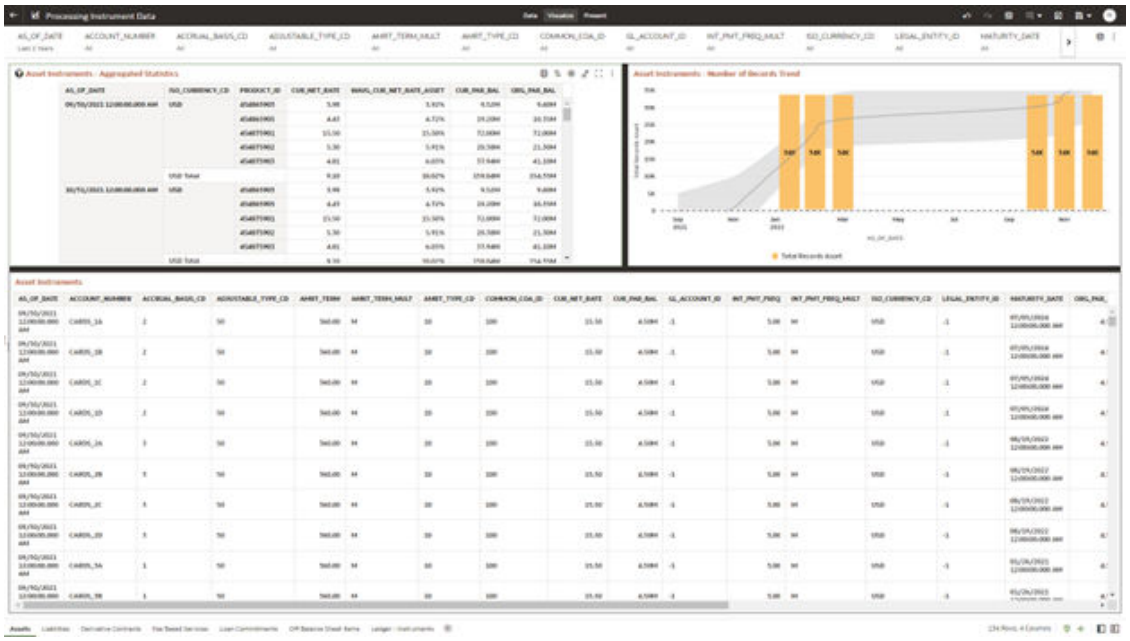
You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Asset Instruments - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_ID.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_ASSET, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Asset Instruments - Number of Records Trend
  Total Records Asset aggregated by AS_OF_DATE.
- Asset Instruments
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-42 Processing Instrument Data - Assets



8.1.4.5.2 Liabilities

The Liabilities Report provides the analysis capability on the Liability Instrument Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

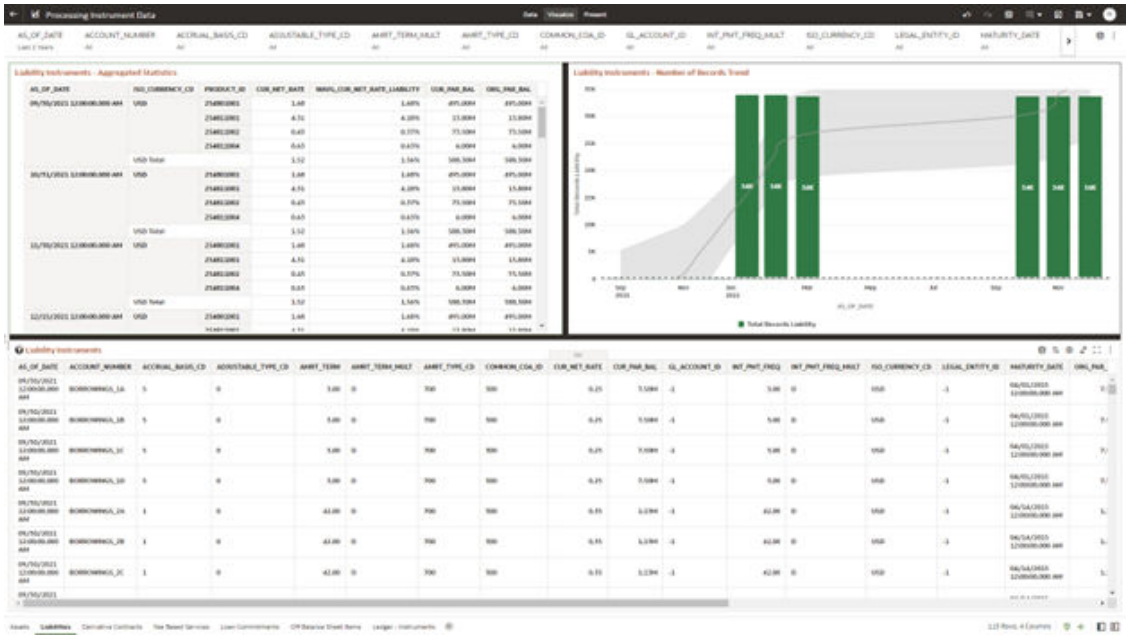
The report displays the underlying data according to the following Charts' logic:

- Liability Instruments - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_ID.

In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_LIABILITY, is calculated as the Weighted AVG by CUR_PAR_BAL.

- Liability Instruments - Number of Records Trend
  Total Records Liability aggregated by AS_OF_DATE.
- Liability Instruments
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-43 Processing Instrument Data - Liabilities



8.1.4.5.3 Derivative Contracts

The Derivative Contracts Report provides the analysis capability on the Derivative Contracts Table.

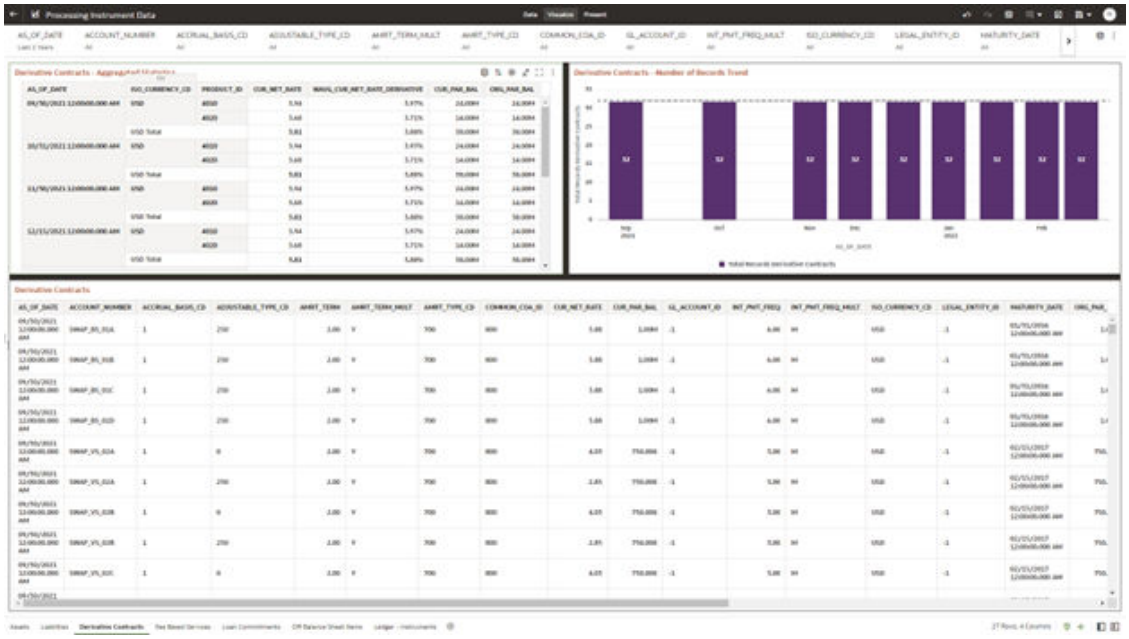
You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Derivative Contracts - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_ID.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_LIABILITY, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Derivative Contracts - Number of Records Trend
  Total Records Derivative Contracts aggregated by AS_OF_DATE.
- Derivative Contracts
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-44 Processing Instrument Data – Derivative Contracts



8.1.4.5.4 Fee Based Services

The Fee Based Services Report provides the analysis capability on the Fee Based and Other Services Table.

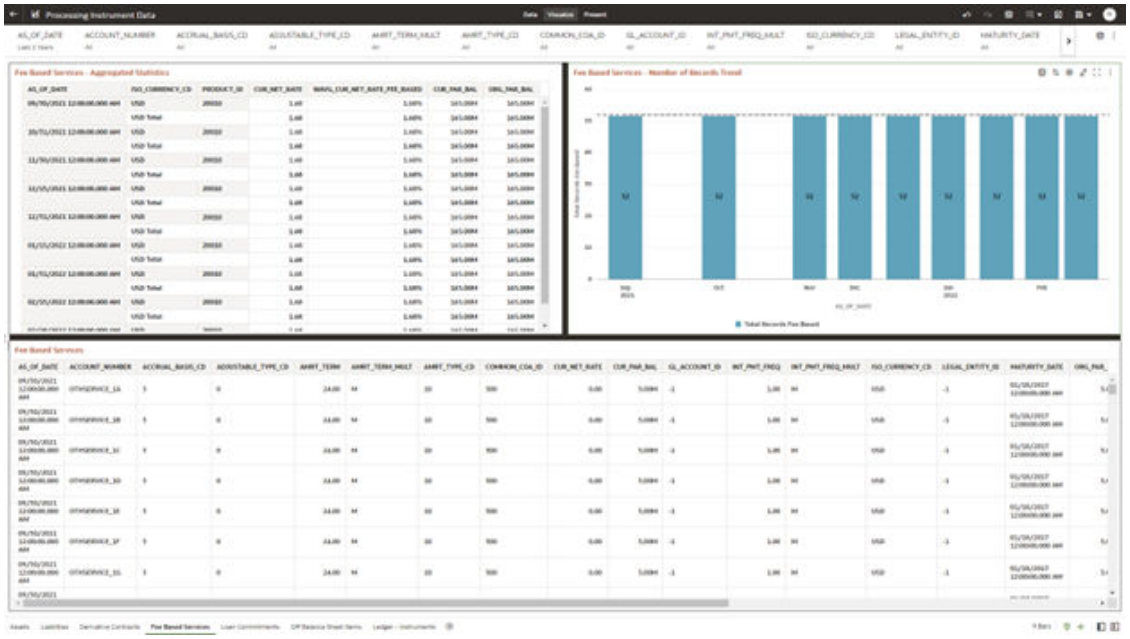
You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Fee Based Services - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_ID.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_FEE_BASED, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Fee Based Services - Number of Records Trend
  Total Records Fee Based aggregated by AS_OF_DATE.
- Fee Based Services
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-45 Processing Instrument Data – Fee Based Services



8.1.4.5.5 Loan Commitments

The Loan Commitments Report provides the analysis capability on the Loan Commitments Table.

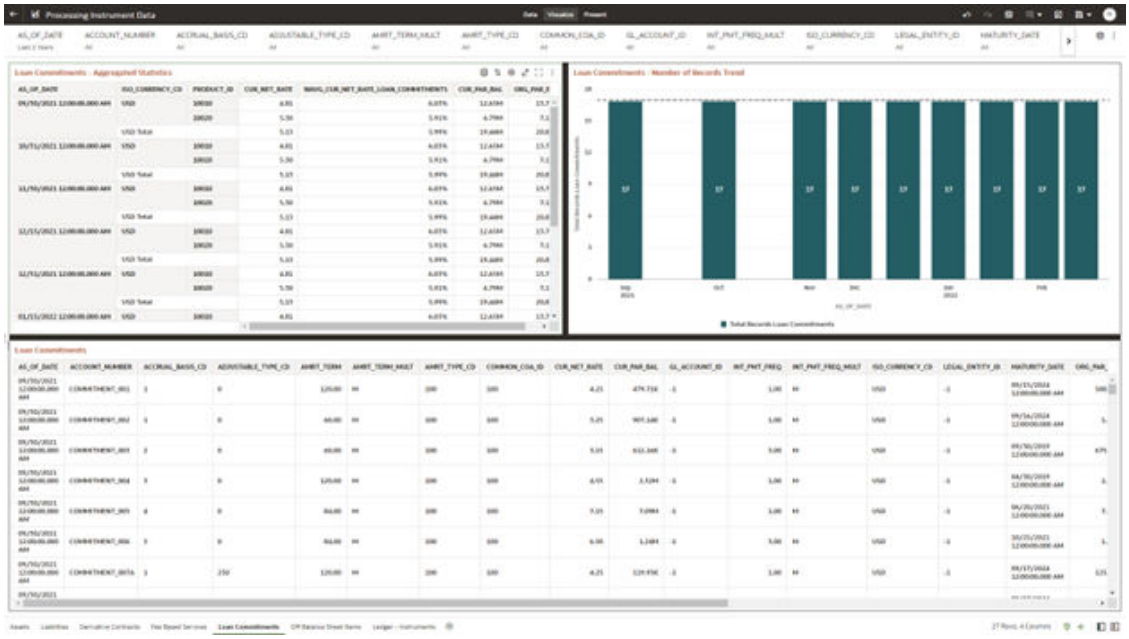
You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Loan Commitments - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_ID.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_LOAN_COMMITMENTS, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Loan Commitments - Number of Records Trend
  Total Records Loan Commitments aggregated by AS_OF_DATE.
- Loan Commitments
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-46 Processing Instrument Data – Loan Commitments



8.1.4.5.6 Off Balance Sheet Items

The Off Balance Sheet Items Report provides the analysis capability on the Off Balance Sheet Contracts Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Off Balance Sheet Contracts - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_ID.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_OFF_BALANCE_SHEET, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Off Balance Sheet Contracts - Number of Records Trend
  Total Record Off Balance Sheet aggregated by AS_OF_DATE.
- Off Balance Sheet Contracts
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-47 Processing Instrument Data – Off Balance Sheet Items

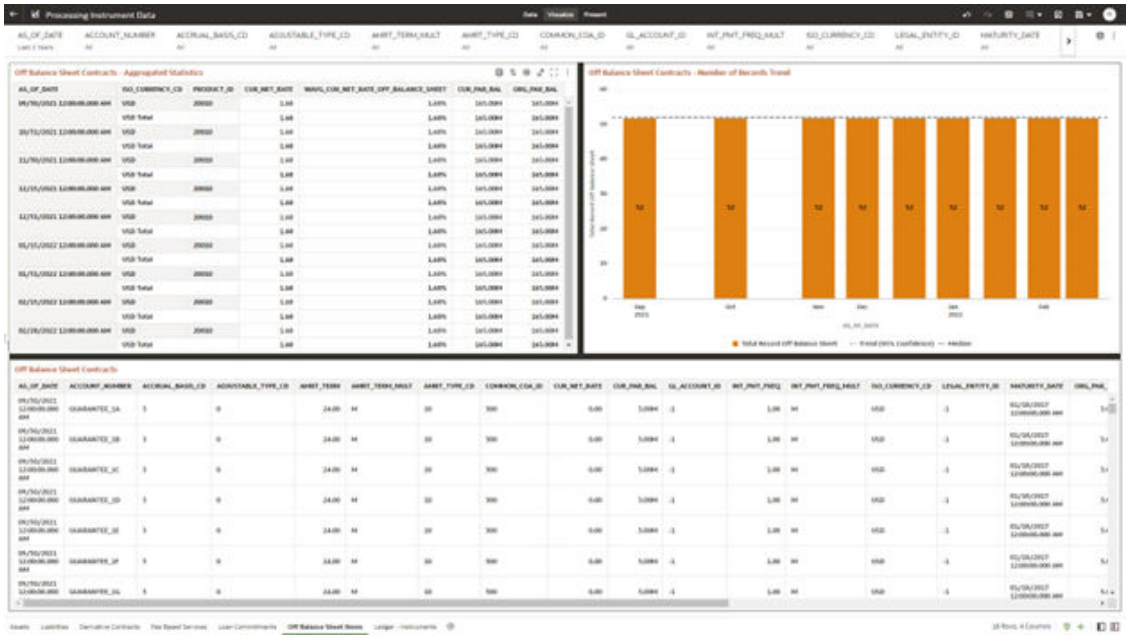
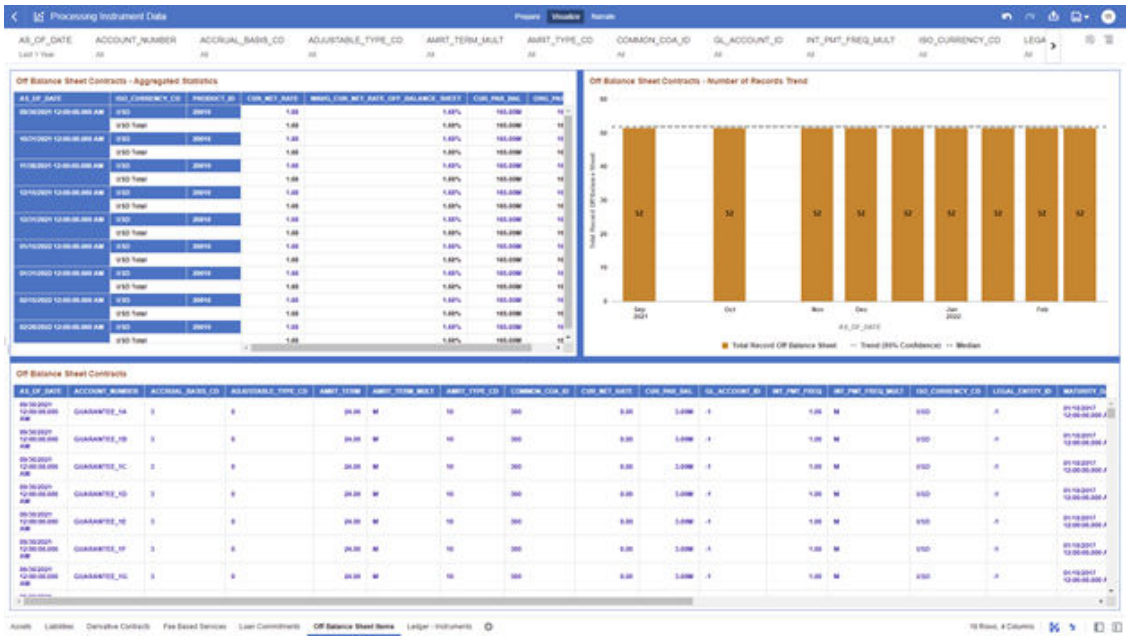


Figure 8-48 Processing Instrument Data – Off Balance Sheet Items



8.1.4.5.7 Ledger - Instruments

The Ledger – Instrument Report provides the analysis capability on the Ledger Instrument Table.

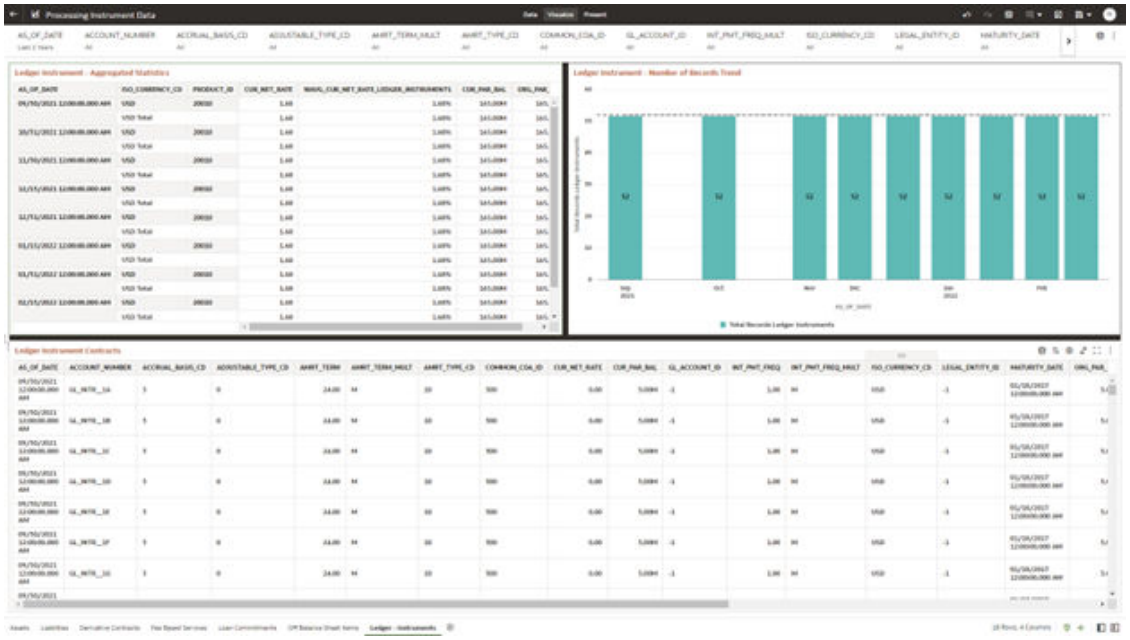
You can use a series of Report Prompts to filter the data according to functional key attributes pertaining to the table columns perimeter.

The report displays the underlying data according to the following Charts' logic:

- Ledger Instrument - Aggregated Statistics
  Aggregation for CUR_PAR_BAL (sum), ORG_PAR_BAL (sum) and CUR_NET_RATE (avg) by AS_OF_DATE, ISO_CURRENCY_CD and PRODUCT_ID.

  In addition, for CUR_NET_RATE, the additional Balance Weighted Rate, WAVG_CUR_NET_RATE_LEDGER_INSTRUMENTS, is calculated as the Weighted AVG by CUR_PAR_BAL.
- Ledger Instrument - Number of Records Trend
  Total Records Ledger Instruments aggregated by AS_OF_DATE.
- Ledger Instrument
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-49 Processing Instrument Data – Ledger Instruments



8.1.4.6 Processing Instrument Supplementary Data

You can use this report to perform the analysis on the Processing Area Tables related to Instrument Data. The report contains specifically the below Processing Database Objects:

Table 6: Processing Instrument Supplementary Data

Table 8-7 Processing Instrument Supplementary Data

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Processing Instrument Supplementary Data	Instrument Supplementary	FSI–Processing	FSI_D_ACCOUNT_INDEX_HIST FSI_D_ACCOUNT_RATE_TIERS FSI_D_EMBEDDED_OPTIONS_SCH FSI_D_PAYMENT_SCHEDULE	Account Index History Account Rate Tiers Embedded Options Schedule Payment Schedule	Account Index History Account Rate Tiers Embedded Options Schedule Payment Schedule

8.1.4.6.1 Account Index History

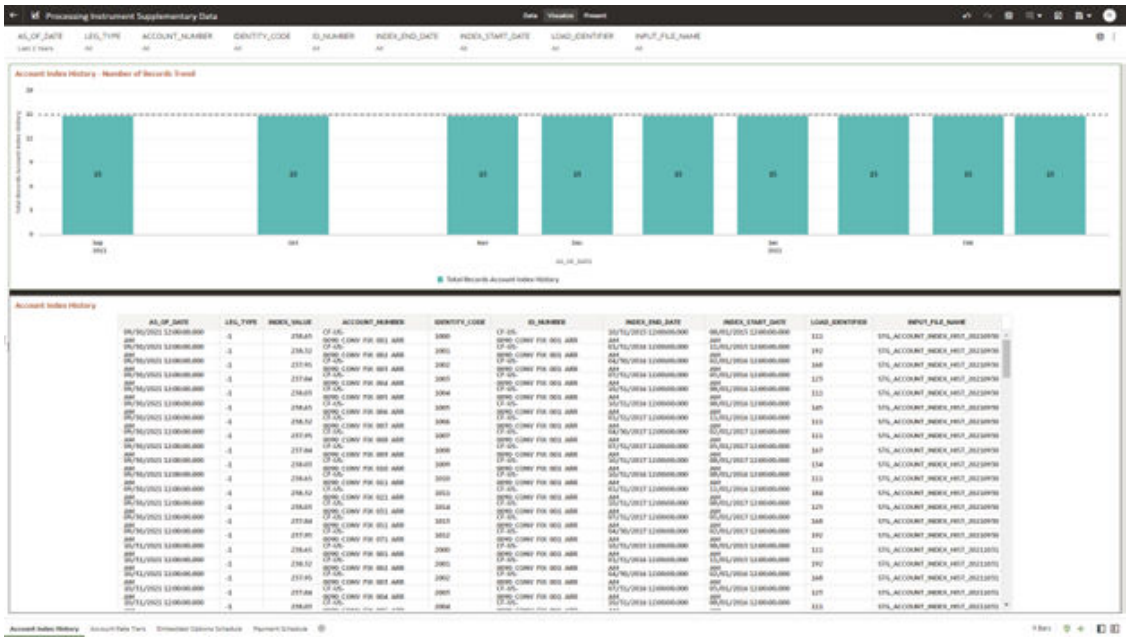
The Account Index History Report provides the analysis capability on the Account Index History Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Account Index History - Number of Records Trend
  Total Records Account Index History aggregated by AS_OF_DATE.
- Account Index History
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-50 Processing Instrument Supplementary Data – Account Index History



8.1.4.6.2 Account Rate Tiers

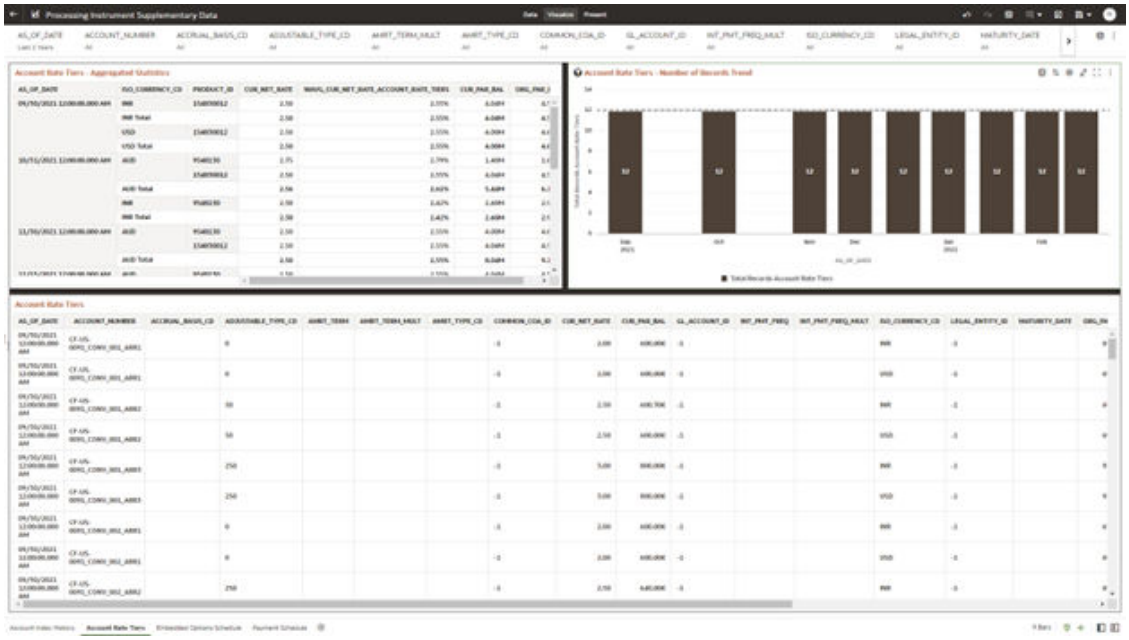
The Account Rate Tiers Report provides the analysis capability on the Account Rate Tiers Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Account Rate Tiers - Number of Records Trend
  Total Records Account Rate Tiers aggregated by AS_OF_DATE.
- Account Rate Tiers
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-51 Processing Instrument Supplementary Data – Account Rate Tiers



8.1.4.6.3 Embedded Options Schedule

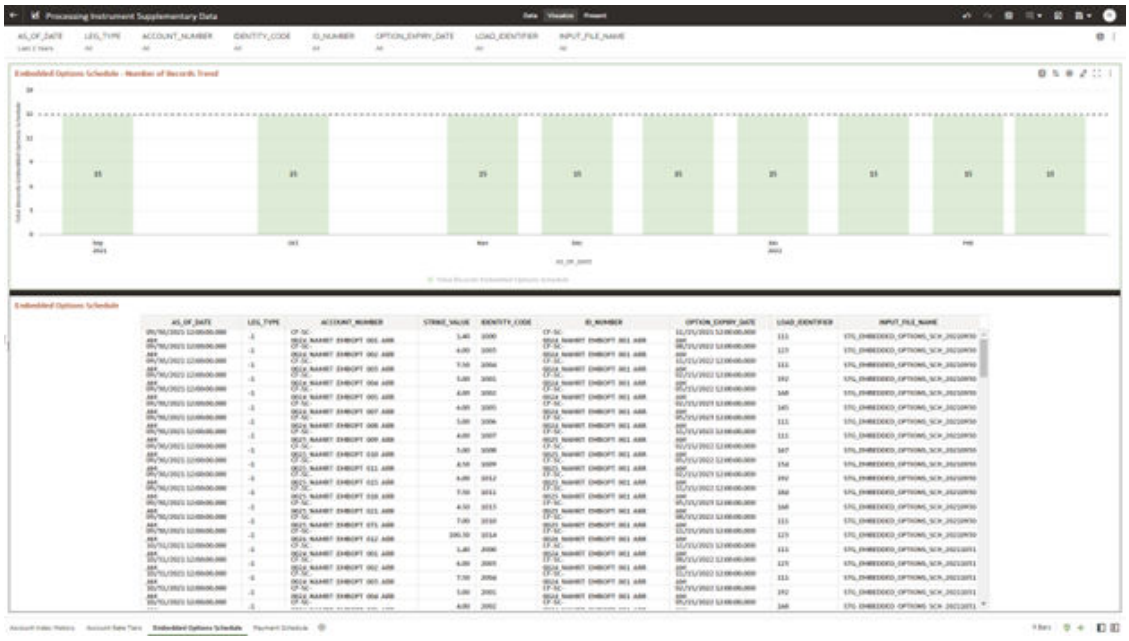
The Embedded Options Schedule Report provides the analysis capability on the Embedded Options Schedule Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Embedded Options Schedule - Number of Records Trend
  Total Records Embedded Options Schedule aggregated by AS_OF_DATE.
- Embedded Options Schedule
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-52 Processing Instrument Supplementary Data – Embedded Options Schedule



8.1.4.6.4 Payment Schedule

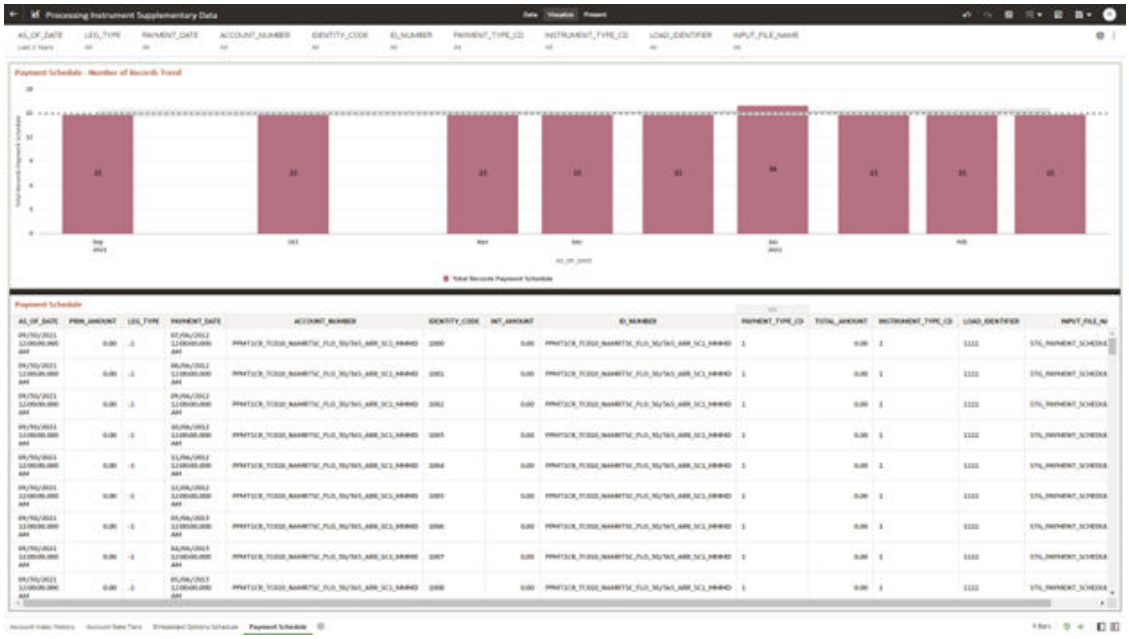
The Payment Schedule Report provides the analysis capability on the Payment Schedule Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Payment Schedule - Number of Records Trend
  Total Records Payment Schedule aggregated by AS_OF_DATE.
- Payment Schedule
  Granular table records at ACCOUNT_NUMBER level.

Figure 8-53 Processing Instrument Supplementary Data – Payment Schedule



8.1.4.7 Processing Ledger Data

You can use this report to perform analysis on the Processing Area Tables related to Ledger Data. The report contains specifically the following Staging Database Objects:

Table 7: Staging Ledger Data Reports

Table 8-8 Staging Ledger Data Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Processing Ledger Data	Ledger	FSI-Processing	FSI_D_MANAGEMENT_LEDGER FSI_D_MANAGEMENT_LEDGER_01 FSI_D_MANAGEMENT_LEDGER_02 FSI_D_MANAGEMENT_LEDGER_03 FSI_D_MANAGEMENT_LEDGER_04 FSI_D_MANAGEMENT_LEDGER_05	Management Ledger Placeholder Management Ledger 01 Placeholder Management Ledger 02 Placeholder Management Ledger 03 Placeholder Management Ledger 04 Placeholder Management Ledger 05	Management Ledger Management Ledger 01 Management Ledger 02 Management Ledger 03 Management Ledger 04 Management Ledger 05

8.1.4.7.1 Management Ledger

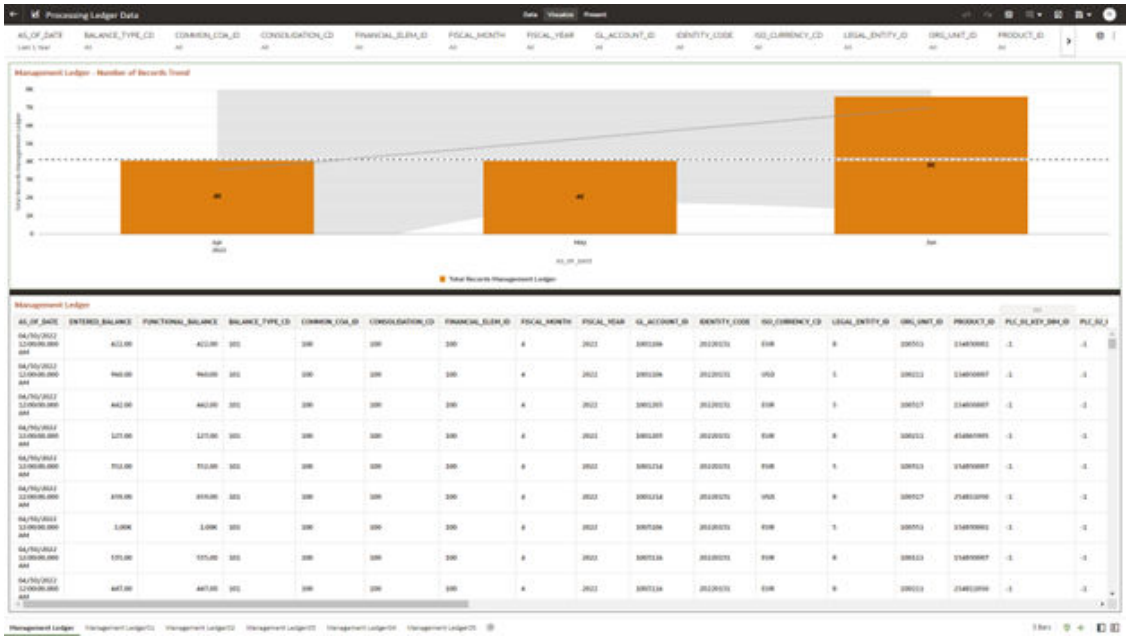
The Management Ledger Report provides the analysis capability on the Management Ledger Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Management Ledger - Number of Records Trend
  Total Records Management Ledger aggregated by AS_OF_DATE.
- Management Ledger
  Granular table records at FINANCIAL_ELEM_ID level.

Figure 8-54 Processing Ledger Data – Management Ledger



8.1.4.7.2 Management Ledger01

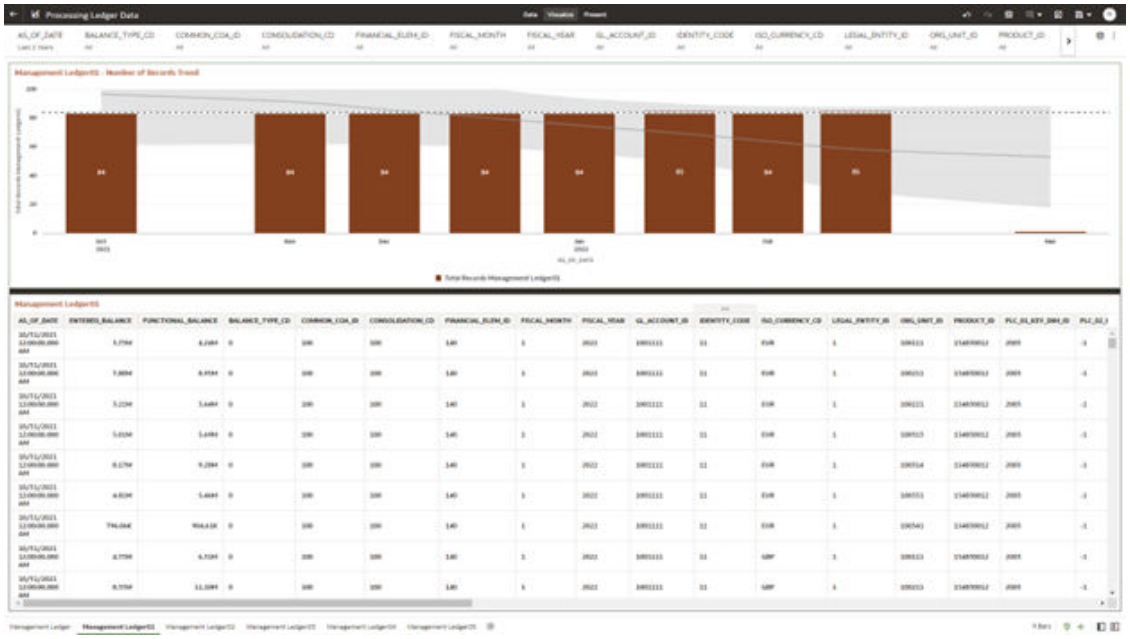
The Management Ledger01 Report provides the analysis capability on the Placeholder Management Ledger 01 Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Management Ledger01 - Number of Records Trend
  Total Records Management Ledger01 aggregated by AS_OF_DATE.
- Management Ledger01
  Granular table records at FINANCIAL_ELEM_ID level.

Figure 8-55 Processing Ledger Data – Management Ledger01



8.1.4.7.3 Management Ledger02

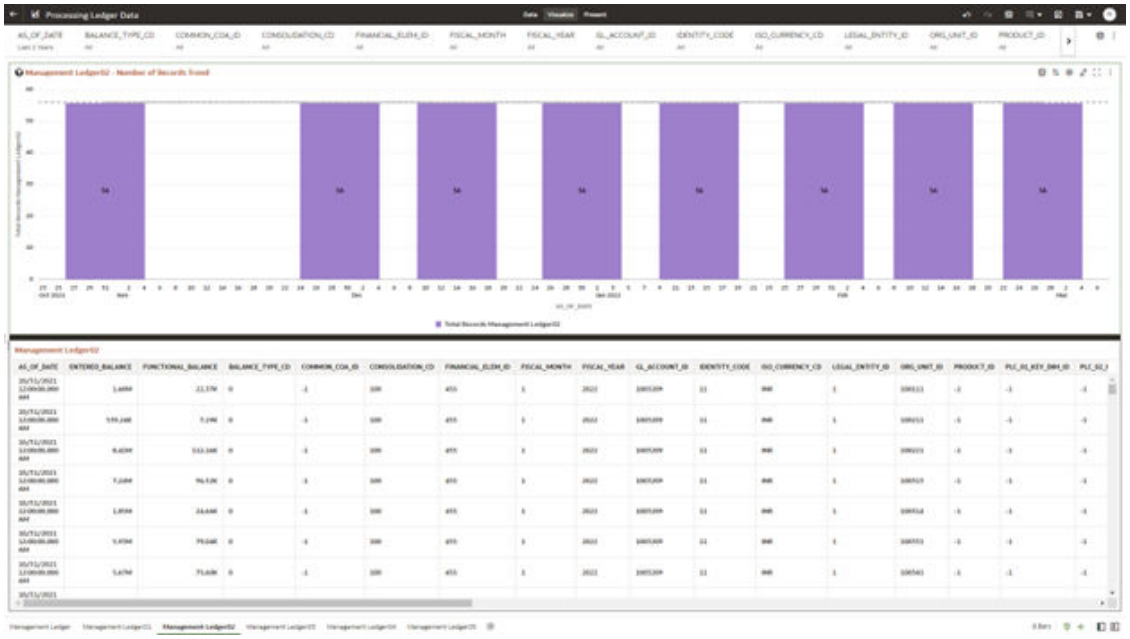
The Management Ledger02 Report provides the analysis capability on the Placeholder Management Ledger 02 Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Management Ledger02 - Number of Records Trend
  Total Records Management Ledger02 aggregated by AS_OF_DATE.
- Management Ledger02
  Granular table records at FINANCIAL_ELEM_ID level.

Figure 8-56 Processing Ledger Data – Management Ledger02



8.1.4.7.4 Management Ledger03

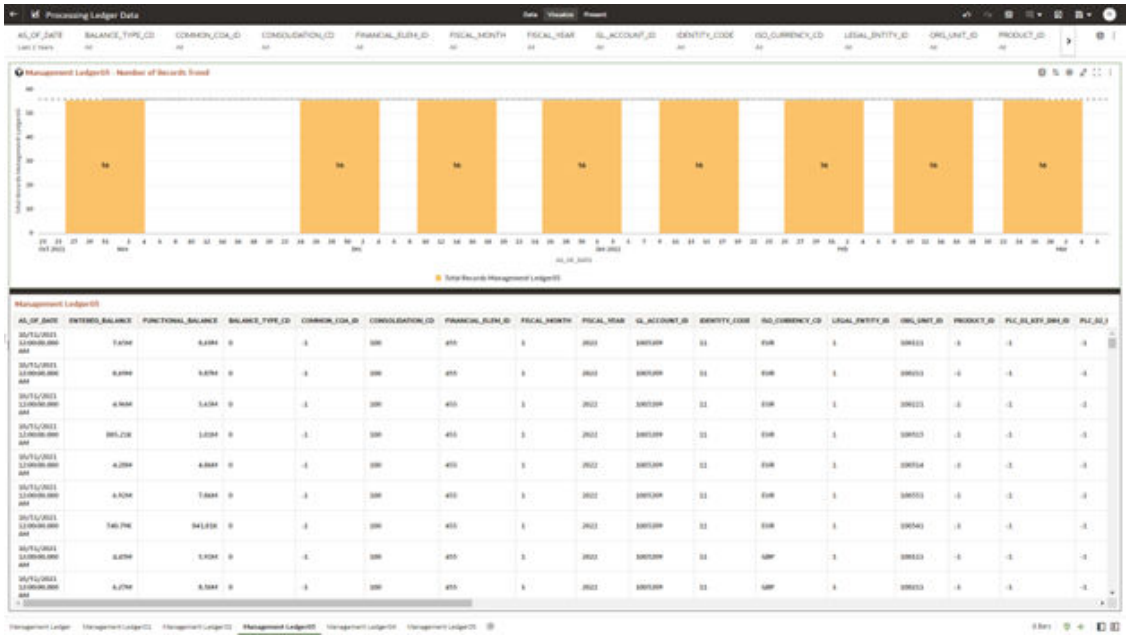
The Management Ledger03 Report provides the analysis capability on the Placeholder Management Ledger 03 Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Management Ledger03 - Number of Records Trend
  Total Records Management Ledger03 aggregated by AS_OF_DATE.
- Management Ledger03
  Granular table records at FINANCIAL_ELEM_ID level.

Figure 8-57 Processing Ledger Data – Management Ledger03



8.1.4.7.5 Management Ledger04

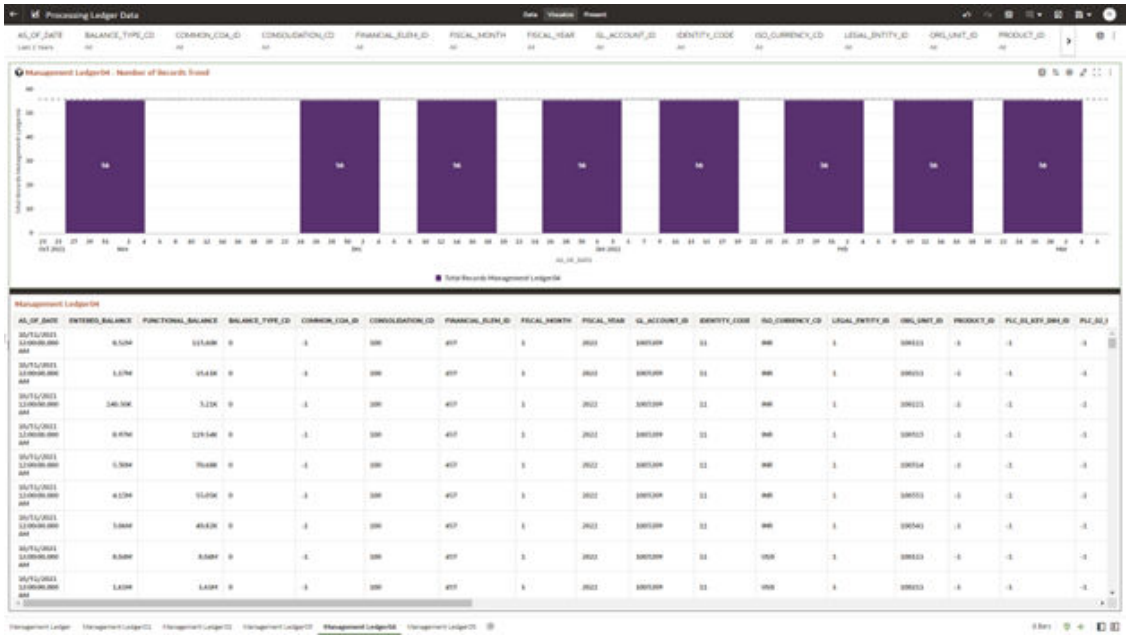
The Management Ledger04 Report provides the analysis capability on the Placeholder Management Ledger 04 Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Management Ledger04 - Number of Records Trend
  Total Records Management Ledger04 aggregated by AS_OF_DATE.
- Management Ledger04
  Granular table records at FINANCIAL_ELEM_ID level.

Figure 8-58 Processing Ledger Data – Management Ledger04



8.1.4.7.6 Management Ledger05

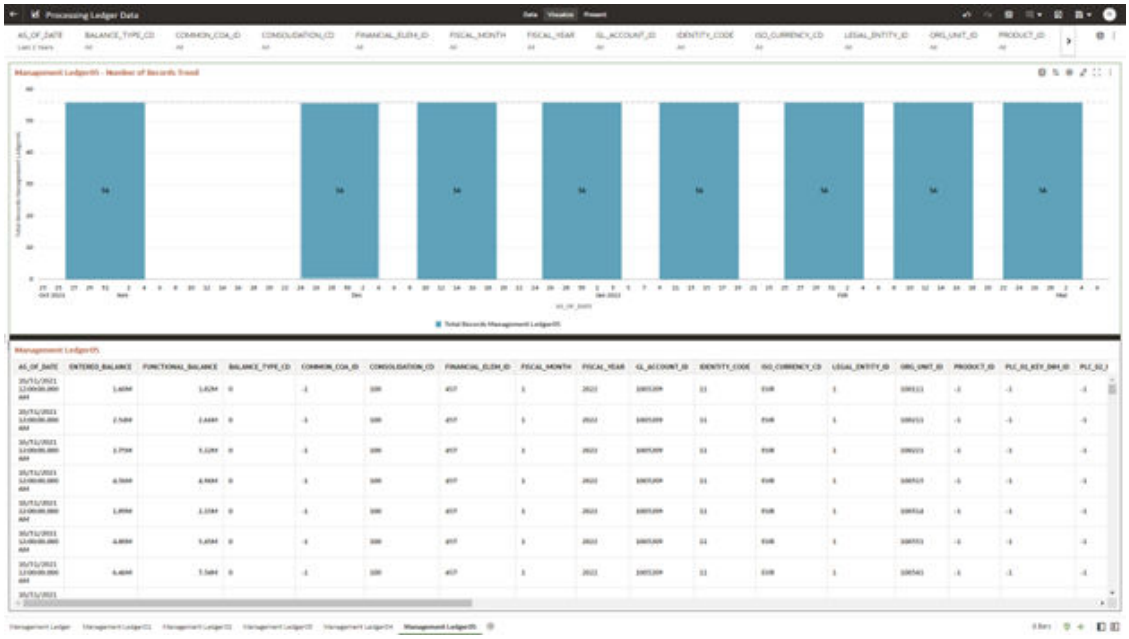
The Management Ledger05 Report provides the analysis capability on the Placeholder Management Ledger 05 Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Management Ledger05 - Number of Records Trend
  Total Records Management Ledger05 aggregated by AS_OF_DATE.
- Management Ledger05
  Granular table records at FINANCIAL_ELEM_ID level.

Figure 8-59 Processing Ledger Data – Management Ledger05



8.1.4.8 Processing Transaction Summary Data

You can use this report to perform the analysis on the Processing Area Tables related to Transaction Summary Data.

The report contains specifically the following Staging Database Objects:

Table 8-9 Staging Transaction Summary Data Reports

Report Name	Scope	Table Layer	Physical Table List	Logical Table List	Report Canvas Name
Processing Transaction Summary Data	Transaction Summary	FSI–Processing	FSI_D_ASSET_TXNS FSI_D_LIABILITY_TXNS FSI_D_FEE_BASED_SERVICE_TXNS FSI_D_OFF_BALANCE_SHEET_TXNS	Asset Transaction Summary Liability Transaction Summary Fee Based and Other Services Transaction Summary Off Balance Sheet Transaction Summary	Assets Transaction Summary Liabilities Transaction Summary Fee Based Services Transaction Summary Off Balance Sheet Transaction Summary

8.1.4.8.1 Asset Transaction Summary

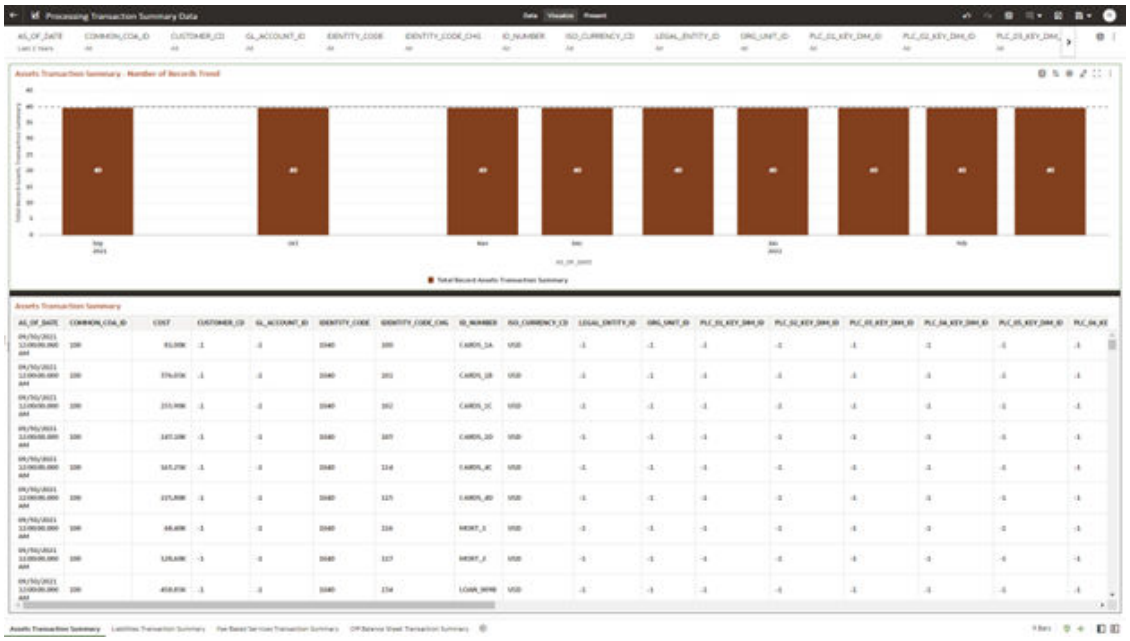
The Asset Transaction Summary Report provides the analysis capability on the Assets Transaction Summary Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Assets Transaction Summary - Number of Records Trend
  Total Record Assets Transaction Summary aggregated by AS_OF_DATE.
- Assets Transaction Summary
  Granular table records at ID_NUMBER level.

Figure 8-60 Processing Transaction Summary Data - Asset Transaction Summary



8.1.4.8.2 Liabilities Transaction Summary

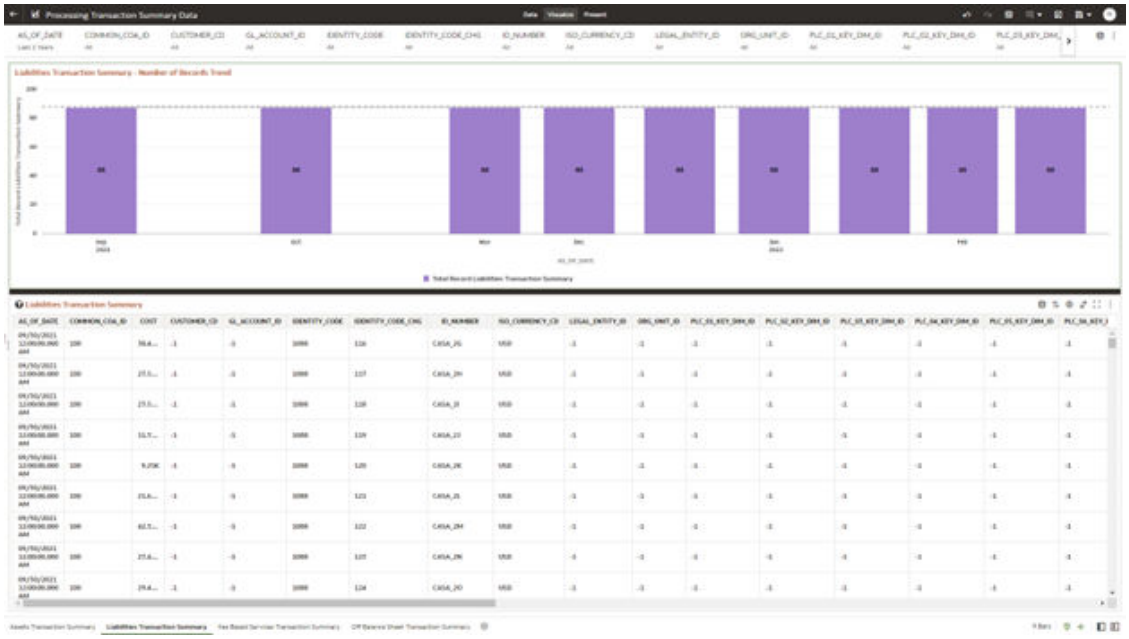
The Liabilities Transaction Summary Report provides the analysis capability on the Liability Transaction Summary Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Liabilities Transaction Summary - Number of Records Trend
  Total Record Liability Transaction Summary aggregated by AS_OF_DATE.
- Liabilities Transaction Summary
  Granular table records at ID_NUMBER level.

Figure 8-61 Processing Transaction Summary Data – Liabilities Transaction Summary



8.1.4.8.3 Fee Based Services Transaction Summary

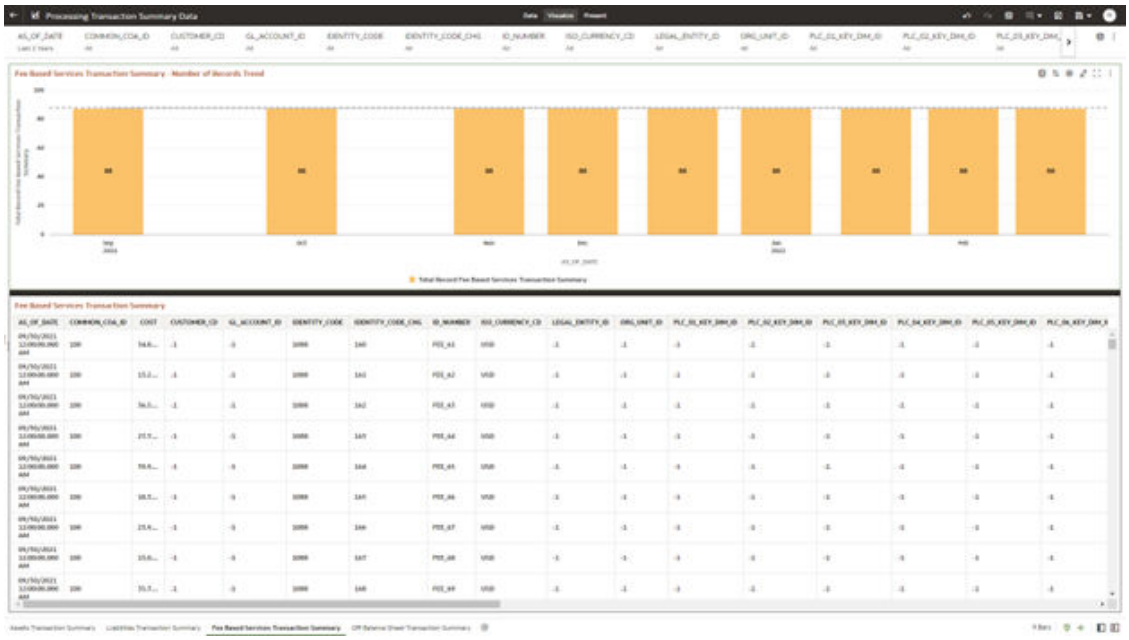
The Fee Based Services Transaction Summary Report provides the analysis capability on the Fee Based and Other Services Transaction Summary Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Fee Based Services Transaction Summary - Number of Records Trend
  Total Record Fee Based Services Transaction Summary aggregated by AS_OF_DATE.
- Fee Based Services Transaction Summary
  Granular table records at ID_NUMBER level.

Figure 8-62 Processing Transaction Summary Data – Fee Based Services Transaction Summary



8.1.4.8.4 Off Balance Sheet Transaction Summary

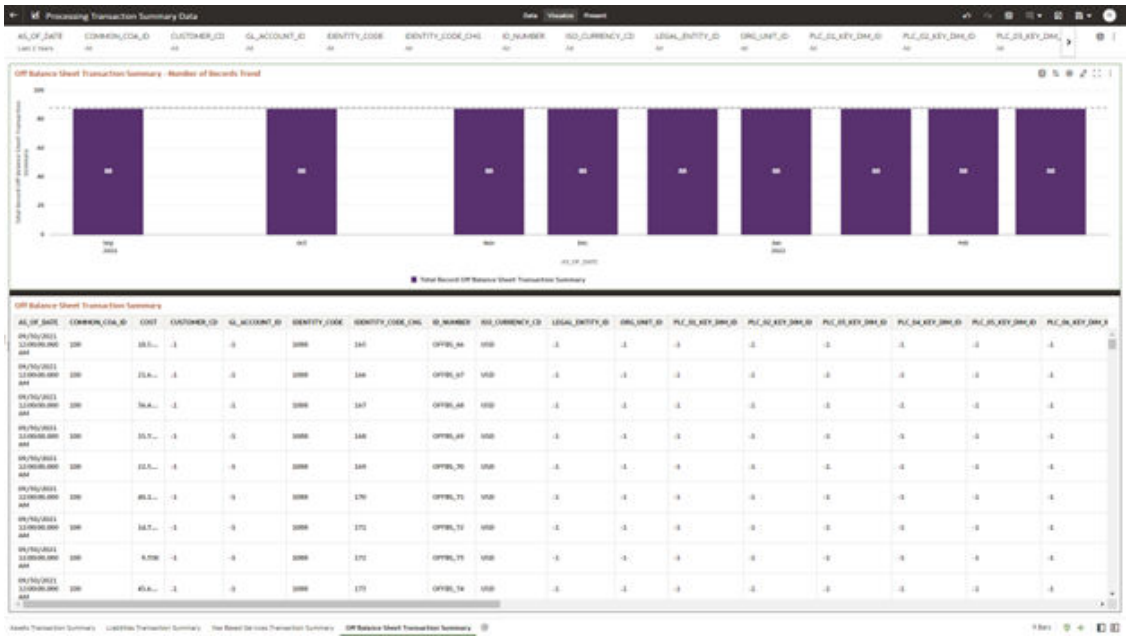
The Off Balance Sheet Transaction Summary Report provides the analysis capability on the Off Balance Sheet Transaction Summary Table.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes pertaining to the Table Columns Perimeter.

The report displays the underlying data according to the following Charts' logic:

- Off Balance Sheet Transaction Summary - Number of Records Trend
  Total Record Off Balance Sheet Transaction Summary aggregated by AS_OF_DATE.
- Off Balance Sheet Transaction Summary
  Granular table records at ID_NUMBER level.

Figure 8-63 Processing Transaction Summary Data – Off Balance Sheet Transaction Summary



8.1.5 Operational Analysis

This topic covers the following reports:

- Dimensions Registry
- Currency Rates
- Data Quality Checks
- File Uploads
- Groups and Roles

8.1.5.1 Dimensions Registry

To access the Dimensions Registry report, from the LHS menu, select **Operational Analysis**, and then select **Dimensions Registry**.

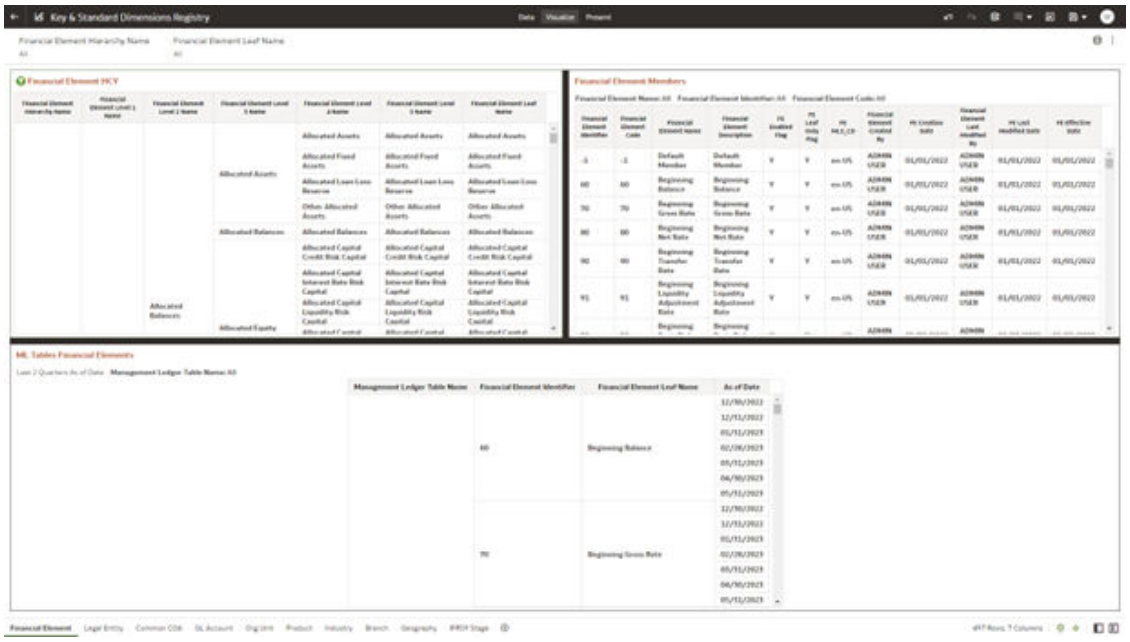
This is arranged as a set of reports catering to the analysis of the following categories:

- Financial Element
- Legal Entity
- Common COA
- GL Account
- Org Unit
- Product
- Industry
- Branch

- Geography
- IFRS9 Stage

8.1.5.1.1 Financial Element

Figure 8-64 Key & Standard Dimensions Registry



- **HCY Report**: Report displays the names of the hierarchy levels and dimensions from Level 1 to Level 5, as well as the names of the leaf nodes. More Levels can be added by the user as per user convenience.
- **Member Report**: Report displays the information regarding member names, Descriptions, and other member-related information. This Report will help the user in identifying the members of the dimension that are loaded in the application. Instrument Tables Report:- Report displays the Instrument table name and the corresponding Member ID and Member Name along with As of Date. Users can identify a particular dimension present in which instrument tables and the corresponding as-of-date.
- **Management Ledger Tables Report**: Report displays the ML table name and the corresponding Member ID and Member Name along with As of Date. Users can identify a particular dimension is present in which Management Ledger tables and the corresponding as-of-date.

Report Filters

The following Report Filters are available:

- **Financial Element Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Financial Element Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Financial Element Hierarchy Name” must be selected with only a single value simultaneously.

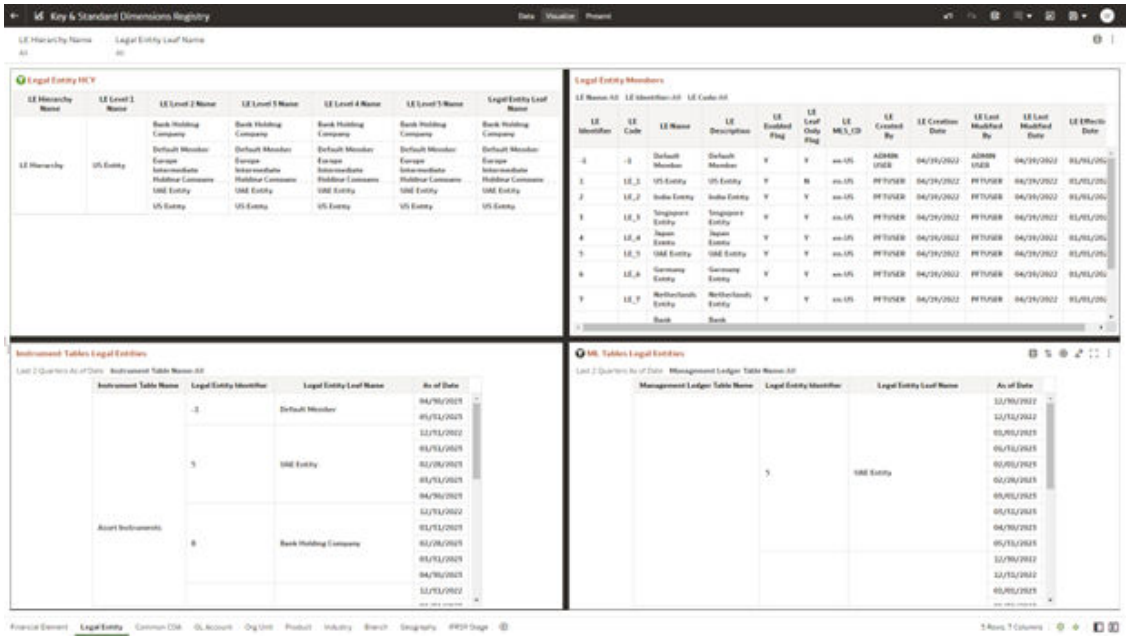
- **Financial Element Leaf Name**: You can use this filter to select the Financial Element Leaf Name that is related to the underlying Management Ledger data.

8.1.5.1.2 Legal Entity

The following Report Filters are available:

- **Legal Entity Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Legal Entity Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “LE Hierarchy Name” must be selected with only a single value simultaneously.
- **Legal Entity Leaf Name**: You can use this filter to select the Legal Entity Leaf Name that is related to the underlying Management Ledger data.

Figure 8-65 Legal Entity-Key & Standard Dimensions Registry

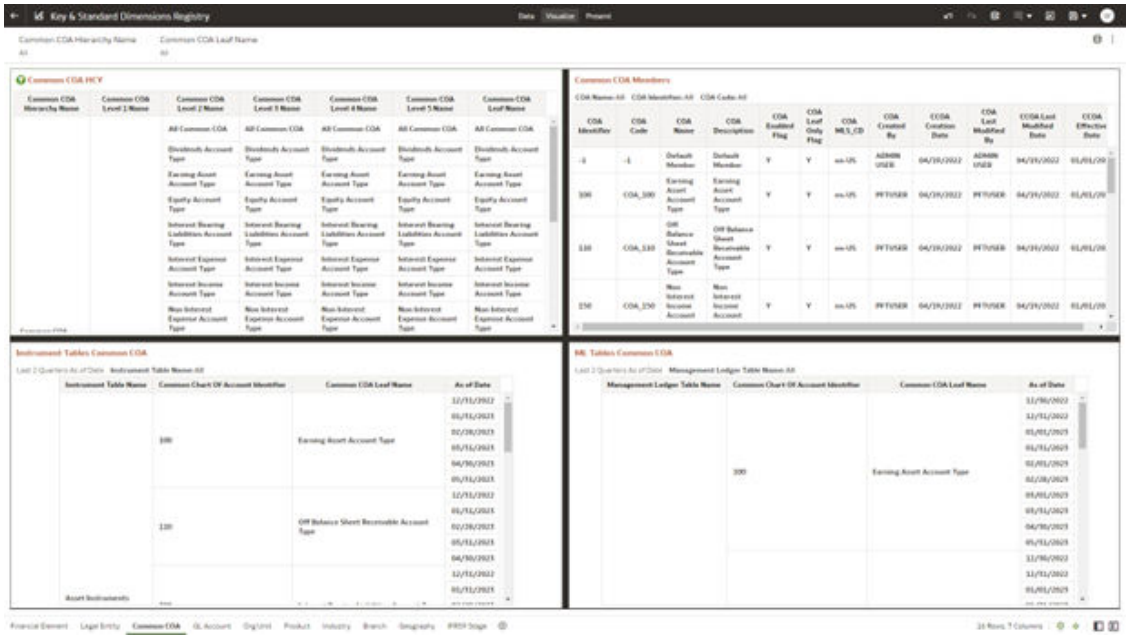


8.1.5.1.3 Common COA

The following Report Filters are available:

- Common COA Hierarchy Name: N.B. This is a mandatory filter for the group filtering on Common COA Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Common COA Hierarchy Name” must be selected with only a single value simultaneously.
- Common COA Leaf Name: You can use this filter to select the Common COA Leaf Name that is related to the underlying management ledger data.

Figure 8-66 Common COA-Key and Standard Dimensions Registry

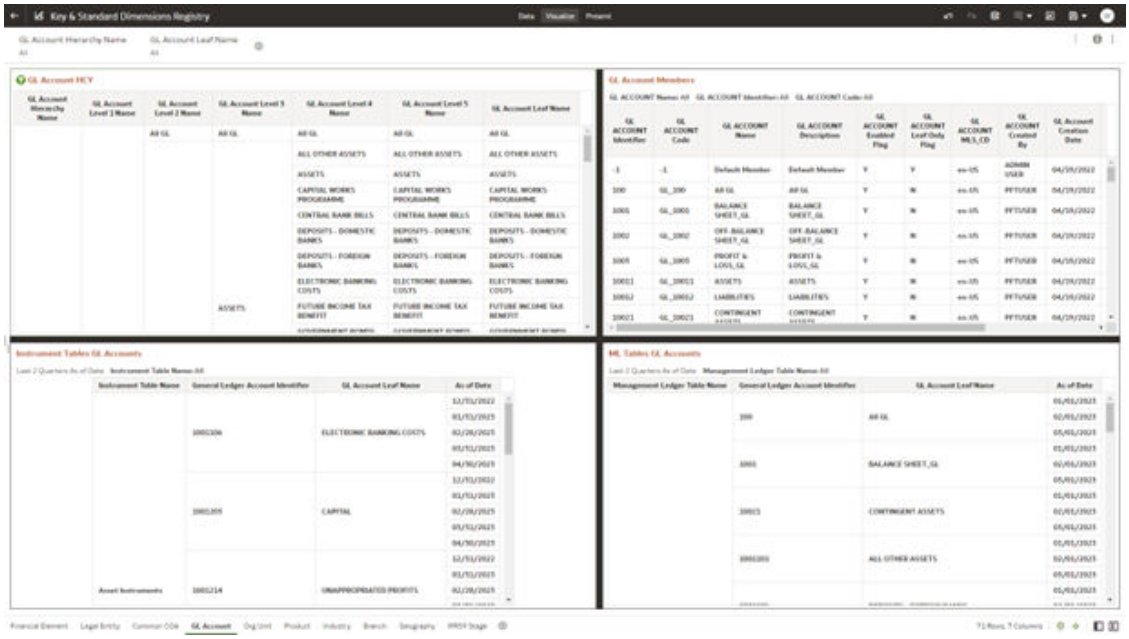


8.1.5.1.4 GL Account

The following Report Filters are available:

- **GL Account Hierarchy Name**: Note that this is a mandatory filter for the group filtering on GL Account Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “GL Account Hierarchy Name” must be selected with only a single value simultaneously.
- **GL Account Leaf Name**: You can use this filter to select the GL Account Leaf Name that is related to the underlying Management Ledger data.

Figure 8-67 GL Account - Key and Standard Dimensions Registry

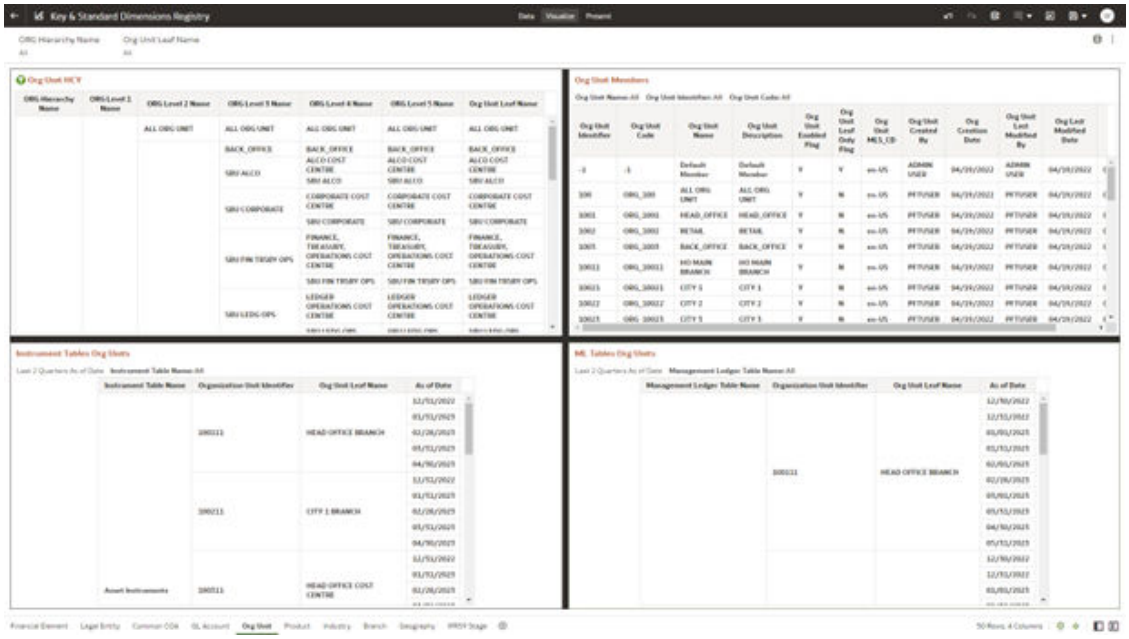


8.1.5.1.5 Org Unit

The following Report Filters are available:

- **Org Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Org Unit Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Org Hierarchy Name” must be selected with only a single value simultaneously.
- **Org Unit Leaf Name**: You can use this filter to select the Org Unit Leaf Name that is related to the underlying Management Ledger data.

Figure 8-68 Org Unit - Key & Standard Dimensions Registry

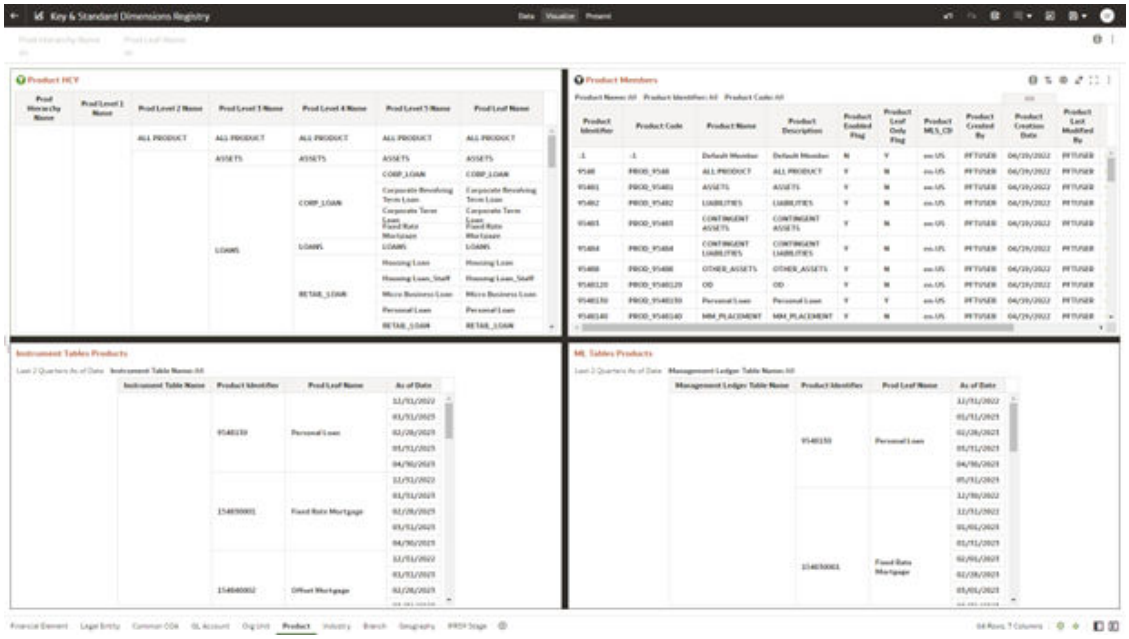


8.1.5.1.6 Product

The following Report Filters are available:

- **Product Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Product Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Prod Hierarchy Name” must be selected with only a single value simultaneously.
- **Product Leaf Name**: You can use this filter to select the Prod Leaf Name that is related to the underlying Management Ledger data.

Figure 8-69 Product - Key & Standard Dimensions Registry

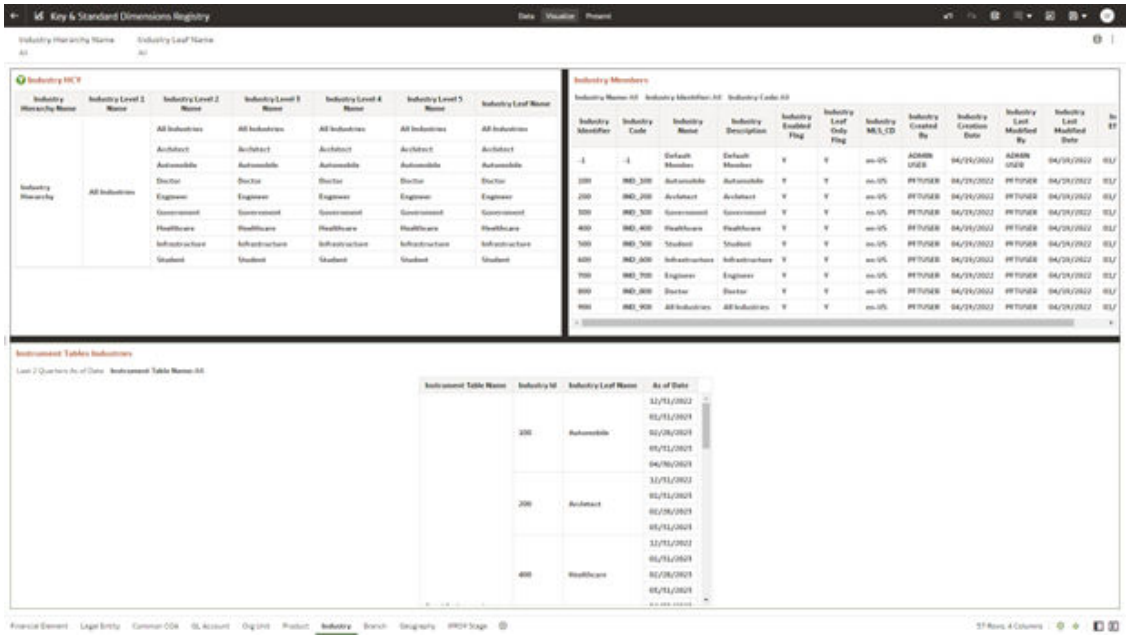


8.1.5.1.7 Industry

The following Report Filters are available:

- **Industry Hierarchy Name**: As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Industry Hierarchy Name” must be selected with only a single value simultaneously.
- **Industry Leaf Name**: You can use this filter to select the Industry Leaf Name that is related to the underlying Industry.

Figure 8-70 Industry - Key & Standard Dimensions Registry

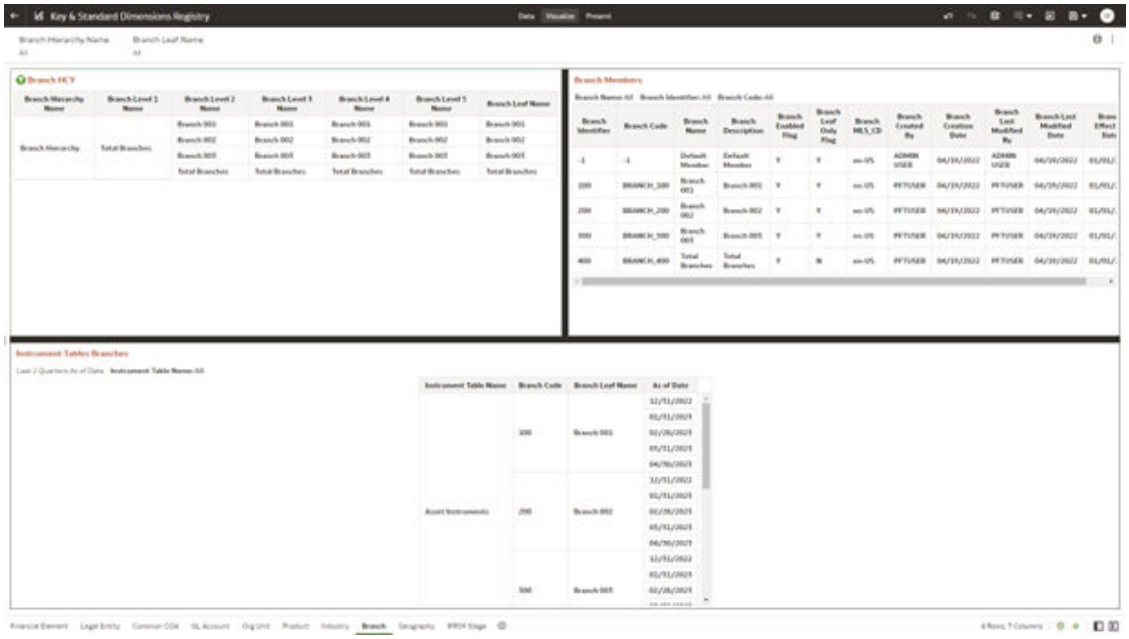


8.1.5.1.8 Branch

The following Report Filters are available:

- **Branch Hierarchy Name**: As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Branch Hierarchy Name” must be selected with only a single value simultaneously.
- **Branch Leaf Name**: You can use this filter to select the Branch Leaf Name that is related to the underlying Branch.

Figure 8-71 Branch - Key and Standard Dimensions Registry

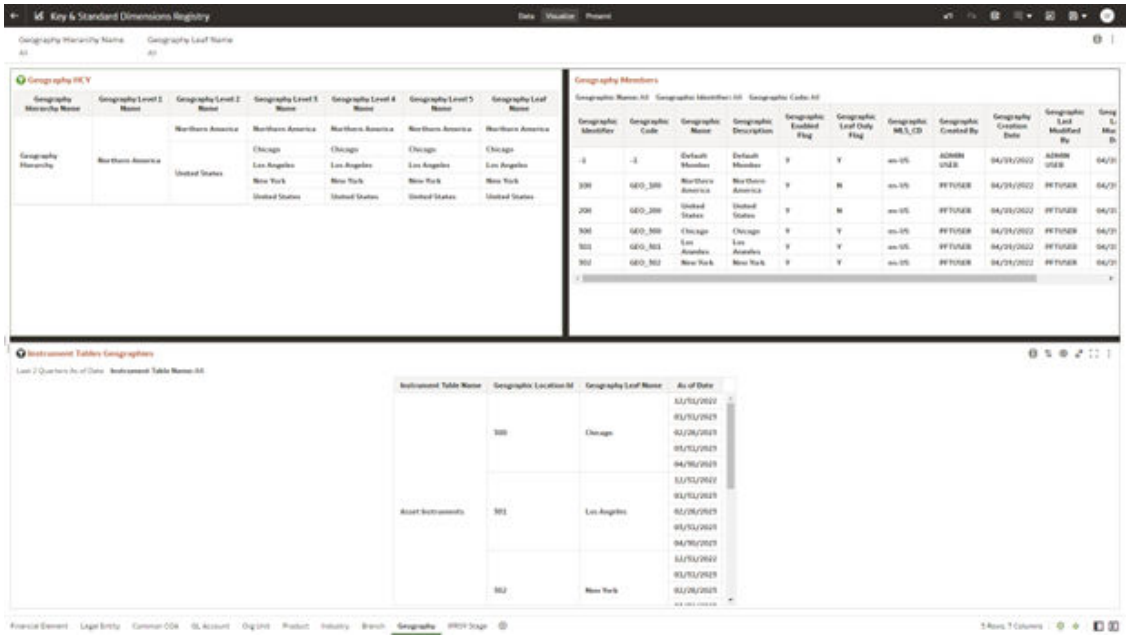


8.1.5.1.9 Geography

The following Report Filters are available:

- **Geography Hierarchy Name**: This is a mandatory filter for the group filtering on the Geography Hierarchy.
  As the application supports the creation of multiple hierarchies for the same dimension of analysis, to avoid displaying results from multiple hierarchies at the same time, a mandatory driver to select "Geography Hierarchy Name" must be selected.
- **Geography Leaf Name**: You can use this filter to select the Geography Leaf Name that is related to the underlying Geography.

Figure 8-72 Geography - Key & Standard Dimensions Registry

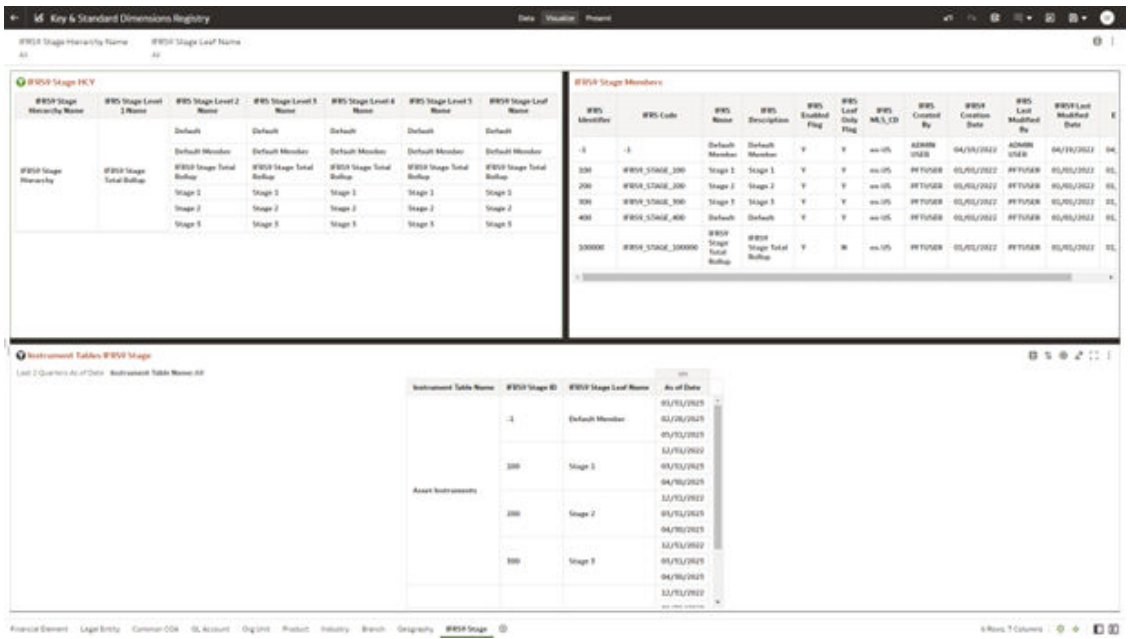


8.1.5.1.10 IFRS9 Stage

The following Report Filters are available:

- **IFRS9 Stage Hierarchy Name**: IFRS 9, financial assets are classified according to the business model for managing them and their characteristics. An individual or collective basis – in three stages under IFRS 9.
- **IFRS9 Stage Leaf Name**: You can use this filter to select the IFRS9 Stage Leaf Name that is related to the underlying IFRS9.

Figure 8-73 IFRS9 State - Key & Standard Dimensions Registry



8.1.5.2 Currency Rates

To access the Currency Rates report, from the LHS menu, select **Operational Analysis**, and then select **Currency Rates**.

Reporting Currency Rates is the currency in which an entity's financial statements or other financial documents are reported. Choosing one currency for reporting makes it easier to understand the financial documents across the board.

This is arranged as a set of reports catering to the analysis of the following categories:

- Floating Segment Rate
- Fixed Exchange Rate
- Exchange Rate

8.1.5.2.1 Report Filters

The following Report Filters are available:

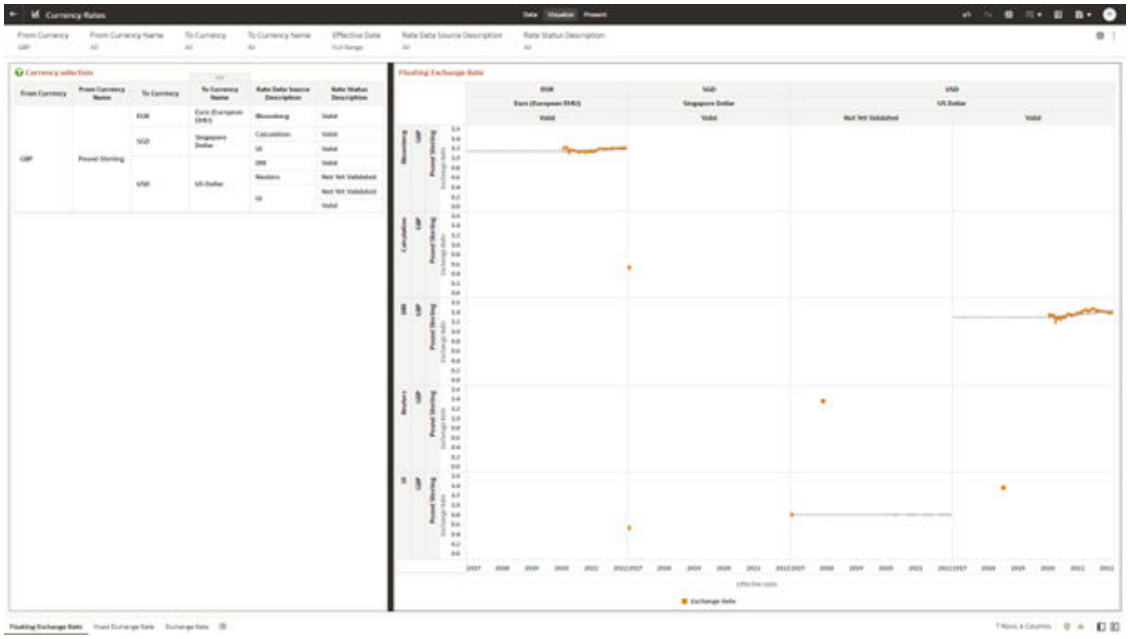
Figure 8-74 Report Filters

- **From Currency**: You can use this filter to select the Currency Code source corresponding to the hierarchy.
- **From Currency Name**: You can use this filter to select the Currency Name source corresponding to the hierarchy.
- **To Currency**: You can use this filter to select the Currency Code destination corresponding to the hierarchy.
- **To Currency Name**: You can use this filter to select the Currency Name destination corresponding to the hierarchy.
- **Effective Date**: You can use this filter to select a date is the specific date when an agreement outlined in the contract begins and end;
- **Rate Data Source Description**: You can use this filter to select the Rate Data Source Description could be Bloomberg, Calculation, etc
- **Rate Status Description**: You can use this filter to select Rate Data Source description could be valid, invalid, etc

8.1.5.2.2 Floating Segment Rate

In this canvas, the floating segment rate shows rises or falls with the rest of the market, along with a segment and conversion rate.

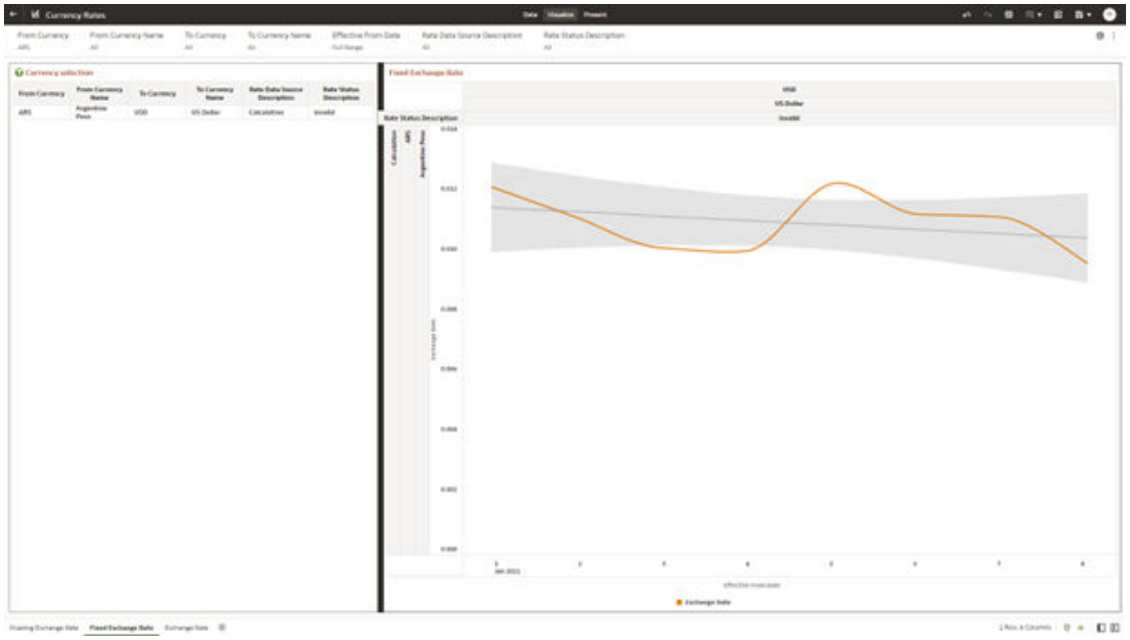
Figure 8-75 Floating Segment Rate



8.1.5.2.3 Fixed Exchange Rate

In this canvas, the fixed exchange rate shows rises or falls with the market.

Figure 8-76 Fixed Exchange Rate



8.1.5.2.4 Report Filters

The following Report Filters are available:

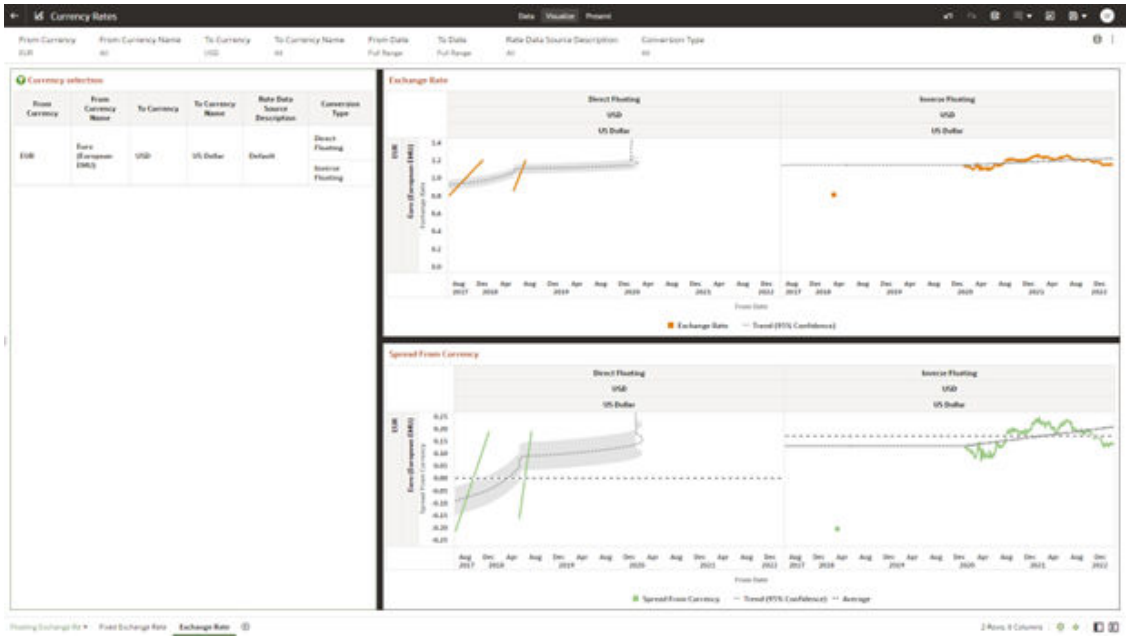
Figure 8-77 Exchange Rate Report Filters

- **From Currency**: You can use this filter to select the Currency Code source corresponding to the hierarchy.
- **From Currency Name**: You can use this filter to select the Currency Name source corresponding to the hierarchy.
- **To Currency**: You can use this filter to select the Currency Code destination corresponding to the hierarchy.
- **To Currency Name**: You can use this filter to select the Currency Name destination corresponding to the hierarchy.
- **From Date**: You can use this filter to select a date as the specific date source to begin.
- **To Date**: You can use this filter to select a date is the specific date destination to end.
- **Rate Data Source Description**: You can use this filter to select the Rate Data Source Description could be Bloomberg, Calculation, etc.
- **Conversion Type**: You can use this filter to select a Conversion Type as Direct Floating, Inverse Fixed, Inverse Floating, or Non-triangulated.

8.1.5.2.5 Exchange Rate

In this canvas, the Exchange rate shows Currency and spread of them.

Figure 8-78 Exchange Rate Canvas



8.1.5.3 Data Quality Checks

To access the Data Quality Checks report, from the LHS menu, select **Operational Analysis**, and then select **Data Quality Checks**.

Data Quality Check Reports are divided into four canvases.

- DQ Check Platform Availability
- DQ Batch Executions
- DQ Results
- DQ Detail Results

DQ Check Platform Availability

You can use the following filters:

- **DQ Rule Name**: Rules created in the Application
- **Base Table**: Base tables used in the rules
- **Severity Values**: Error, Warning, Info

Total Checks: Number of Checks created in the OFSAA Application.

Number of Total available checks for each Staging table: Gives the information regarding number of checks based on the various staging tables.

The following reports gives the information regarding the number of various checks created.

- **Range Checks**: Total number of Range checks defined in the system.
- **Data Length Checks**: Total number of Data Length checks defined in the system.
- **Column Reference Checks**: Total number of Column Reference checks defined in the system.
- **List of Values Checks**: Total number of List of values check defined in the system.
- **Null Checks**: Total number of Null checks defined in the system.
- **Blank Checks**: Total number of Blank checks defined in the system.
- **Integrity Checks**: Total number of Integrity checks defined in the system.
- **Duplicate Checks**: Total number of Duplicate checks defined in the system.
- **Business Checks**: Total number of Business checks defined in the system.

Figure 8-79 Number of Total available Checks for each Staging table

Data Quality Checks Distribution gives the distribution of checks based on the base tables.

Detail of Available quality checks in the platform gives the percentage distribution according to severity category defined on different Staging tables.

Figure 8-80 Detail Quality Checks Distribution and Detail of Available Quality Checks in the Platform

DQ Batch Executions Canvas

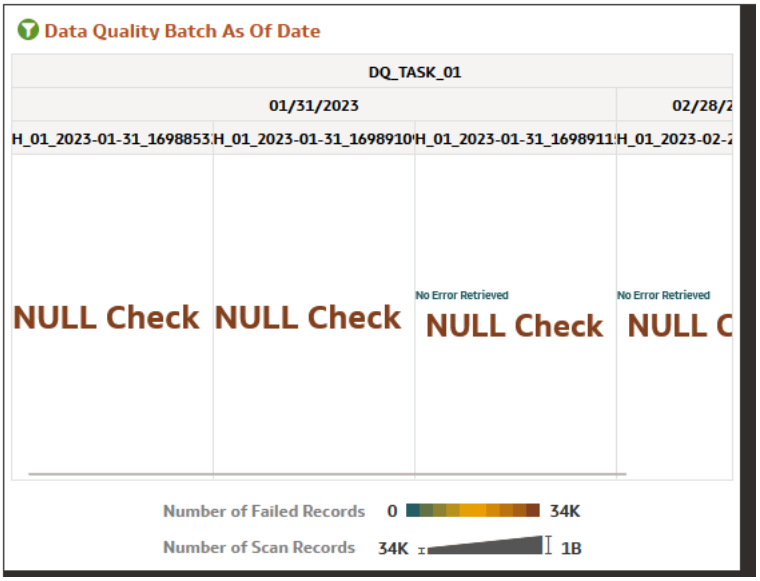
This canvas gives the information regarding the Batches executed on Data Quality Checks.

You can use the following filters:

- **Batch Identifier**: Batches executed in the system.
- **Process Identifier**: Process Name for the executed batch in the system.
- **Fic Mis Date**: Batch execution date.
- **DQ Group Identifier**: Data Quality Groups created in the system.
- **DQ Group Description**: Description of Data Quality Groups.
- **DQ Check Identifier**: Data Quality checks created in the system.
- **DQ Check Description**: Description of Data Quality checks.
- **DQ Source Table**: Base table on which Data Quality check is created.
- **DQ Category Name**: Data Quality check category.

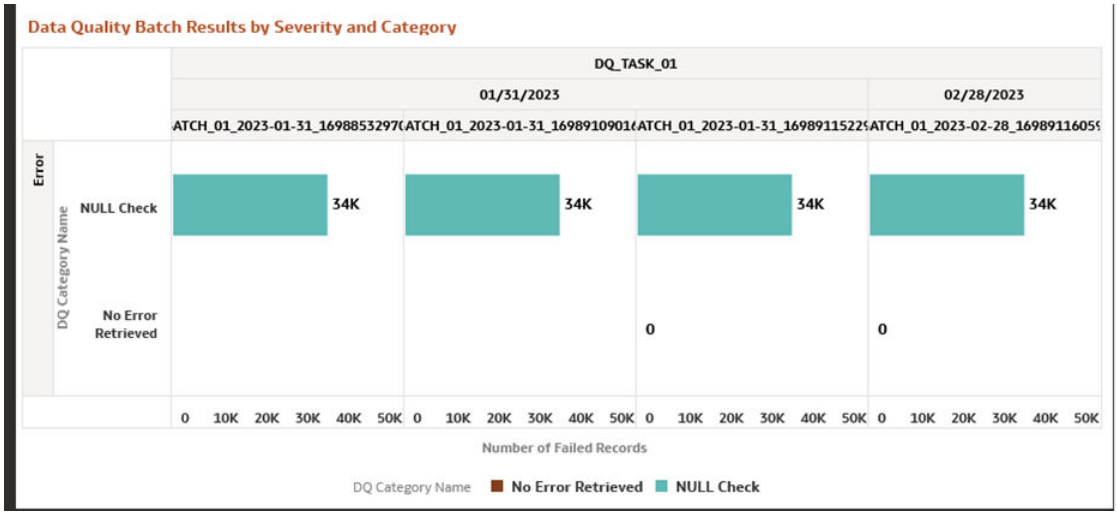
Data Quality Batch As Of Date: This report provides details on the executed checks, including the date of execution, Batch name, and the count of scanned records and failed records against each defined check and corresponding to Data Quality Category name.

Figure 8-81 Data Quality Batch As Of Date



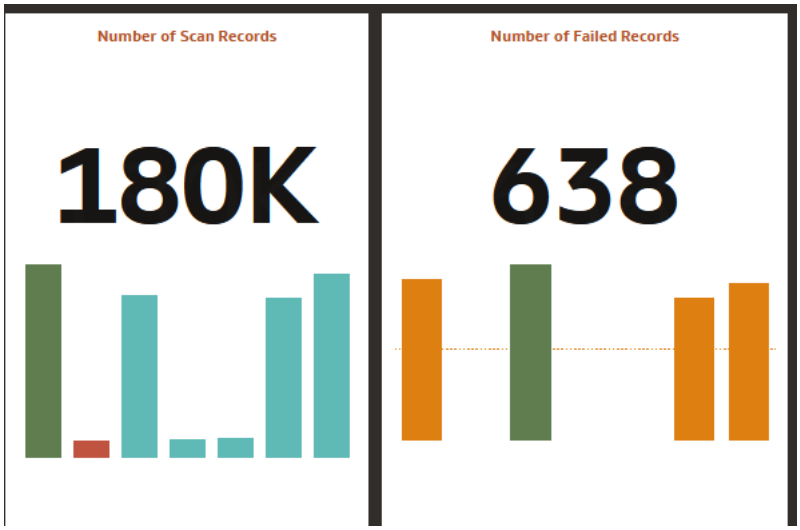
Results of Data Quality Batches by Severity and Category: This report provides details on the quantity of failed records across various batches, including the execution date and batch name according to Data Quality Category Name.

Figure 8-82 Data Quality Batch Results by Severity and Category



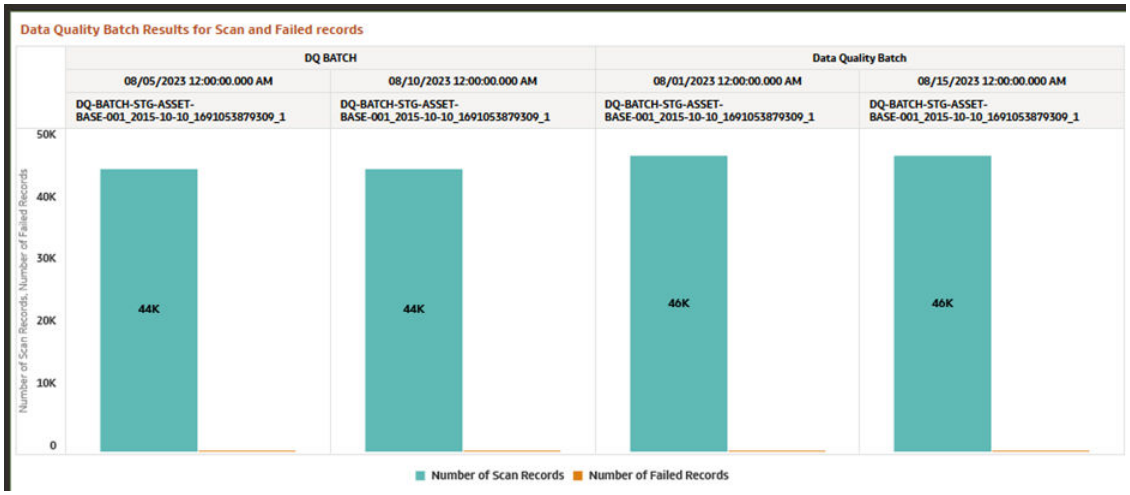
These tile reports display information about total number of scanned records and total number of failed records according to the last available Data Quality batch execution.

Figure 8-83 Number of Scan Records and Number of Failed Records



Results of Data Quality Batches for Scanned and Failed Records: This report presents a bar chart illustrating the total number of scanned records and total number of failed records, categorized by batch name and execution date.

Figure 8-84 Data Quality Batch Results for Scan and Failed Records



DQ Results

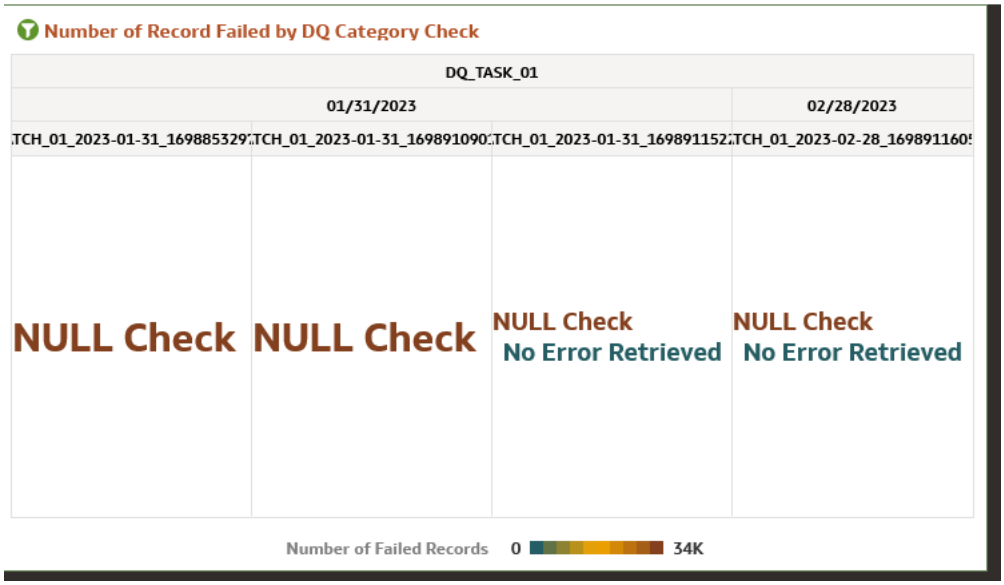
You can use the following filters:

- **Batch Identifier**: Batches executed in the system.
- **Process Identifier**: Process Name for the executed batch in the system.
- **Fic Mis Date**: Batch execution date.
- **DQ Group Identifier**: Data Quality Groups created in the system.
- **DQ Group Description**: Description of Data Quality Groups.

- **DQ Check Identifier**: Data Quality checks created in the system.
- **DQ Check Description**: Description of Data Quality checks.
- **DQ Source Table**: Base table on which Data Quality check is created.
- **DQ Category Name**: Data Quality check category.

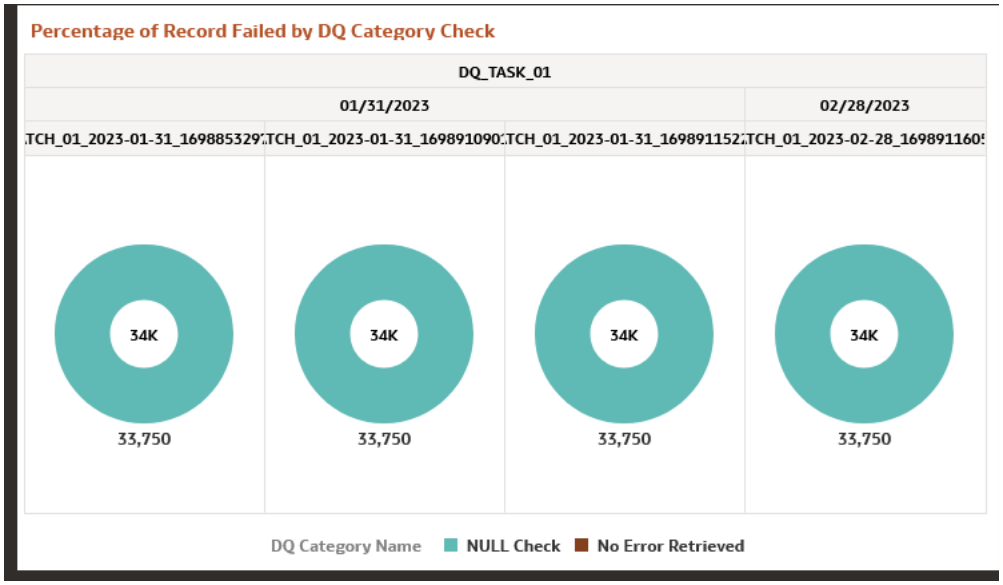
Number of Records Failed by Data Quality Category Check: This report showcases the number of failed records for each Data quality check by batch names and execution dates according to Data Quality Category Name.

Figure 8-85 Number of Record Failed by DQ Category Check



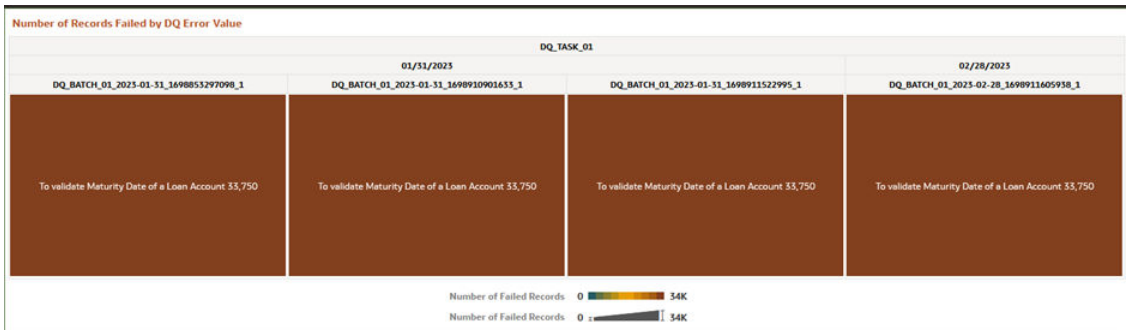
Percentage of Record Failed by DQ Category Check: This report gives the information regarding Percentage distribution and total number of checks by batch names and execution dates displayed by Data Quality Category Name.

Figure 8-86 Percentage of Record Failed by DQ Category Check



Number of Records Failed by DQ Error Value: This report shows the information regarding number of errors along with the Data Quality Check Description separated by batch names and execution dates.

Figure 8-87 Number of Records Failed by DQ Error Value



DQ Detail Results

This canvas gives the detailed information regarding the Data Quality Batch information.

Figure 8-88 DQ Detail Results

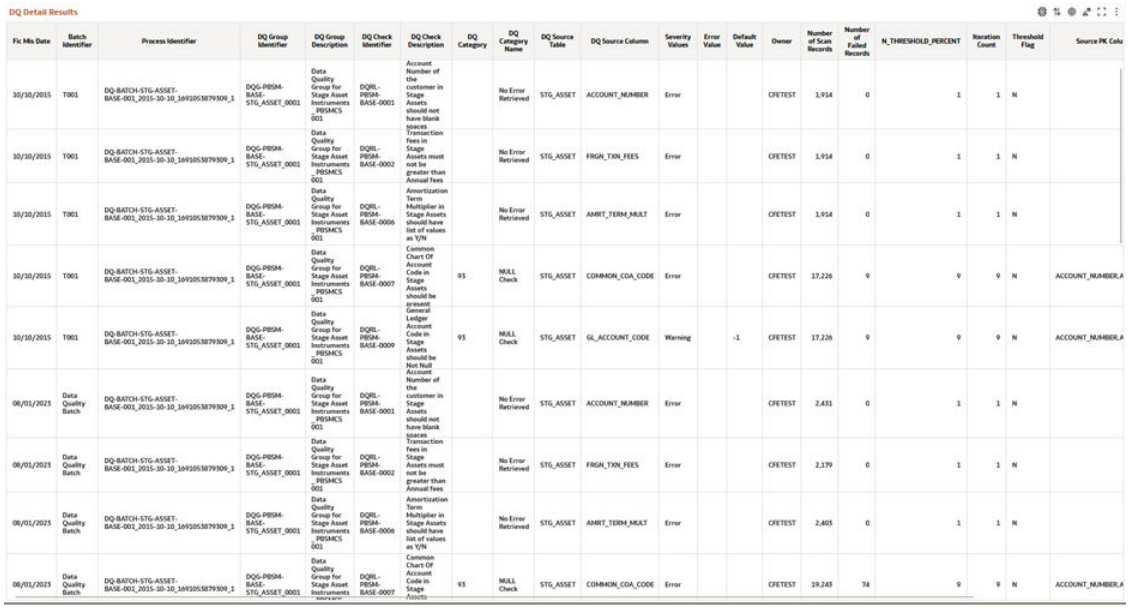
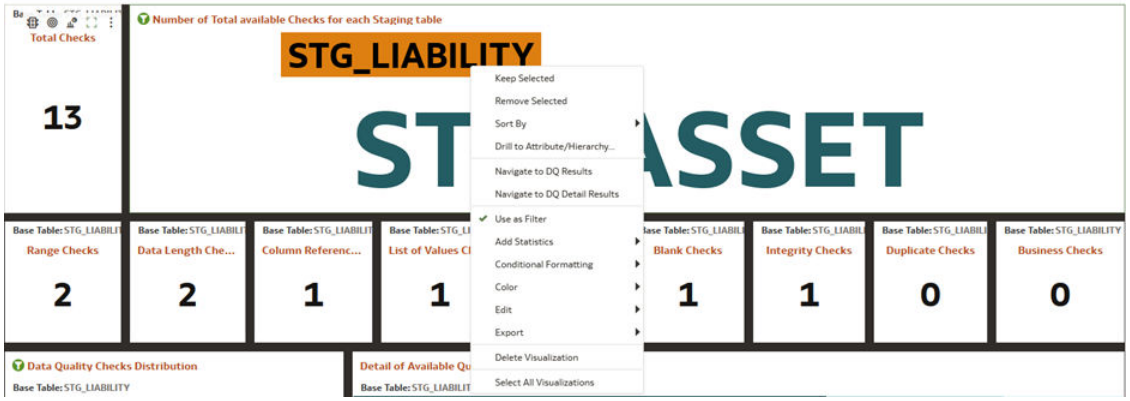


Figure 8-89 Data Action



Data Action: A Data Action link can pass context values as parameters to other canvas. In Data Quality Reports we have two data actions namely DQ Results and DQ details results.

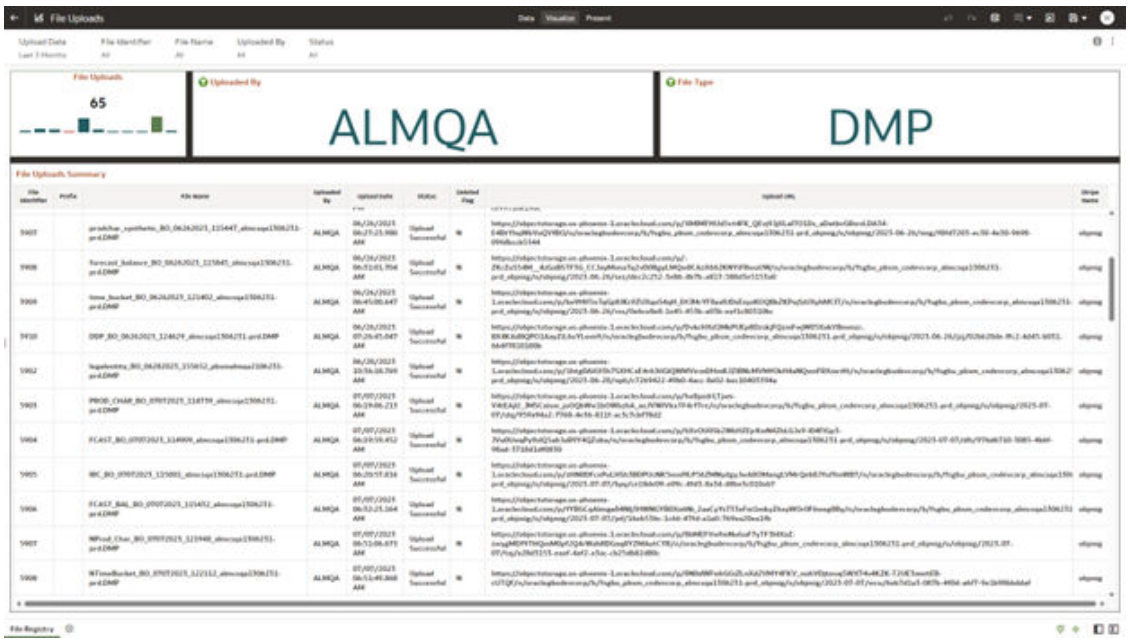
DQ Results: When user right clicks on any element and navigates to DQ Result, the selected object will get passed as a filter and pass this filter in DQ results Canvas.

DQ Result Details: When user right clicks on any element and navigates to DQ Result Details, the selected object will get passed as a filter and pass this filter in DQ Results Details Canvas.

8.1.5.4 File Uploads

To access the File Uploads report, from the LHS menu, select **Operational Analysis**, and then select **File Uploads**.

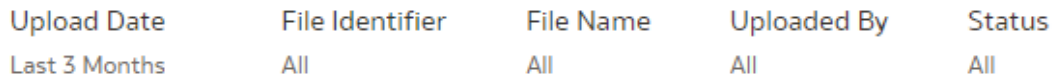
Figure 8-90 File Upload Report



Report Common Filters

You can use a series of canvas level pinned Prompts to filter the data according to Functional Key Attributes as follows:

Figure 8-91 Canvas Prompt Filters



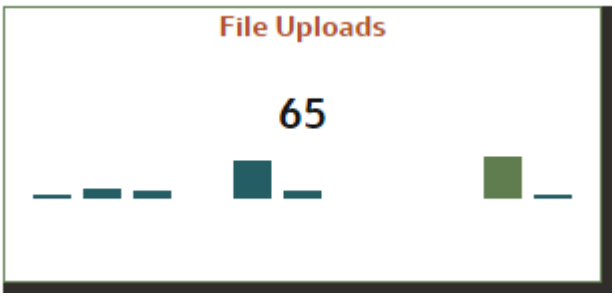
The following filters are available:

- **Update Date**: Use this filter to select the Update Date. The selection default is Last 3 Months.
- **File Identifier**: Use this filter to select a specific File Identifier.
- **File Name**: Use this filter to select a specific File Name.
- **Upload By**: Use this filter to select Upload By.

Canvas File Uploads

This chart shows the total number of files uploaded based on a reporting period.

Figure 8-92 Canvas File Uploads



Canvas Uploads by

This filter enables you to view the details of the users who have uploaded the files via the UI or batch process.

Figure 8-93 Canvas Uploads by

Canvas File Type

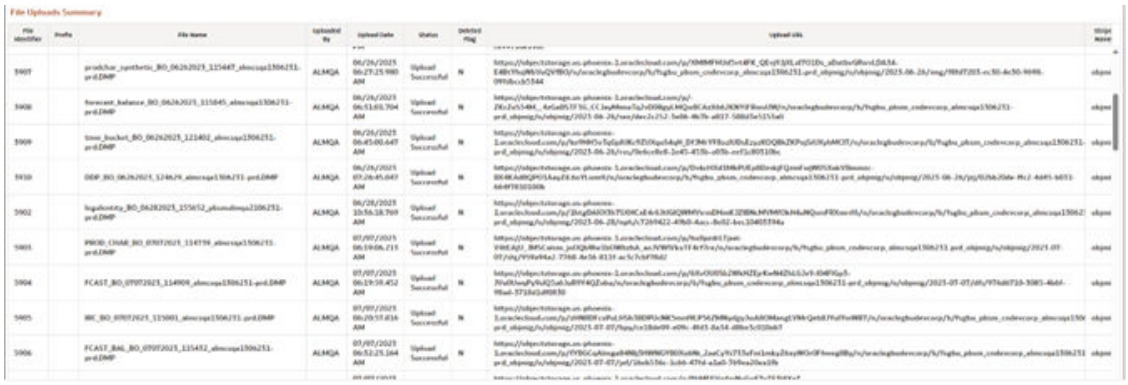
This filter the data by the file type. In this case, it's DMP, but it can be CSV, TXT, or other formats supported by the UI.

Figure 8-94 Canvas File Type

Canvas Summary

This table gives a clear view of detailed file upload information, that is displayed based on the search filters. Here, you can see the file identifier, prefix, File Name, the user who uploaded the file, Upload Data, status, Deleted Flag – which identifies if the file has been deleted, and the Upload URL.

Figure 8-95 Canvas Summary



8.1.5.5 Groups and Roles

To open the Group and Users Report, from the LHS menu, select **Operational Analysis**, and then select **Groups and Roles**.

The Groups and Roles Report Reporting reports section is arranged as a set of canvases, classified into the following:

- Master Registry for Groups - Roles - Functions
- User to Groups Mapping
- Group to Roles Mapping
- Roles to Functions Mapping

Report Common Filters

You can use a series of canvas-level pinned Prompts to filter the data according to Functional Key Attributes as follows:

Figure 8-96 Canvas Prompt Filters for Users, Groups and Roles

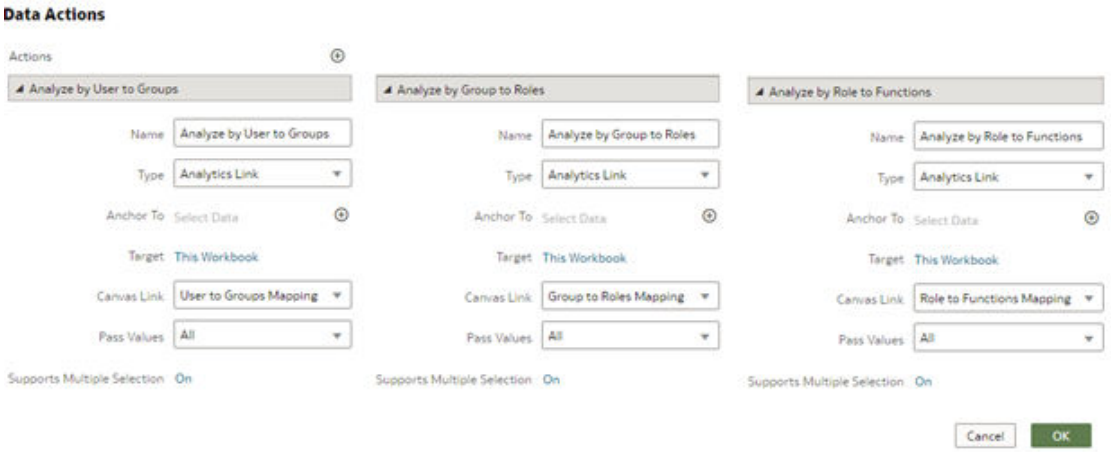
The following filters are available:

- **User ID**: To select/search for a specific user ID.
- **Group Code**: To select/search for a specific group code.
- **Group Name**: To select/search for a specific group name.
- **Role Name**: To select/search for a specific role name.
- **Role Code**: To select/search for a specific role code.
- **Function Code**: To select/search for a specific function code.
- **Function Name**: To select/search for a specific function name.

Report Data Action

The reports provide the capability to analyze data across canvases via a Data Action. The following are the Data Action Configuration details:

Figure 8-97 Data Action Configuration



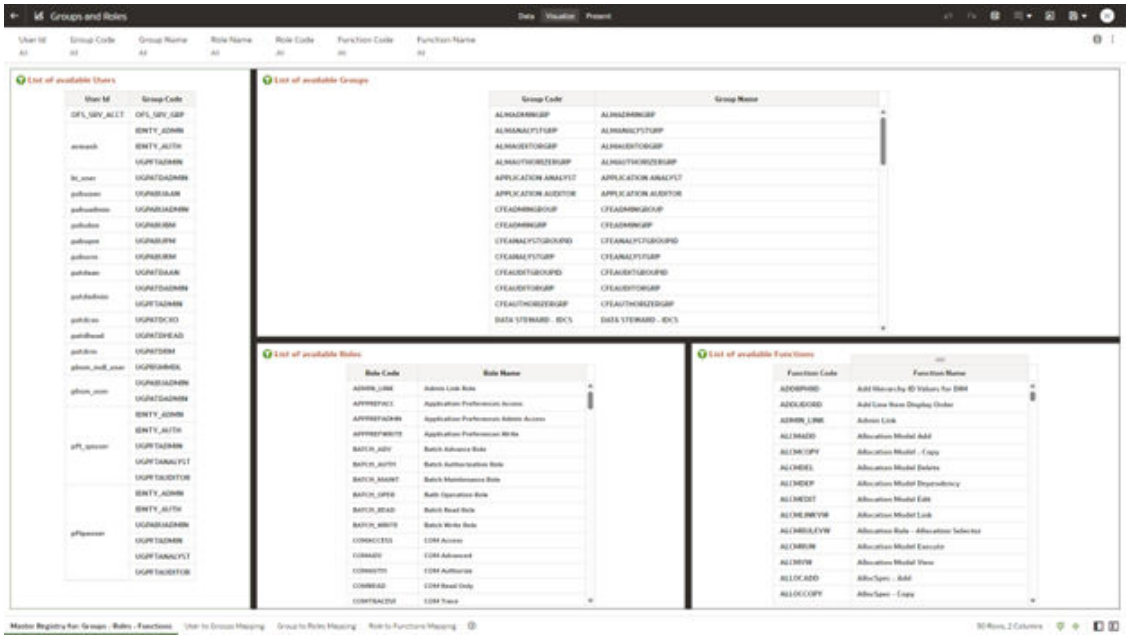
You can analyze by User to Groups, Group to Roles, or Role to Functions.

Report Master Registry For Groups, Rules, Functions

The Master Registry for Groups-Roles-Functions, displays users mapped from the IAM into PBSMCS applications based on the user ID, user group, and related roles and functions, which are assigned to off the shelf groups.

Note that, IAM enables you to set up and manage users and groups, and assigns users to different user groups. You can also use the interactive charts available in the report to analyze the groups, roles, and functions for a given user.

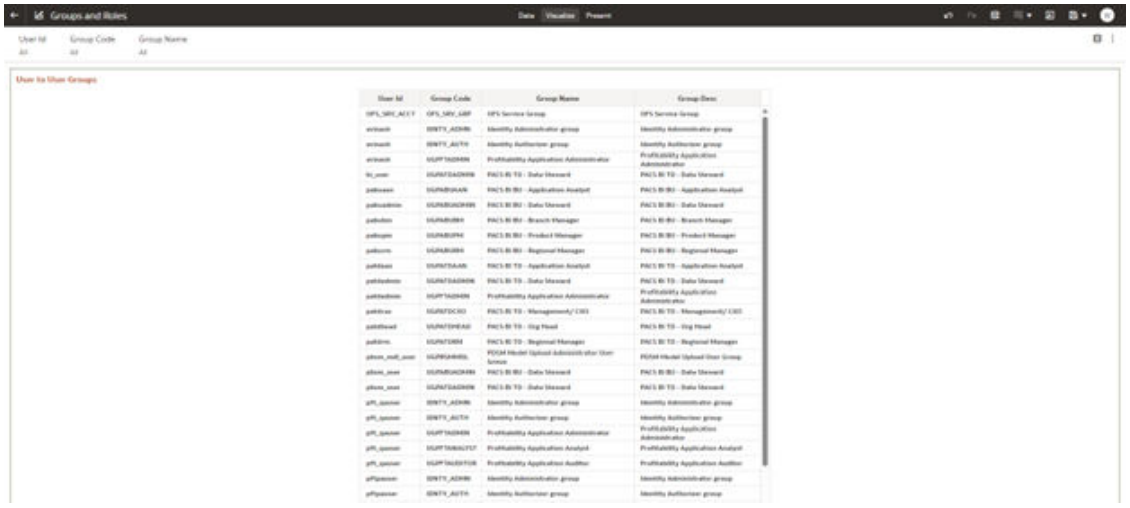
Figure 8-98 Groups and Roles



User Group Mapping

In this canvas, you can view the User ID, Group Code, Group Name, and the Group Description. By using the User ID filter at top to search for a particular user, you can see the corresponding group name and description for the selected user.

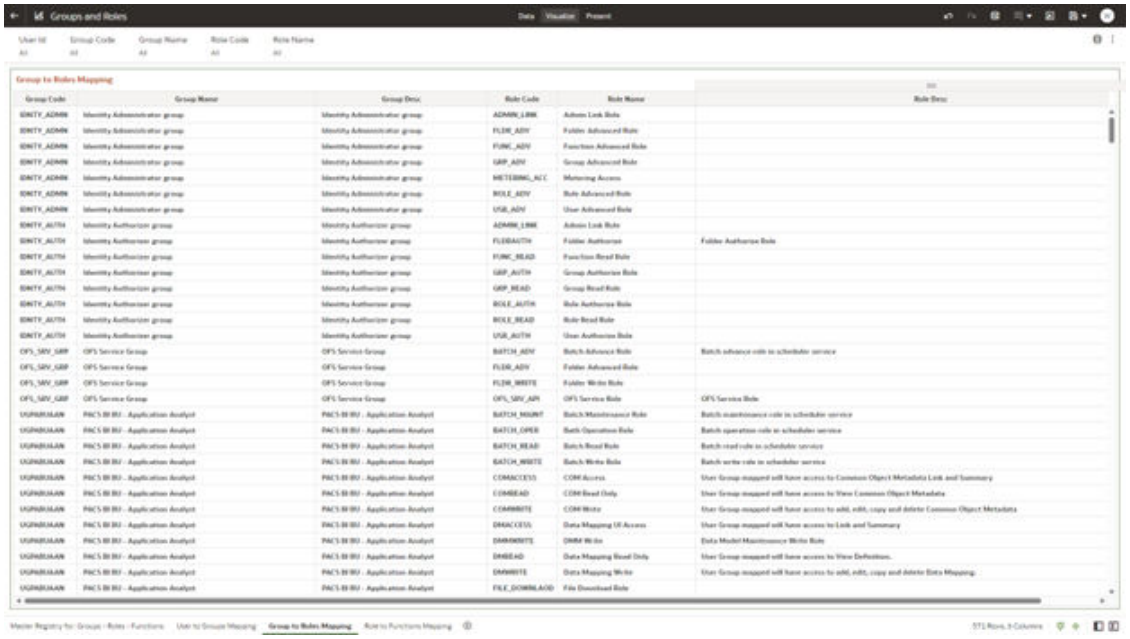
Figure 8-99 User Group Mapping



Group to Rules Mapping

In this canvas, you can filter using User ID, Group Code, Group Name, Role Code, and Role Name. For example, you can filter using a particular role name to view the groups assigned to that role.

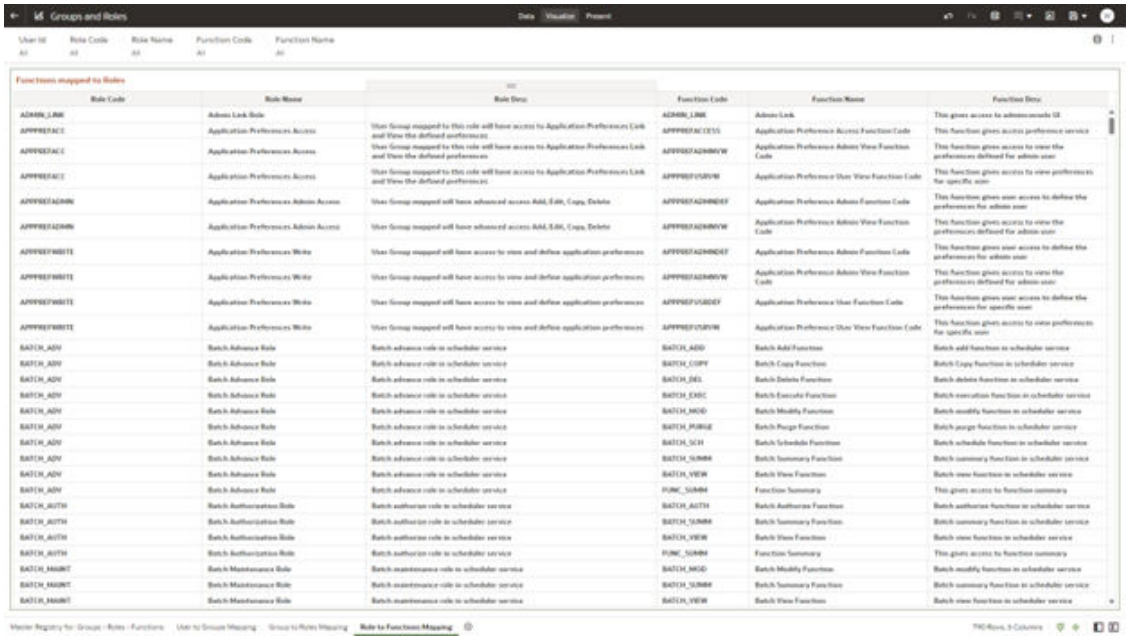
Figure 8-100 Groups to Role Mapping



Rule to Functions Mapping

This canvas displays all the functions mapped to the roles. You can filter based on User ID, Role Code, Role Name, Function Code and Function Name. For example, you can select a particular role, to view the role name, description, and the function assigned to that role.

Figure 8-101 Role to Functions Mapping



8.1.6 Data Insights

To access the PFT Data Insights Report, select **Analytics** from the LHS Menu, and then select **Data Insights**.

This topic discusses the PFT Data Insights.

8.1.6.1 PFT Data Insights

You can use the PFT Data Insights Report to perform analysis on the Direct and Indirect Incomes and Expenses. Direct Incomes and Expenses are directly traceable to the Customer Accounts, while the Indirect Incomes and Expenses need Profitability Allocations to be realized at the Customer Account level.

The Report provides you with the Trend Analysis on the Direct and Indirect Incomes and Expenses components of your Income Statement.

In addition, this Report shows you the Absolute Values and the Variation Percentage of the Metrics over the previous available periods.

The PFT Data Insights is arranged as a Set of Reports catering to analysis of the following categories:

- “1 – Income & Expenses”
- “2 – Non Interest Incomes”
  - “2.a – Fees”
  - “2.b – Charges and Commissions”
- “3 – Non Interest Expenses”
  - “3.a – Other Non Interest Expenses”

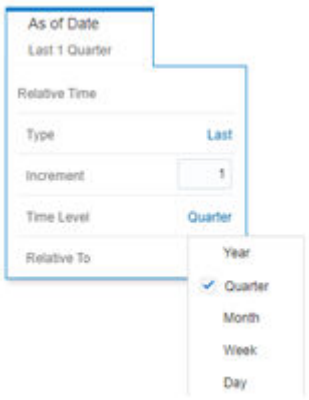
8.1.6.1.1 Report Common Filters

You can use a series of Report Prompts to filter the Data according to Functional Key Attributes as follows:

Figure 8-102 Canvas Prompt Filters for Time Dimension

- **As-of-Date**: The Execution Period for the Allocation Rules output results. You can use this filter to isolate a selected timeframe for the analysis. The following screenshot displays the possible options that this filter provides against the Time Dimension.

Figure 8-103 As-of-Date Selection

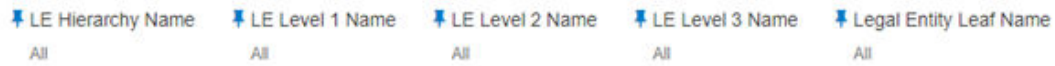


- Additional Filters for the Time Dimension as follows:
  - As-of-Date (Quarter)
  - As-of-Date (Month)
  - As-of-Date (Day)

Figure 8-104 Canvas Prompt Filters for Simple Dimensions

- **Currency Code**: You can use this filter to select a specific Currency Code for the underlying Instrument Tables Accounts.
- **Instrument Table Name**: You can use this filter to select the Source Instrument Table used by the Allocation Process.
- **Input File Name**: You can use this filter to select the Input File Name that has sourced the data used by the Allocation Process.
- **Account Officer Name**: You can use this filter to select the Account Officer or Account Manager for the underlying Instrument Tables Accounts.
- **Customer Type Name**: You can use this filter to select the Customer Type for the underlying Instrument Tables Accounts.

Figure 8-105 Canvas Prompt Filters for Legal Entity Key Processing Dimension



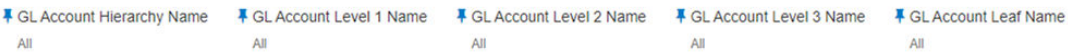
- **LE Hierarchy Name**: This is a mandatory filter for the group filtering on Legal Entity Key Processing Dimension.
  As the Application supports the creation of multiple Hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “LE Hierarchy Name” must be selected with only a single value simultaneously.
- **LE Level 1 Name**: You can use this filter to select the LE Level 1 Name pertaining to the LE Hierarchy Level 1, for rolling up the results on the underlying Legal Entity Leaf Name that is related to the underlying Instrument Tables Accounts.

- **LE Level 2 Name**: You can use this filter to select the LE Level 2 Name pertaining to the LE Hierarchy Level 2, for rolling up the results on the underlying Legal Entity Leaf Name that is related to the underlying Instrument Tables Accounts.
- **LE Level 3 Name**: You can use this filter to select the LE Level 3 Name pertaining to the LE Hierarchy Level 3, for rolling up the results on the underlying Legal Entity Leaf Name that is related to the underlying Instrument Tables Accounts.
- **Legal Entity Leaf Name**: You can use this filter to select the Legal Entity Leaf Name that is related to the underlying Instrument Tables Accounts.

Figure 8-106 Canvas Prompt Filters for Common COA Key Processing Dimension

- **Common COA Hierarchy Name**: N.B. this is a mandatory filter for the group filtering on Common COA Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Common COA Hierarchy Name” must be selected with only a single value simultaneously.
- **Common COA Level 1 Name**: You can use this filter to select the Common COA Level 1 Name pertaining to the Common COA Hierarchy level 1, for rolling up the results on the underlying Common COA Leaf Name that is related to the underlying Instrument Tables Accounts.
- **Common COA Level 2 Name**: You can use this filter to select the Common COA Level 2 Name pertaining to the Common COA Hierarchy level 2, for rolling up the results on the underlying Common COA Leaf Name that is related to the underlying Instrument Tables Accounts.
- **Common COA Level 3 Name**: You can use this filter to select the Common COA Level 3 Name pertaining to the Common COA Hierarchy level 3, for rolling up the results on the underlying Common COA Leaf Name that is related to the underlying Instrument Tables Accounts.
- **Common COA Leaf Name**: You can use this filter to select the Common COA Leaf Name that is related to the underlying Instrument Tables Accounts.

Figure 8-107 Canvas Prompt Filters for GL Account Key Processing Dimension



- **GL Account Hierarchy Name**: N.B. this is a mandatory filter for the group filtering on GL Account Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “GL Account Hierarchy Name” must be selected with only a single value simultaneously.
- **GL Account Level 1 Name**: You can use this filter to select the GL Account Level 1 Name pertaining to the GL Account Hierarchy Level 1, for rolling up the results on the underlying GL Account Leaf Name that is related to the underlying Instrument Tables Accounts.
- **GL Account Level 2 Name**: You can use this filter to select the GL Account Level 2 Name pertaining to the GL Account Hierarchy level 2, for rolling up the results on the underlying GL Account Leaf Name that is related to the underlying Instrument Tables Accounts.

- **GL Account Level 3 Name**: You can use this filter to select the GL Account Level 3 Name pertaining to the GL Account Hierarchy level 3, for rolling up the results on the underlying GL Account Leaf Name that is related to the underlying Instrument Tables Accounts.
- **GL Account Leaf Name**: You can use this filter to select the GL Account Leaf Name that is related to the underlying Instrument Tables Accounts.

Figure 8-108 Canvas Prompt Filters for Org Unit Key Processing Dimension

- **Org Hierarchy Name**: This is a mandatory filter for the group filtering on Org Unit Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Org Hierarchy Name” must be selected with only a single value simultaneously.
- **Org Level 1 Name**: You can use this filter to select the Org Level 1 Name pertaining to the Org Unit Hierarchy Level 1, for rolling up the results on the underlying Org Unit Leaf Name that is related to the underlying Instrument Tables Accounts.
- **Org Level 2 Name**: You can use this filter to select the Org Level 2 Name pertaining to the Org Unit Hierarchy Level 2, for rolling up the results on the underlying Org Unit Leaf Name that is related to the underlying Instrument Tables Accounts.
- **Org Level 3 Name**: You can use this filter to select the Org Level 3 Name pertaining to the Org Unit Hierarchy Level 3, for rolling up the results on the underlying Org Unit Leaf Name that is related to the underlying Instrument Tables Accounts.
- **Org Unit Leaf Name**: You can use this filter to select the Org Unit Leaf Name that is related to the underlying Instrument Tables Accounts.

Figure 8-109 Canvas Prompt Filters for Product Key Processing Dimension

- **Prod Hierarchy Name**: This is a mandatory filter for the group filtering on Product key processing dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Prod Hierarchy Name” must be selected with only a single value simultaneously.
- **Prod Level 1 Name**: You can use this filter to select the Prod Level 1 Name pertaining to the Product Hierarchy Level 1, for rolling up the results on the underlying Prod Leaf Name that is related to the underlying Instrument Tables Accounts.
- **Prod Level 2 Name**: You can use this filter to select the Prod Level 2 Name pertaining to the Product Hierarchy Level 2, for rolling up the results on the underlying Prod Leaf Name that is related to the underlying Instrument Tables Accounts.
- **Prod Level 3 Name**: You can use this filter to select the Prod Level 3 Name pertaining to the Product Hierarchy Level 3, for rolling up the results on the underlying Prod Leaf Name that is related to the underlying Instrument Tables Accounts.

- **Prod Leaf Name**: You can use this filter to select the Prod Leaf Name that is related to the underlying Instrument Tables Accounts.

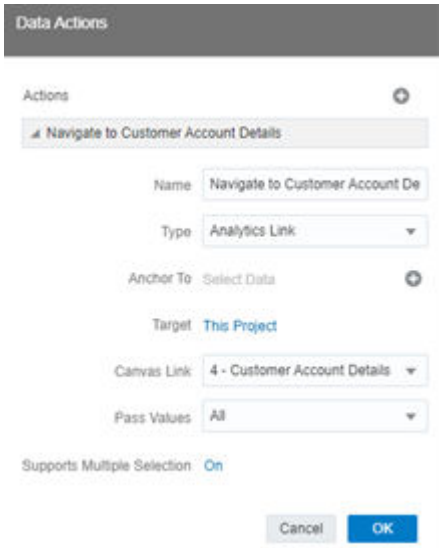
Figure 8-110 Canvas Prompt Filters for Standard Dimensions

- **Branch Leaf Name**: You can use this filter to select a specific Branch value at leaf level related to the underlying Instrument Tables Accounts.
- **Geography Leaf Name**: You can use this filter to select a specific Geography value at leaf level related to the underlying Instrument Tables Accounts.
- **Industry Leaf Name**: You can use this filter to select a specific Industry value at leaf level related to the underlying Instrument Tables Accounts.

8.1.6.1.2 Report Data Action

The report provides the capability to look at the Allocation Measurements underlying Customer Account Details via a Data Action. The following are the Data Action Configuration details:

Figure 8-111 Data Action Configuration



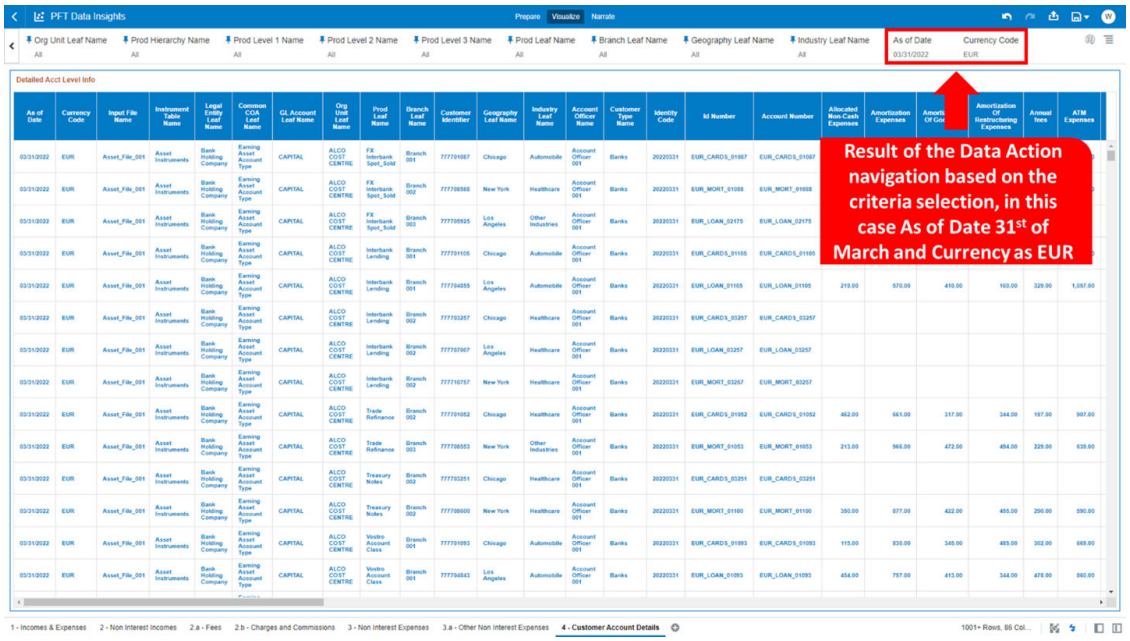
From every chart available in the Report, except for the last canvas “4 – Customer Account Detail” that provides the actual underlying Customer Account Level Results, you can select a value, and then navigate to the related Customer Account Details.

To do so, with a right-click on the Chart Selection, the Data Action option will appear for you to be able to navigate further at the Customer Account Details.

The following two screenshots are showing the procedure you have to follow. The first one shows how to perform the Data Action on a specific selection, and the second one the result of this Data Action Navigation.

Figure 8-112 Use Data Action to Navigate to Customer Account Details

Figure 8-113 Result of Data Action Navigation



8.1.6.1.3 “1 - Incomes & Expenses”

The “1 - Incomes & Expenses” Report provides a view of the descriptive analytics related to the heads of Income and Expenses.

You can use a series of Report Prompts, as previously described, to filter the data according to Key Attributes pertaining to the underlying Instrument Tables Accounts.

The report displays the underlying data according to the following Charts' logic:

- **Interest Income**: The chart displays the absolute value for the Interest Income, as well as the relative percentage variation Interest Income – Variation %, that is calculated over the previous period available Interest Income value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Interest Expense**: The chart displays the absolute value for the Interest Expense, as well as the relative percentage variation Interest Expense – Variation %, that is calculated over the previous period available Interest Expense value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Non Interest Income**: The chart displays the absolute value for the Non Interest Income, as well as the relative percentage variation Non Interest Income – Variation %, that is calculated over the previous period available Non Interest Income value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Non Interest Expense**: The chart displays the absolute value for the Non Interest Expense, as well as the relative percentage variation Non Interest Expense – Variation %, that is calculated over the previous period available Non Interest Expense value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **TP Charge**: The chart displays the absolute value for the TP Charge, as well as the relative percentage variation TP Charge – Variation %, that is calculated over the previous period available TP Charge value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **TP Credit**: The chart displays the absolute value for the TP Credit, as well as the relative percentage variation TP Credit – Variation %, that is calculated over the previous period available TP Credit value. The results are displayed according to the As-of-Date and split by the Currency Code.

Figure 8-114 "1 - Incomes & Expenses Report"

8.1.6.1.4 “2 – Non-Interest Incomes”

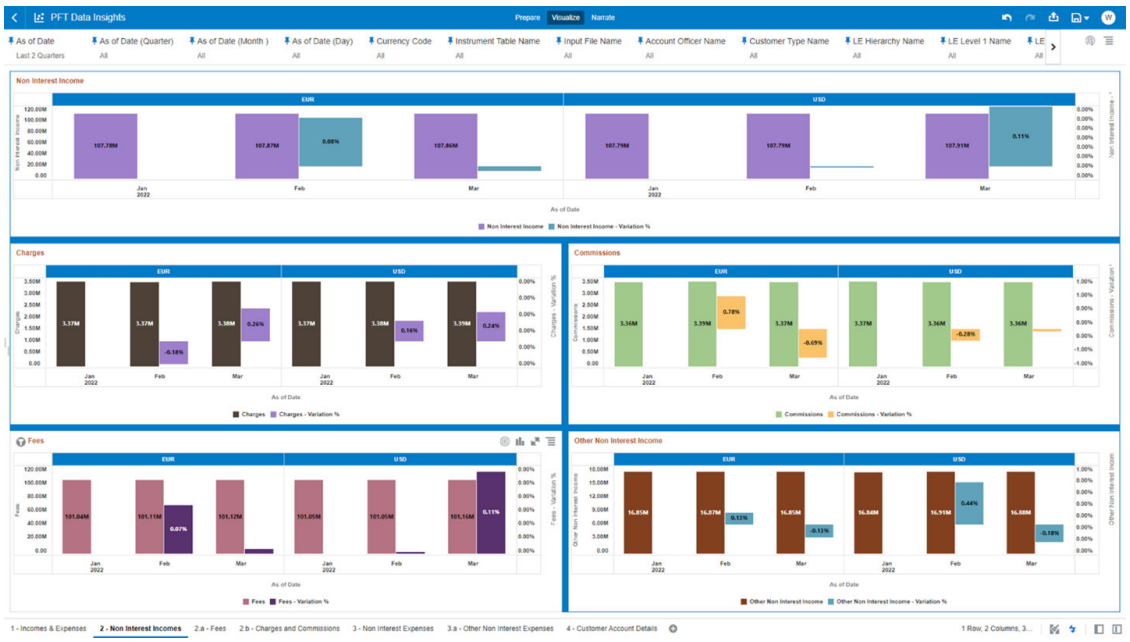
The “2 - Non Interest Incomes” Report provides a view of the descriptive analytics related to the heads of Non Interest Incomes.

You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying Instrument Tables Accounts.

The report displays the underlying data according to the following Charts’ logic:

- **Non Interest Income**: The chart displays the absolute value for the Non Interest Income, as well as the relative percentage variation Non Interest Income – Variation %, that is calculated over the previous period available Non Interest Income value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Charges**: The chart displays the absolute value for the Charges, as well as the relative percentage variation Charges – Variation %, that is calculated over the previous period available Charges value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Commissions**: The chart displays the absolute value for the Commissions, as well as the relative percentage variation Commissions – Variation %, that is calculated over the previous period available Commissions value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Fees**: The chart displays the absolute value for the Fees, as well as the relative percentage variation Fees – Variation %, that is calculated over the previous period available Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Other Non Interest Income**: The chart displays the absolute value for the Other Non Interest Income, as well as the relative percentage variation Other Non Interest Income – Variation %, that is calculated over the previous period available Other Non Interest Income value. The results are displayed according to the As-of-Date and split by the Currency Code.

Figure 8-115 “2 - Non Interest Incomes” Report



8.1.6.1.4.1 “2.a – Fees”

The “2.a – Fees” Report provides a view of the descriptive analytics related to the heads of Fees.

You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying Instrument Tables Accounts.

The report displays the underlying data according to the following Charts’ logic:

- **Annual Fees**: The chart displays the absolute value for the Annual Fees, as well as the relative percentage variation Annual Fees – Variation %, that is calculated over the previous period available Annual Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Balance Transfer Fees**: The chart displays the absolute value for the Balance Transfer Fees, as well as the relative percentage variation Balance Transfer Fees – Variation %, that is calculated over the previous period available Balance Transfer Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Cash Advance Fees**: The chart displays the absolute value for the Cash Advance Fees, as well as the relative percentage variation Cash Advance Fees – Variation %, that is calculated over the previous period available Cash Advance Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Commitment Fees**: The chart displays the absolute value for the Commitment Fees, as well as the relative percentage variation Commitment Fees – Variation %, that is calculated over the previous period available Commitment Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Convenience Fees**: The chart displays the absolute value for the Convenience Fees, as well as the relative percentage variation Convenience Fees – Variation %, that is calculated over the previous period available Convenience Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Customer Service Fees**: The chart displays the absolute value for the Customer Service Fees, as well as the relative percentage variation Customer Service Fees – Variation %, that is calculated over the previous period available Customer Service Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Early Redemption Fees**: The chart displays the absolute value for the Early Redemption Fees, as well as the relative percentage variation Early Redemption Fees – Variation %, that is calculated over the previous period available Early Redemption Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Foreign Transaction Fees**: The chart displays the absolute value for the Foreign Transaction Fees, as well as the relative percentage variation Foreign Transaction Fees – Variation %, that is calculated over the previous period available Foreign Transaction Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Interchange Fees**: The chart displays the absolute value for the Interchange Fees, as well as the relative percentage variation Interchange Fees – Variation %, that is calculated over the previous period available Interchange Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Late Fees**: The chart displays the absolute value for the Late Fees, as well as the relative percentage variation Late Fees – Variation %, that is calculated over the previous period available Late Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.

- **Management Fees**: The chart displays the absolute value for the Management Fees, as well as the relative percentage variation Management Fees – Variation %, that is calculated over the previous period available Management Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Origination Fees**: The chart displays the absolute value for the Origination Fees, as well as the relative percentage variation Origination Fees – Variation %, that is calculated over the previous period available Origination Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Other Fees**: The chart displays the absolute value for the Other Fees, as well as the relative percentage variation Other Fees – Variation %, that is calculated over the previous period available Other Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Over Limit Fees**: The chart displays the absolute value for the Over Limit Fees, as well as the relative percentage variation Over Limit Fees – Variation %, that is calculated over the previous period available Over Limit Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Overdraft Fees**: The chart displays the absolute value for the Overdraft Fees, as well as the relative percentage variation Overdraft Fees – Variation %, that is calculated over the previous period available Overdraft Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Prepayment Fees**: The chart displays the absolute value for the Prepayment Fees, as well as the relative percentage variation Prepayment Fees – Variation %, that is calculated over the previous period available Prepayment Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Processing Fees**: The chart displays the absolute value for the Processing Fees, as well as the relative percentage variation Processing Fees – Variation %, that is calculated over the previous period available Processing Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Statement Fees**: The chart displays the absolute value for the Statement Fees, as well as the relative percentage variation Statement Fees – Variation %, that is calculated over the previous period available Statement Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Total Waived Fees**: The chart displays the absolute value for the Total Waived Fees, as well as the relative percentage variation Total Waived Fees – Variation %, that is calculated over the previous period available Total Waived Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Transaction Fees**: The chart displays the absolute value for the Transaction Fees, as well as the relative percentage variation Transaction Fees – Variation %, that is calculated over the previous period available Transaction Fees value. The results are displayed according to the As-of-Date and split by the Currency Code.

Figure 8-116 “2.a – Fees” Report

8.1.6.1.4.2 “2.b - Charges and Commissions”

The “2.b - Charges and Commissions” Report provides a view of the descriptive analytics related to the heads of Charges and Commissions.

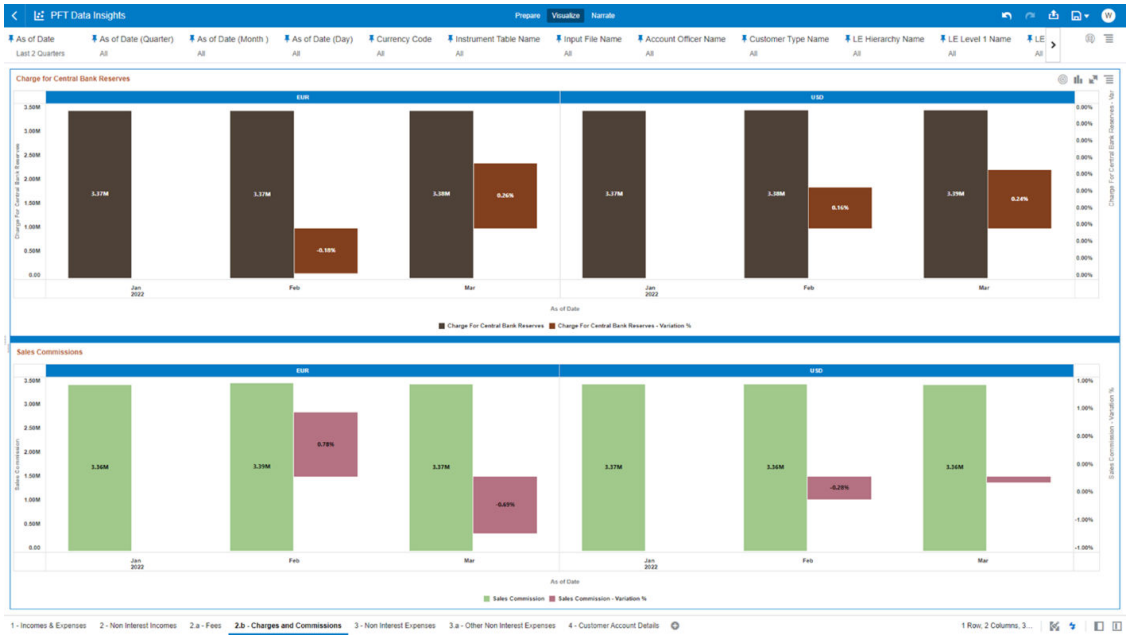
The “2.b - Charges and Commissions” Report provides a view of the descriptive analytics related to the heads of Charges and Commissions.

You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying Instrument Tables Accounts.

The report displays the underlying data according to the following Charts’ logic:

- **Charge for Central Bank Reserves**: The chart displays the absolute value for the Charge for Central Bank Reserves, as well as the relative percentage variation Charge for Central Bank Reserves – Variation %, that is calculated over the previous period available Charge for Central Bank Reserves value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Sales Commissions**: The chart displays the absolute value for the Sales Commissions, as well as the relative percentage variation Sales Commissions – Variation %, that is calculated over the previous period available Sales Commissions value. The results are displayed according to the As-of-Date and split by the Currency Code.

Figure 8-117 “2.b - Charges and Commissions” Report



8.1.6.1.5 “3 - Non Interest Expenses”

The “3 - Non Interest Expenses” Report provides a view of the descriptive analytics related to the heads of Non Interest Expenses.

You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying Instrument Tables Accounts.

The report displays the underlying data according to the following Charts’ logic:

- **Total Account Expenses**: The chart displays the absolute value for the Total Account Expenses, as well as the relative percentage variation Total Account Expenses – Variation %, that is calculated over the previous period available Total Account Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Total Distribution Expense**: The chart displays the absolute value for the Total Distribution Expense, as well as the relative percentage variation Total Distribution Expense – Variation %, that is calculated over the previous period available Total Distribution Expense value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Total Processing Expense**: The chart displays the absolute value for the Total Processing Expense, as well as the relative percentage variation Total Processing Expense – Variation %, that is calculated over the previous period available Total Processing Expense value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Total Tax Expenses**: The chart displays the absolute value for the Total Tax Expenses, as well as the relative percentage variation Total Tax Expenses – Variation %, that is calculated over the previous period available Total Tax Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Total Brand Management Expenses**: The chart displays the absolute value for the Total Brand Management Expenses, as well as the relative percentage variation Total Brand Management Expenses – Variation %, that is calculated over the previous period available

Total Brand Management Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.

- **Marketing Expense**: The chart displays the absolute value for the Marketing Expense, as well as the relative percentage variation Marketing Expense – Variation %, that is calculated over the previous period available Marketing Expense value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Business Development Expense**: The chart displays the absolute value for the Business Development Expense, as well as the relative percentage variation Business Development Expense – Variation %, that is calculated over the previous period available Business Development Expense value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Branch Management Expenses**: The chart displays the absolute value for the Branch Management Expenses, as well as the relative percentage variation Branch Management Expenses – Variation %, that is calculated over the previous period available Branch Management Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Retail Operations Expense**: The chart displays the absolute value for the Retail Operations Expense, as well as the relative percentage variation Retail Operations Expense – Variation %, that is calculated over the previous period available Retail Operations Expense value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **ATM Expenses**: The chart displays the absolute value for the ATM Expenses, as well as the relative percentage variation ATM Expenses – Variation %, that is calculated over the previous period available ATM Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Branch Teller Expenses**: The chart displays the absolute value for the Branch Teller Expenses, as well as the relative percentage variation Branch Teller Expenses – Variation %, that is calculated over the previous period available Branch Teller Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Electronic Banking Expenses**: The chart displays the absolute value for the Electronic Banking Expenses, as well as the relative percentage variation Electronic Banking Expenses – Variation %, that is calculated over the previous period available Electronic Banking Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Interchange Expense Amount**: The chart displays the absolute value for the Interchange Expense Amount, as well as the relative percentage variation Interchange Expense Amount – Variation %, that is calculated over the previous period available Interchange Expense Amount value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Infrastructure Expense**: The chart displays the absolute value for the Infrastructure Expense, as well as the relative percentage variation Infrastructure Expense – Variation %, that is calculated over the previous period available Infrastructure Expense value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Fixed Expense**: The chart displays the absolute value for the Fixed Expense, as well as the relative percentage variation Fixed Expense – Variation %, that is calculated over the previous period available Fixed Expense value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Staff Costs**: The chart displays the absolute value for the Staff Costs, as well as the relative percentage variation Staff Costs – Variation %, that is calculated over the previous period available Staff Costs value. The results are displayed according to the As-of-Date and split by the Currency Code.

- **Loan Processing Expenses**: The chart displays the absolute value for the Loan Processing Expenses, as well as the relative percentage variation Loan Processing Expenses – Variation %, that is calculated over the previous period available Loan Processing Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Loan Loss Provision**: The chart displays the absolute value for the Loan Loss Provision, as well as the relative percentage variation Loan Loss Provision – Variation %, that is calculated over the previous period available Loan Loss Provision value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Allocated Non-Cash Expenses**: The chart displays the absolute value for the Allocated Non-Cash Expenses, as well as the relative percentage variation Allocated Non-Cash Expenses – Variation %, that is calculated over the previous period available Allocated Non-Cash Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.
- **Amortization Expenses**: The chart displays the absolute value for the Amortization Expenses, as well as the relative percentage variation Amortization Expenses – Variation %, that is calculated over the previous period available Amortization Expenses value. The results are displayed according to the As-of-Date and split by the Currency Code.

Figure 8-118 “3 - Non Interest Expenses” Report

8.1.6.1.5.1 “3.a - Other Non Interest Expenses”

The “3.a - Other Non Interest Expenses” Report provides a view of the descriptive analytics related to the heads of Other Non Interest Expenses.

The “3.a - Other Non Interest Expenses” Report provides a view of the descriptive analytics related to the heads of Other Non Interest Expenses.

You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying Instrument Tables Accounts.

The report displays the underlying data according to the following Charts’ logic:

- – Other Expenses Variation% breakdown (valid for both Pivot table chart and Bar Chart)

  The chart displays the relative percentage variation for the following metrics, that are calculated over the previous period available corresponding metrics values.

  The results are displayed according to the As-of-Date and split by the Currency Code.

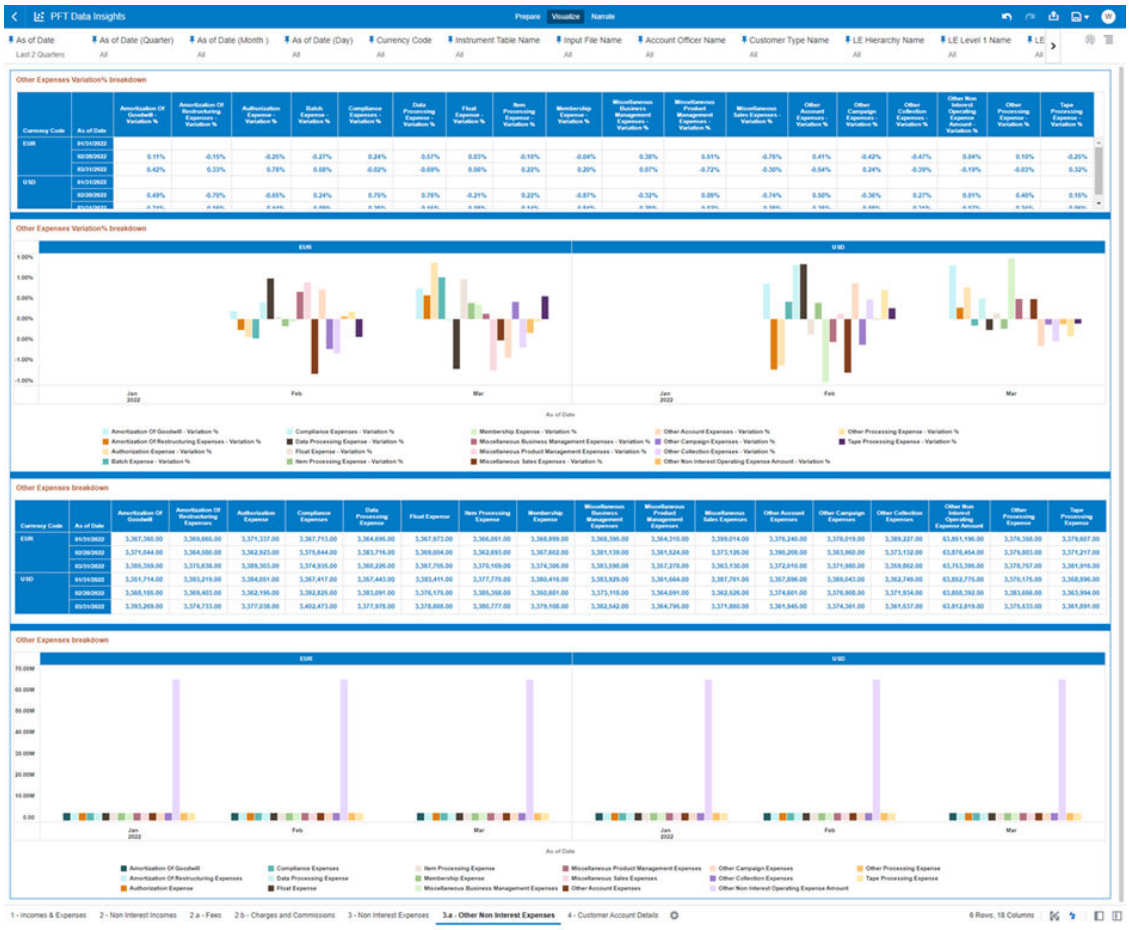
  * * Amortization Of Goodwill - Variation %
    * Amortization Of Restructuring Expenses - Variation %
    * Authorization Expense - Variation %
    * Batch Expense - Variation %
    * Compliance Expenses - Variation %
    * Data Processing Expense - Variation %
    * Float Expense - Variation %
    * Item Processing Expense - Variation %
    * Membership Expense - Variation %
    * Miscellaneous Business Management Expenses - Variation %
    * Miscellaneous Product Management Expenses - Variation %
    * Miscellaneous Sales Expenses - Variation %
    * Other Account Expenses - Variation %
    * Other Campaign Expenses - Variation %
    * Other Collection Expenses - Variation %
    * Other Non Interest Operating Expense Amount - Variation %
    * Other Processing Expense - Variation %
    * Tape Processing Expense - Variation %

  – Other Expenses breakdown (valid for both Pivot table chart and Bar Chart) The chart displays the absolute value for the following metrics.
  The results are displayed according to the As-of-Date and split by the Currency Code.

  * * Amortization Of Goodwill
    * Amortization Of Restructuring Expenses
    * Authorization Expense
    * Compliance Expenses
    * Data Processing Expense

* Float Expense
* Item Processing Expense
* Membership Expense
* Miscellaneous Business Management Expenses
* Miscellaneous Product Management Expenses
* Miscellaneous Sales Expenses
* Other Account Expenses
* Other Campaign Expenses
* Other Collection Expenses
* Other Non Interest Operating Expense Amount
* Other Processing Expense
* Tape Processing Expense

Figure 8-119 “3.a - Other Non Interest Expenses” Report



8.1.6.1.6 “4 - Customer Account Details”

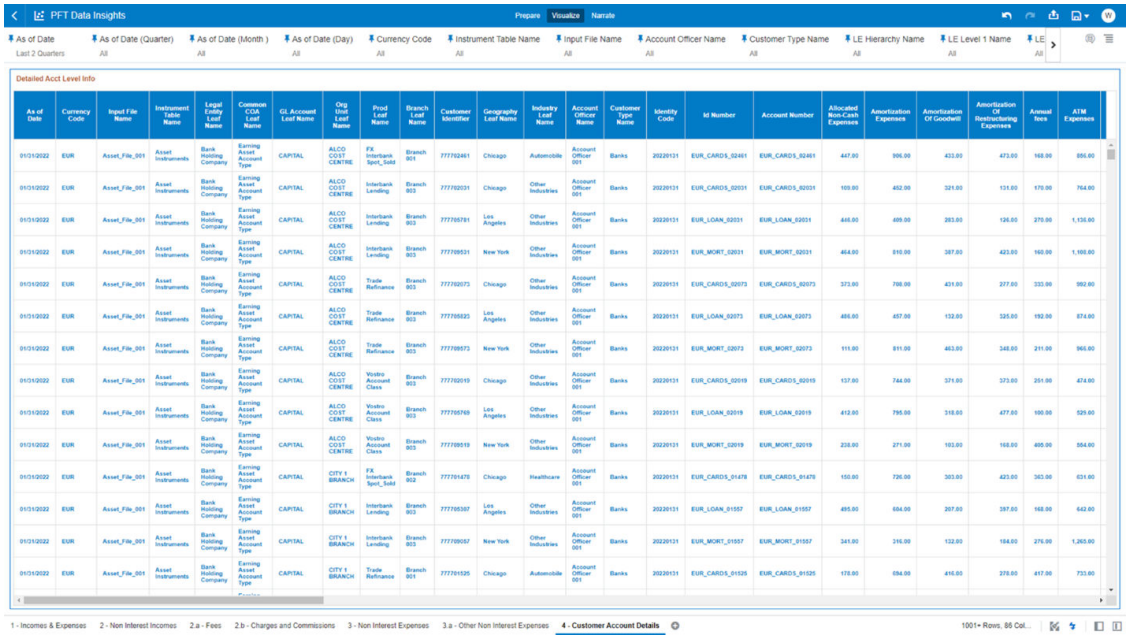
The “4 - Customer Account Details” Report provides a view of the underlying instrument tables Customer Accounts details.

You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying Instrument Tables Accounts.

The report displays the underlying data according to the following Chart' logic:

- **Detailed Acct Level Info**: The tabular report displays all the dimensions and the measures, available at the Account level granularity, that have been displayed in all the other previously described report categories.
  Following the granular elements available for this table chart:
  - Detailed Acct Level Info
    The tabular report displays all the dimensions and the measures, available at the Account level granularity, that have been displayed in all the other previously described report categories.
    * "As-of-Date", "Currency Code", "Input File Name", "Instrument Table Name", "Legal Entity Leaf Name", "Common COA Leaf Name", "GL Account Leaf Name", "Org Unit Leaf Name", "Prod Leaf Name", "Branch Leaf Name", "Customer Identifier", "Geography Leaf Name", "Industry Leaf Name", "Account Officer Name", "Customer Type Name", "Identity Code", "Id Number", "Account Number", "Allocated Non-Cash Expenses", "Amortization Expenses", "Amortization Of Goodwill", "Amortization Of Restructuring Expenses", "Annual fees", "ATM Expenses", "Authorization Expense", "Balance Transfer fees", "Branch Management Expenses", "Branch Teller Expenses", "Cash Advance fees", "Charge For Central Bank Reserves", "Charges", "Commissions", "Commitment fees", "Compliance Expenses", "Convenience fees", "Customer Service fees", "Data Processing Expense", "Early Redemption Fees", "Electronic Banking Expense", "Fees", "Fixed Expense", "Float Expense", "Foreign Transaction fees", "Infrastructure Expense", "Interchange Expense Amount", "Interchange fees", "Interest Expense", "Interest Income", "Item Processing Expense", "Late fees", "Loan Loss Provision", "Loan Processing Expenses", "Management Fees", "Marketing Expense", "Membership Expense", "Miscellaneous Business Management Expenses", "Miscellaneous Product Management Expenses", "Miscellaneous Sales Expenses", "Non Interest Expense", "Non Interest Income", "Origination fees", "Other Account Expenses", "Other Campaign Expenses", "Other Collection Expenses", "Other fees", "Other Non Interest Income", "Other Non Interest Operating Expense Amount", "Other Processing Expense", "Over Limit fees", "Overdraft fees", "Prepayment fees", "Processing fees", "Retail Operations Expense", "Sales Commission", "Staff Costs", "Statement fees", "Tape Processing Expense", "Total Account Expenses", "Total Brand Management Expenses", "Total Distribution Expense", "Total Processing Expense", "Total Tax Expenses", "Total Waived Fees", "TP Charge", "TP Credit", "Transaction fees".

Figure 8-120 "4 - Customer Account Details" Report



8.1.7 Processing Analytics

To access the Processing Analytics Report, select **Analytics** from the LHS Menu, and then select **Processing Analytics**.

Allocation Performance Analysis

You can use the Allocation Performance Analysis Report to perform analysis on the Allocation Statistics. In particular, you can look at multiple periods for the Allocation Executions as well as concentrate the analysis focus on a single execution period.

Using this LHS link, you will be redirected to the UI with the related report, as explained in the following section.

8.1.7.1 Multi-Period Analysis

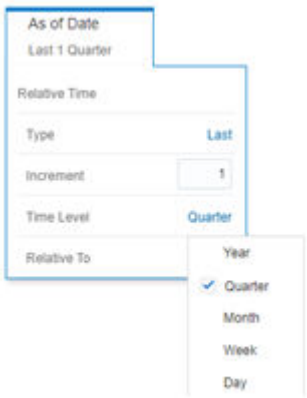
You can use the Multi-Periods Analysis Report section to analyze the Allocation Execution Performances across different periods.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes as described below:

Figure 8-121 Canvas Prompt Filters

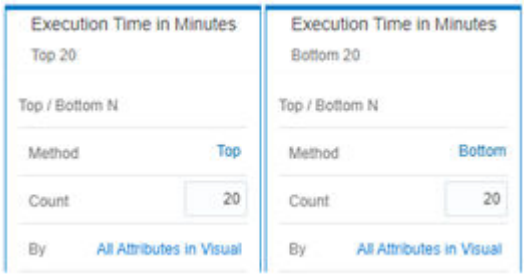
- **As of Date**: The Execution Period for the Allocation Rules. You can use this filter to isolate a selected timeframe for the analysis. The following screenshot displays the possible options that this filter provides against the Time Dimension.

Figure 8-122 As-of-Date Selection



- Additional Filters for the Time Dimension as follows:
  - As of Date (Quarter of Year)
  - As of Date (Month of Year)
  - As of Date (Day)
- **Execution Time in Minutes**: You can use this filter to retrieve the Top/Bottom N Allocation rules based on their Execution Time in Minutes.
  The possible filter options that you can use are selecting either “Top” or “Bottom” in the “Method” option, as well as define a selected number of occurrences (that is, assigning an integer value such as 5, 10, and so on) in the option “Count”.

Figure 8-123 Execution Time in Minutes for Top/Bottom Selection



- **Table Name**: You can use this filter to select a specific Table Name (one or more) used by the Allocation Rule that has been utilized for processing.
- **Allocation Name**: You can use this filter to select a specific Allocation rule (one or more) used by the different process executions.

The first step is to select in the Charts List Box “Select Period 1”, “Select Period 2”, and “Select Period 3”, the three different periods that will be used to compare across different As-of-Date the performances of the Allocation Rules executed.

The first screenshot shows how to select the First Period, and the subsequent screenshots show how to select the Second and Third Periods. <Enter a single subject here.>

Figure 8-124 Select Period 1 for the Allocation Rules Execution

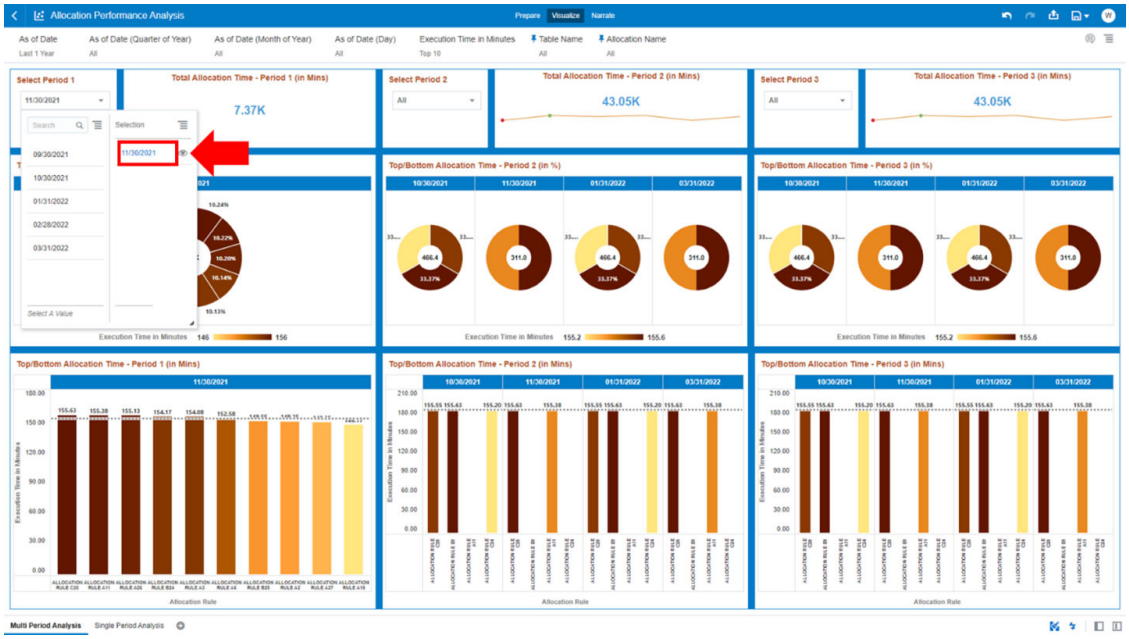


Figure 8-125 Select Period 2 for the Allocation Rules Execution

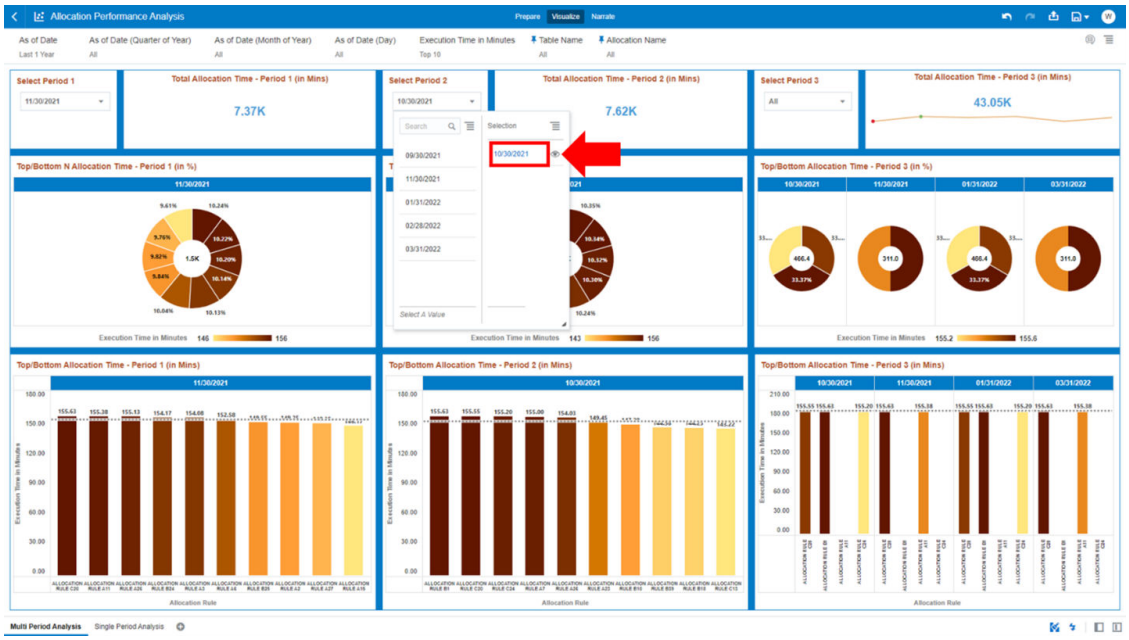
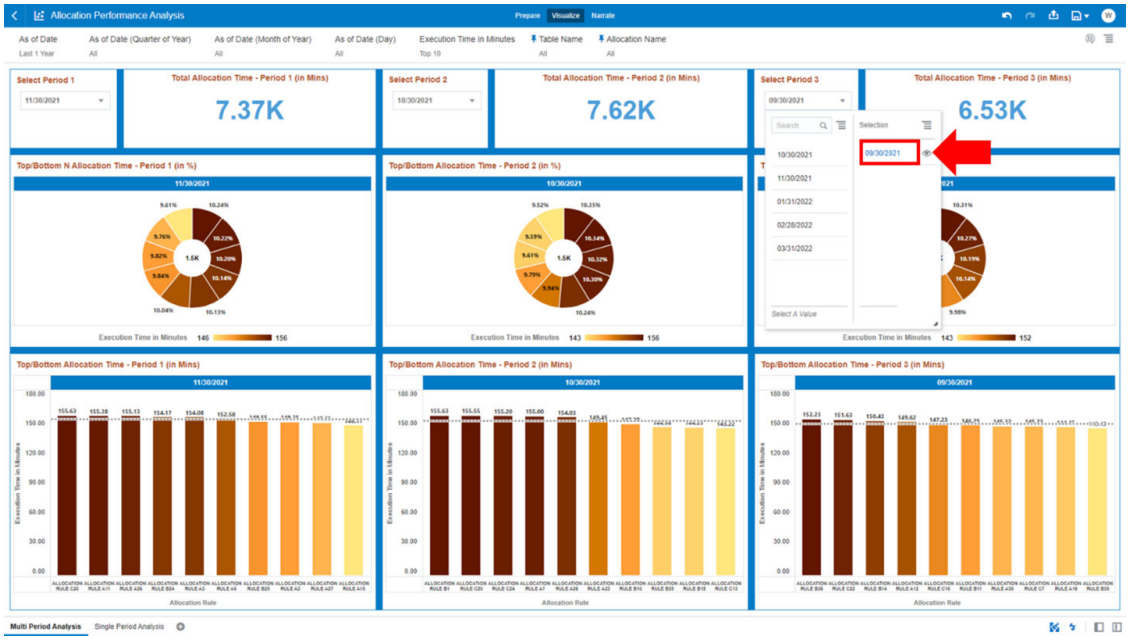


Figure 8-126 Select Period 3 for the Allocation Rules Execution



The result of the three previous selection steps is shown in the following screenshot. You can compare the multiple periods and analyze the performances across them.

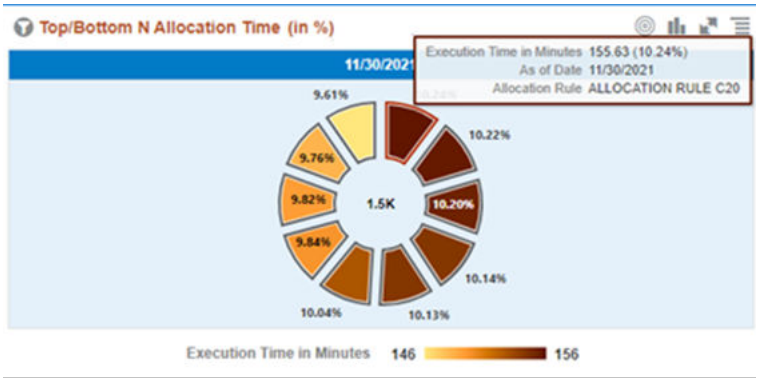
The report displays the underlying data according to the following charts' logic and for the three sections Period 1, Period 2, and Period 3 (the charts description will reference only the "Period 1" as for the other periods the content will be functionally the same):

- Select Period 1 (2 or 3)
  The As-of-Date selected for the Period that you want to analyze.
- Total Allocation Time - Period 1 (2 or 3) (in Mins) – (Tile Chart)
  The total time spent in minutes for all the Allocation Rules executed during the selected period.
- • Top/Bottom N Allocation Time - Period 1 (2 or 3) (in %) – (Pie Chart)
  The chart displays the N Allocation Rules, out of the Top/Bottom N selection (where N is related to the value used in the Report Prompts Filter selection on the "Execution Time in Minutes"; in the screenshot for example we have filtered "Top 10"), sorted by the Allocation Rule Percentage Value.

  The Percentage Value, is calculated based on the "Execution Time in Minutes" spent for the Allocation Rule, out of the total time spent for the Top/Bottom N Allocation Rules selected.

  In the following, we see, for instance, what is the Allocation Rule that needed more time to be executed and that is the one scoring a higher percentage value out of the total time spent within the Top/Bottom N selection.

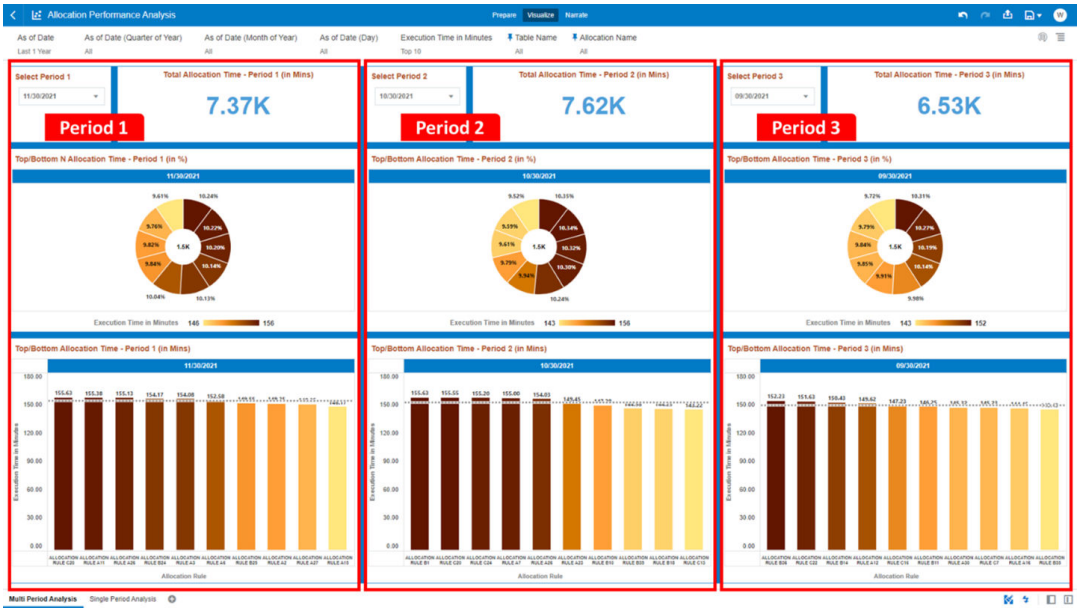
Figure 8-127 Top/Bottom N Allocation Time – Period 1 (in %)



The chart also displays the “Execution Time in Minutes” needed by the Top/Bottom N Allocation Rules (this value is visible at the center of the above pie chart screenshot and in this example is “1.5K” minutes).

- Top/Bottom Allocation Time - Period 1 (2 or 3) (in Mins) – (Bar Chart)
  The chart displays the N Allocation Rules, out of the Top/Bottom N selection, sorted by the “Execution Time in Minutes” in descending order.

Figure 8-128 Allocation Performance Analysis – Multi Period Analysis



8.1.7.2 Single Period Analysis

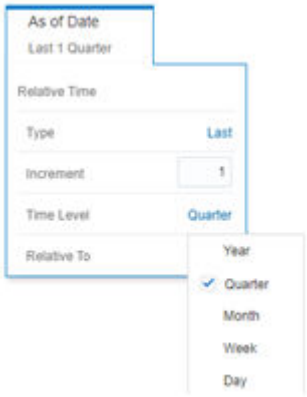
You can use this report section to analyze the Allocation Execution Performances within a Single Period.

You can use a series of Report Prompts to filter the data according to Functional Key Attributes as described (note that for this report section the “As-of-Date (Day)” filter is a mandatory filter and must be used with one selection value only at the same time):

Figure 8-129 Canvas Prompt Filters

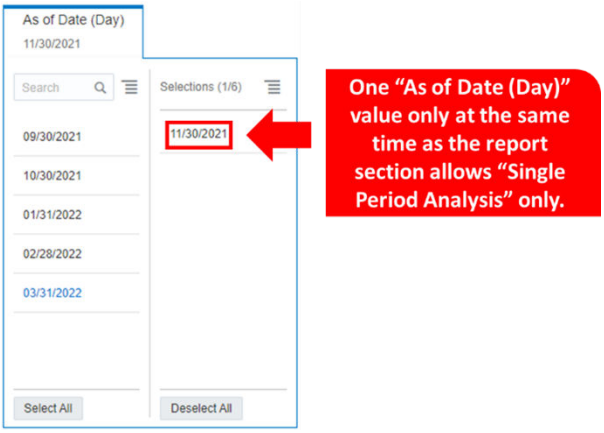
- **As of Date**: The Execution Period for the Allocation Rules.
  You can use this filter to isolate a selected Timeframe for the analysis. Below, see a screenshot for the possible options that this filter provides against the Time Dimension.

Figure 8-130 As of Date Selection



- **As-of-Date (Quarter of Year)**
- **As of Date (Month of Year)**
- **As of Date (Day)**: One “As of Date (Day)” value only at the same time as the report section allows “Single Period Analysis” only.

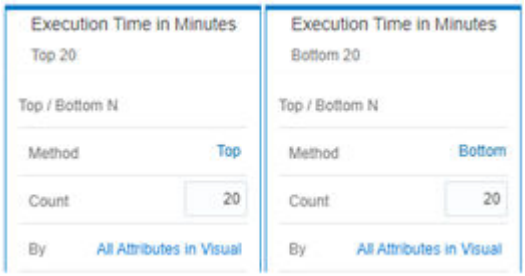
Figure 8-131 As of Date (Day) Selection



- **Execution Time in Minutes**: You can use this filter to retrieve the Top/Bottom N Allocation rules based on their Execution Time in Minutes.

  Below, the possible options that this filter provides such as selecting either “Top” or “Bottom” in the “Method” option as well as define a selected number of occurrences (that is, assigning an integer value such as 5, 10, and so on) in the option “Count”.

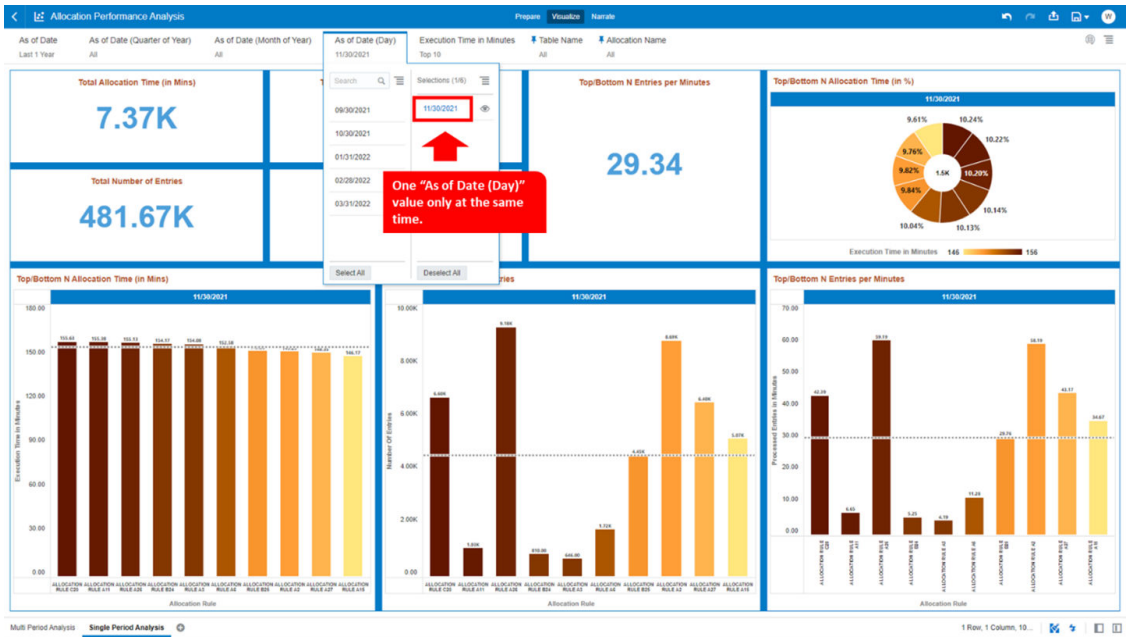
Figure 8-132 Execution Time in Minutes for Top/Bottom Selection



- **Table Name**: You can use this filter to select a specific Table Name (one or more) used by the Allocation Rule that has been utilized for processing.
- **Allocation Name**: You can use this filter to select a specific Allocation Rule (one or more) used by the different process executions.

The first step for you would be to select in the Report Prompt filter “As of Date (Day)”, one value only to focus the analysis on a specific Execution Period.

Figure 8-133 As of Date (Day) Selection



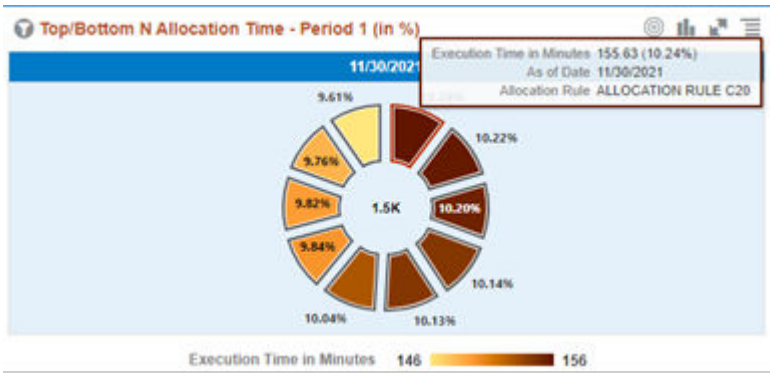
This report displays the underlying data according to the following Charts’ logic:

- **Total Allocation Time (in Mins) – (Tile Chart)**: The total time spent in minutes for all the Allocation Rules executed during the selected period.
- **Total Number of Entries – (Tile Chart)**: The total number of entries allocated for all the Allocation Rules executed during the selected period.
- **Top/Bottom N Allocation Time (in Mins) – (Tile Chart)**: The total allocation time spent for the execution of the selected period. The value is calculated out of the Top/Bottom N selection (where N is related to the value used in the Report Prompts filter selection on the “Execution Time in Minutes”; in the screenshot, for example we have filtered “Top 10”).

- **Top/Bottom N Number of Entries – (Tile Chart)**: The total number of entries processed for the selected period. The value is calculated out of the Top/Bottom N selection (where N is related to the value used in the Report Prompts filter selection on the “Execution Time in Minutes”; in the screenshot, for example we have filtered “Top 10”).
- **Top/Bottom N Entries per Minutes – (Tile Chart)**: The ratio of processed entries per minutes (calculated as the number of entries divided the execution time in minutes). The value is calculated out of the Top/Bottom N selection (where N is related to the value used in the Report Prompts filter selection on the “Execution Time in Minutes”; in the screenshot, for example we have filtered “Top 10”).
- **Top/Bottom N Allocation Time (in %) – (Pie Chart)**: The chart displays the N Allocation Rules, out of the Top/Bottom N selection (where N is related to the value used in the Report Prompts filter selection on the “Execution Time in Minutes”; in the screenshot for example we have filtered “Top 10”), sorted by the Allocation Rule percentage value. The percentage value, is calculated based on the “Execution Time in Minutes” spent for the Allocation Rule, out of the total time spent for the Top/Bottom N Allocation Rules selected.

  Below we see, for instance, what is the Allocation Rule that needed more time to be executed and that is the one scoring a higher percentage value out of the total time spent within the Top/Bottom N selection.

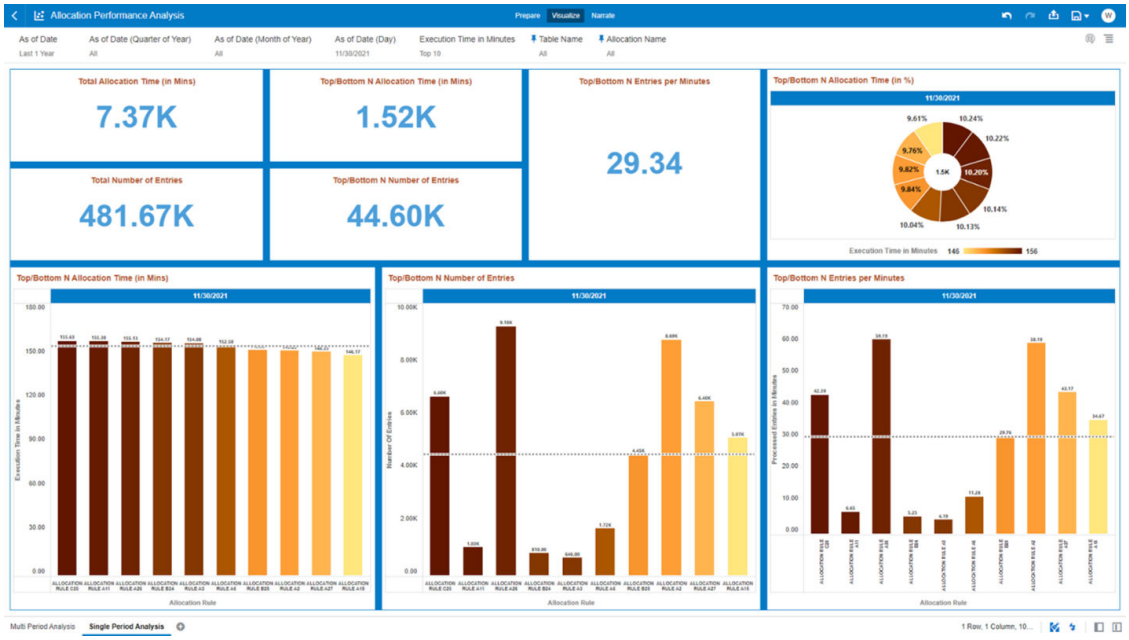
Figure 8-134 Top/Bottom N Allocation Time (in %)



In addition, the chart displays the “Execution Time in Minutes” needed by the Top/Bottom N Allocation Rules (this value is visible at the center of the above pie chart screenshot and in this example is “1.5K” minutes).

- **Top/Bottom N Allocation Time (in Mins) – (Bar Chart)**: The chart displays the N Allocation Rules, out of the Top/Bottom N selection, sorted by the “Execution Time in Minutes” in descending order.
- **Top/Bottom N Number of Entries – (Bar Chart)**: The chart displays, for the N Allocation Rules out of the Top/Bottom N selection, the number of processed entries for each of them keeping the sort by the “Execution Time in Minutes” in descending order.
- **Top/Bottom N Entries per Minutes – (Bar Chart)**: The chart displays, for the N Allocation Rules out of the Top/Bottom N selection, the number of processed entries per minutes (calculated as the number of entries divided the execution time in minutes) for each of them keeping the sort by the “Execution Time in Minutes” in descending order.

Figure 8-135 Allocation Performance Analysis – Single Period Analysis



8.1.8 Processed Data Insights

To access the Processed Data Insights Reports, select **Analytics** from the LHS Menu, and then select **Processed Data Insights**.

The following Reports are available for the Processed Data Insights section. You can select any report that you want.

- Ad-Hoc Data Analysis
- Financial Statement Analysis

8.1.8.1 Ad-hoc Data Analysis

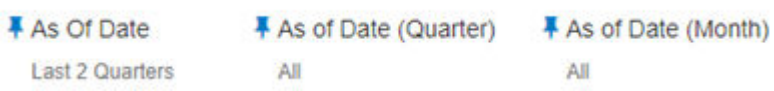
You can use the Ad-hoc Data Analysis Report to perform ad-hoc analysis on Management Ledger data.

Using this LHS link, you will be redirected to the UI with the related report, as explained in the following section.

8.1.8.1.1 Report Filters

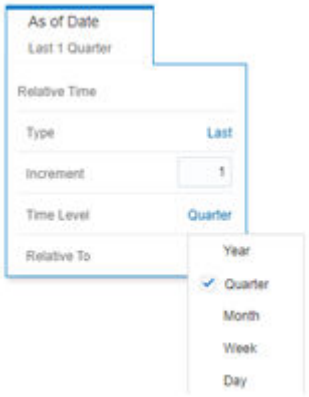
You can use a series of Report Prompts to filter the data according to Functional Key Attributes as described below:

Figure 8-136 Canvas Prompt Filters for Time Dimension



- **As of Date**: The Execution Period for the output results. You can use this filter to isolate a selected time frame for the analysis. The following screen shot displays the possible options that this filter provides against the Time Dimension.

Figure 8-137 As-of-Date Selection

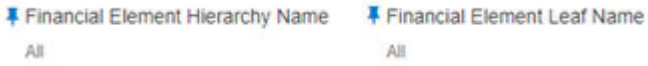


- Additional Filters for the Time Dimension as follows:
  - As of Date (Quarter)
  - As of Date (Month)

Figure 8-138 Canvas Prompt Filters for Management Ledger Key Attributes (1/2)

- **Fiscal Year**: You can use this filter to select a specific Fiscal Year derived from As-of-Date.
- **Fiscal Month**: You can use this filter to select a specific Fiscal Month derived from As-of-Date.
- **Currency Code**: You can use this filter to select a specific Currency Code to be applied to the underlying Management Ledger data.
- **Management Ledger Table Name**: You can use this filter to select the source Management Ledger table for your analysis.

Figure 8-139 Canvas Prompt Filters for Financial Element Key Processing Dimension

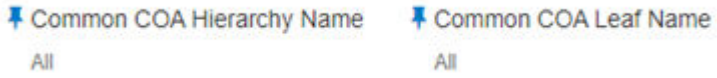


- **Financial Element Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Financial Element Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Financial Element Hierarchy Name” must be selected with only a single value simultaneously.
- **Financial Element Leaf Name**: You can use this filter to select the Financial Element Leaf Name that is related to the underlying Management Ledger data.

Figure 8-140 Canvas Prompt Filters for Legal Entity Key Processing Dimension

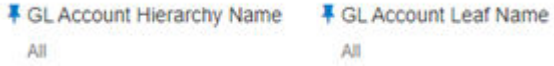
- **LE Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Legal Entity Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “LE Hierarchy Name” must be selected with only a single value simultaneously.
- **Legal Entity Leaf Name**: You can use this filter to select the Legal Entity Leaf Name that is related to the underlying Management Ledger data.

Figure 8-141 Canvas Prompt Filters for Common COA Key Processing Dimension



- **Common COA Hierarchy Name**: N.B. this is a mandatory filter for the group filtering on Common COA Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Common COA Hierarchy Name” must be selected with only a single value simultaneously.
- **Common COA Leaf Name**: You can use this filter to select the Common COA Leaf Name that is related to the underlying management ledger data.

Figure 8-142 Canvas Prompt Filters for GL Account Key Processing Dimension



- **GL Account Hierarchy Name**: Note that this is a mandatory filter for the group filtering on GL Account Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “GL Account Hierarchy Name” must be selected with only a single value simultaneously.
- **GL Account Leaf Name**: You can use this filter to select the GL Account Leaf Name that is related to the underlying Management Ledger data.

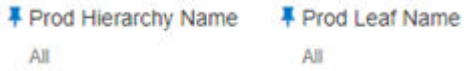
Figure 8-143 Canvas Prompt Filters for Org Unit Key Processing Dimension

- **Org Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Org Unit Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same

time, a mandatory driver to select “Org Hierarchy Name” must be selected with only a single value simultaneously.

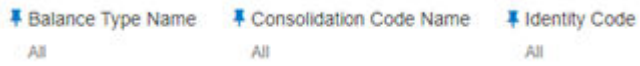
- **Org Unit Leaf Name**: You can use this filter to select the Org Unit Leaf Name that is related to the underlying Management Ledger data.

Figure 8-144 Canvas Prompt Filters for Product Key Processing Dimension



- **Prod Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Product Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Prod Hierarchy Name” must be selected with only a single value simultaneously.
- **Prod Leaf Name**: You can use this filter to select the Prod Leaf Name that is related to the underlying Management Ledger data.

Figure 8-145 Canvas Prompt Filters for Management Ledger Key Attributes (2/2)



- **Balance Type Name**: You can use this filter to select a specific Balance type, such as Debit and Credit.
- **Consolidation Code Name**: You can use this filter to select a specific Consolidation type as it identifies the values for Actual, Budget, Forecast, Forecast Prior.
- **Identity Code**: You can use this filter to select a specific identity code to be applied to the underlying Management Ledger data.

8.1.8.1.2 Report Hierarchies

The Report provides you with the roll-up and drill-down capability on Management Ledger data, leveraging the available levels for the four following Hierarchies:

- Org Unit Entity Hierarchy
- Common COA Hierarchy
- Product Hierarchy
- GL Account Hierarchy

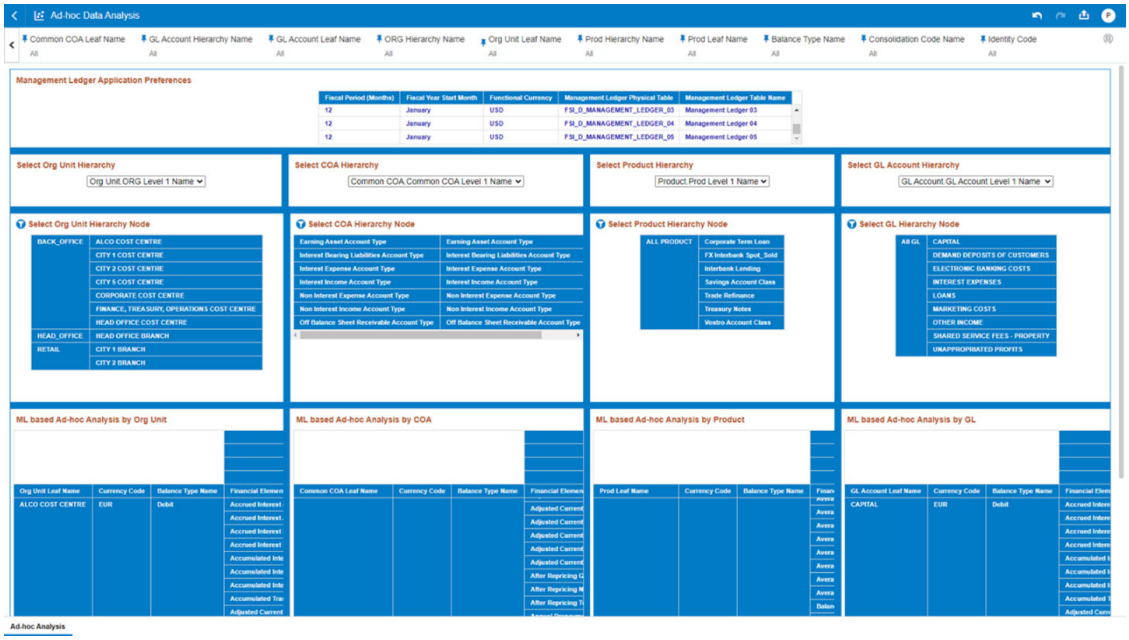
Following screenshot displays the four available selections for the aforementioned hierarchies.

Figure 8-146 Variable Prompt for Management Ledger Key Processing Dimension Hierarchies

8.1.8.1.3 Ad-hoc Analysis

The “Ad-hoc Analysis” Report can be used to perform ad-hoc analysis on Management Ledger data.

Figure 8-147 “Ad-hoc Analysis” Report



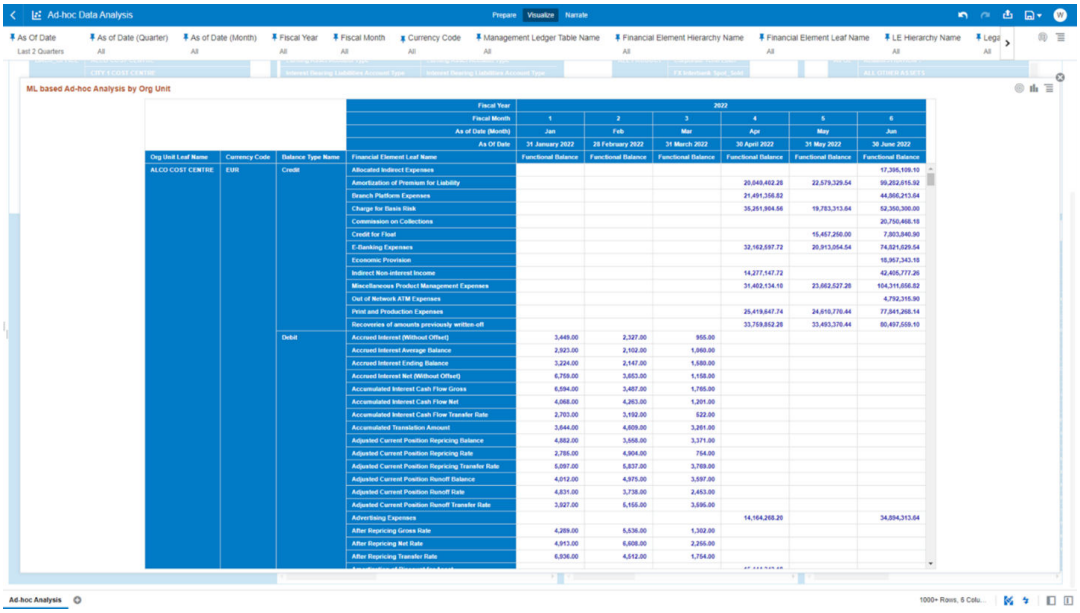
You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying Management Ledger data.

The report displays the underlying Management Ledger data according to the following Charts’ logic:

- Management Ledger Application Preferences
  The chart displays the application preferences values for the following parameters:
  - **Fiscal Period (Months)**: this filed is always 12 months equivalent to the number of fiscal months available in an ideal fiscal year.
  - **Fiscal Year Start Month**: starting month of the current Fiscal Year.
  - **Functional Currency**: the Functional Currency configured for the corresponding Management Ledger.
  - **Management Ledger Physical Table**: name of the underlying Management Ledger physical table.
  - **Management Ledger Table Name**: name of the Management Ledger table.
- **Select Org Unit Hierarchy**: The chart provides you with a selection capability for the desired Org Unit Hierarchical level.
- **Select COA Hierarchy**: The chart provides you with a selection capability for the desired Common COA Hierarchical level.
- **Select Product Hierarchy**: The chart provides you with a selection capability for the desired Product Hierarchical level.

- **Select GL Account Hierarchy**: The chart provides you with a selection capability for the desired GL Account Hierarchical level.
- **Select Org Unit Hierarchy Node**: The chart provides you with two levels of the hierarchy – the selected level from the “Select Org Unit Hierarchy” as well as the Org Unit leaf nodes. You use this chart to further filter down the ML based Ad-hoc Analysis charts as well as the Select KPD Hierarchy Node charts.
- **Select COA Hierarchy Node**: The chart provides you with two levels of the hierarchy – the selected level from the “Select COA Hierarchy” as well as the Common COA leaf nodes. You use this chart to further filter down the ML based Ad-hoc Analysis charts as well as the Select KPD Hierarchy Node charts.
- **Select Product Hierarchy Node**: The chart provides you with two levels of the hierarchy – the selected level from the “Select Product Hierarchy” as well as the Product leaf nodes. You use this chart to further filter down the ML based Ad-hoc Analysis charts as well as the Select KPD Hierarchy Node charts.
- **Select GL Account Hierarchy Node**: The chart provides you with two levels of the hierarchy – the selected level from the “Select GL Account Hierarchy” as well as the GL Account leaf nodes. You use this chart to further filter down the ML based Ad-hoc Analysis charts as well as the Select KPD Hierarchy Node charts.

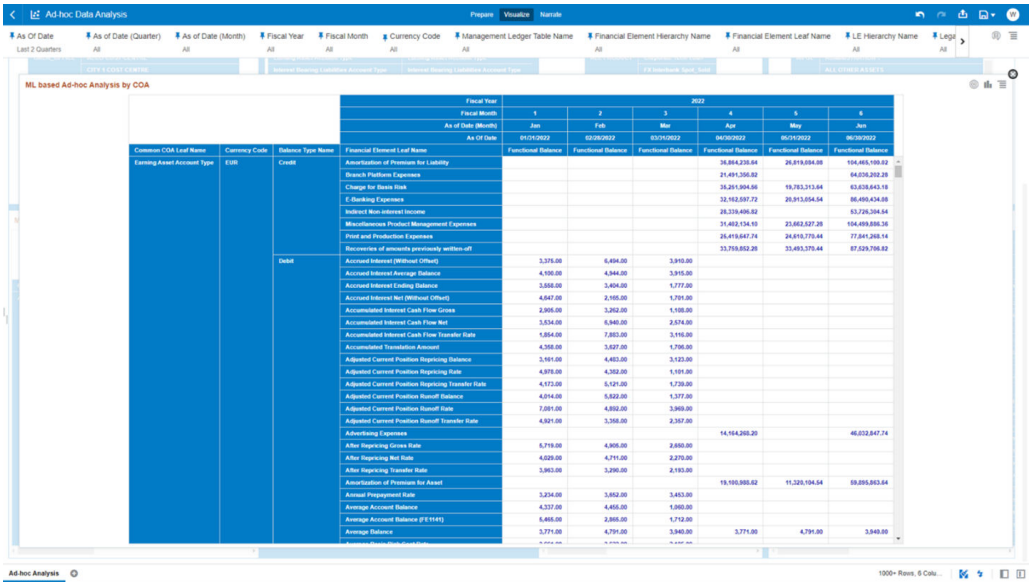
Figure 8-148 “ML based Ad-hoc Analysis by Org Unit” Chart



- **ML based Ad-hoc Analysis by Org Unit**: The chart displays the following underlying management ledger data elements:
  - Org Unit Leaf Name
  - Currency Code – displays the account currency of the records
  - Balance Type Name
  - Financial Element Leaf Name
  - Fiscal Year
  - Fiscal Month
  - As of Date (Month)

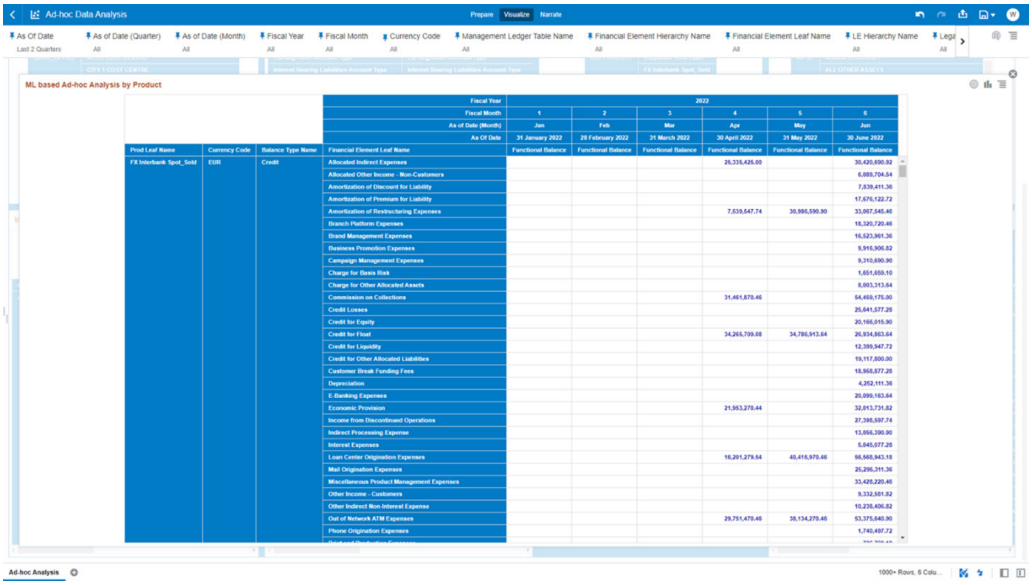
- As of Date
- Functional Balance – displays the balance in functional currency of the management ledger (the functional currency is available in the chart “Management Ledger Application Preferences”)

Figure 8-149 “ML based Ad-hoc Analysis by COA” Chart



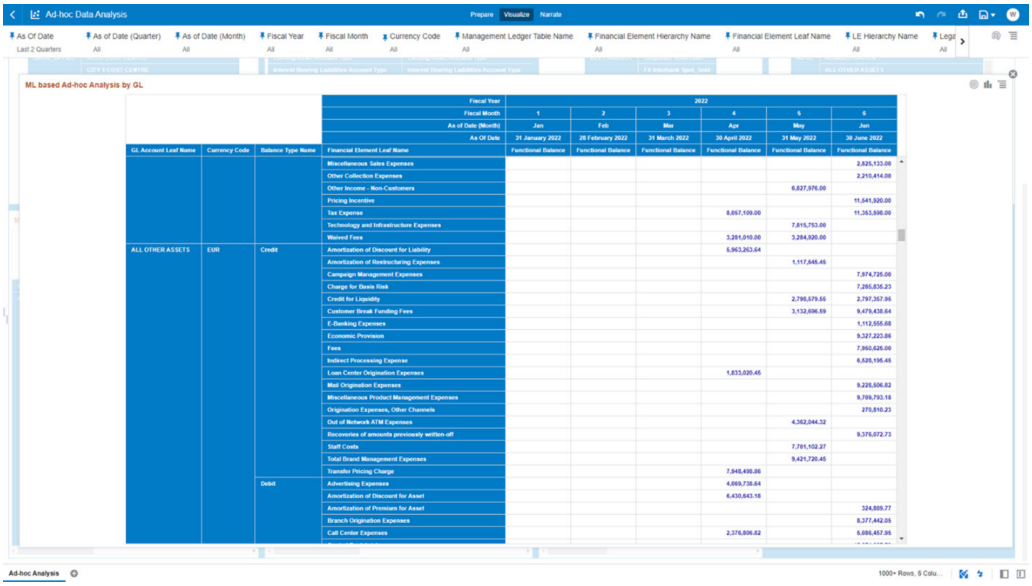
- **ML based Ad-hoc Analysis by COA**: The chart displays the following underlying management ledger data elements:ul
  - Common COA Leaf Name
  - Currency Code – displays the account currency of the records
  - Balance Type Name
  - Financial Element Leaf Name
  - Fiscal Year
  - Fiscal Month
  - As of Date (Month)
  - As of Date
  - Functional Balance – displays the balance in functional currency of the management ledger (the functional currency is available in the chart “Management Ledger Application Preferences”)

Figure 8-150 "ML based Ad-hoc Analysis by Product" Chart



- **ML based Ad-hoc Analysis by Product**: The chart displays the following underlying management ledger data elements:
  - Product Leaf Name
  - Currency Code – displays the account currency of the records
  - Balance Type Name
  - Financial Element Leaf Name
  - Fiscal Year
  - Fiscal Month
  - As of Date (Month)
  - As of Date
  - Functional Balance – displays the balance in functional currency of the management ledger (the functional currency is available in the chart "Management Ledger Application Preferences")

Figure 8-151 "ML based Ad-hoc Analysis by GL" Chart

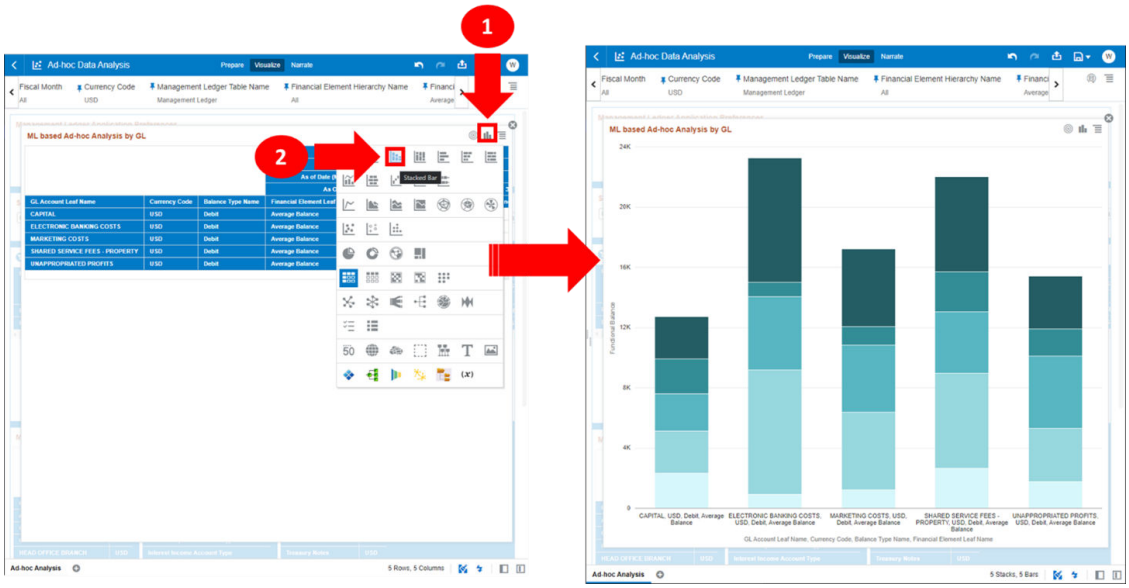


- **ML based Ad-hoc Analysis by GL**: The chart displays the following underlying management ledger data elements:
  - GL Account Leaf Name
  - Currency Code – displays the account currency of the records
  - Balance Type Name
  - Financial Element Leaf Name
  - Fiscal Year
  - Fiscal Month
  - As of Date (Month)
  - As of Date
  - Functional Balance – displays the balance in functional currency of the management ledger (the functional currency is available in the chart "Management Ledger Application Preferences")

After having performed analysis on the off-the-shelf "Ad-hoc Analysis" report charts, you can use the results for further self-service analysis.

You can change the predefined off-the-shelf charts with two clicks' steps as shown in the following screenshot.

Figure 8-152 Change Chart type for Self-Service Analysis



8.1.8.2 Financial Statements Analysis

You can use the Financial Statements Analysis Report to perform analysis on the Financial Statement Reporting Lines derived out of the Management Ledger data.

Using this LHS link, you will be redirected to the UI with the related report, as explained in the following section.

8.1.8.2.1 Report Filters

You can use a series of Report Prompts to filter the data according to Functional Key Attributes as described below:

- **As of Date**: The Execution Period for the Management Ledger data output results. You can use this filter to isolate a selected timeframe for the analysis. The following screenshot displays the possible options that this filter provides against the Time Dimension.

Figure 8-153 As-of-Date Selection

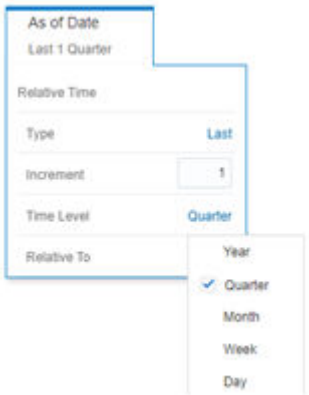
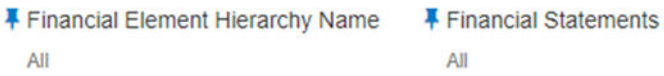


Figure 8-154 Canvas Prompt Filters for Management Ledger Key Attributes

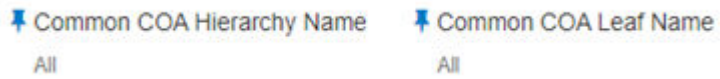
- **Fiscal Year**: You can use this filter to select a specific Fiscal Year derived from As-of-Date.
- **Fiscal Month**: You can use this filter to select a specific Fiscal Month derived from As-of-Date.
- **Management Ledger Table Name**: You can use this filter to select the source Management Ledger table for your analysis.

Figure 8-155 Canvas Prompt Filters for Financial Element Key Processing Dimension



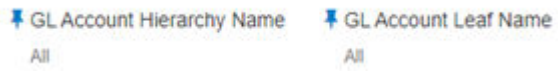
- **Financial Element Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Financial Element Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Financial Element Hierarchy Name” must be selected with only a single value simultaneously.
- **Financial Statements**: You can use this filter to select the Financial Statements Reporting Line that is related to the underlying Management Ledger data.

Figure 8-156 Canvas Prompt Filters for Common COA Key Processing Dimension



- **Common COA Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Common COA Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Common COA Hierarchy Name” must be selected with only a single value simultaneously.
- **Common COA Leaf Name**: You can use this filter to select the Common COA Leaf Name that is related to the underlying Management Ledger data.

Figure 8-157 Canvas Prompt Filters for GL Account Key Processing Dimension



- **GL Account Hierarchy Name**: Note that this is a mandatory filter for the group filtering on GL Account Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same

time, a mandatory driver to select “GL Account Hierarchy Name” must be selected with only a single value simultaneously.

- **GL Account Leaf Name**: You can use this filter to select the GL Account Leaf Name that is related to the underlying Management Ledger data.

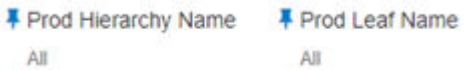
Figure 8-158 Canvas Prompt Filters for Legal Entity Key Processing Dimension

- **LE Hierarchy Name**: Note that this is a mandatory filter for the group filtering on Legal Entity Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “LE Hierarchy Name” must be selected with only a single value simultaneously.
- **Legal Entity Leaf Name**: You can use this filter to select the Legal Entity Leaf Name that is related to the underlying Management Ledger data.

Figure 8-159 Canvas Prompt Filters for Org Unit Key Processing Dimension

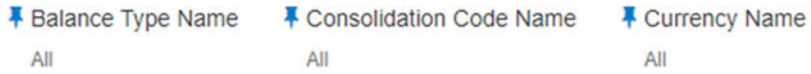
- **Org Hierarchy Name**: N.B. this is a mandatory filter for the group filtering on Org Unit Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Org Hierarchy Name” must be selected with only a single value simultaneously.
- **Org Unit Leaf Name**: You can use this filter to select the Org Unit Leaf Name that is related to the underlying Management Ledger data.

Figure 8-160 Canvas Prompt Filters for Product Key Processing Dimension



- **Prod Hierarchy Name**: N.B. this is a mandatory filter for the group filtering on Product Key Processing Dimension.
  As the Application supports the creation of multiple hierarchies for the same Dimension of analysis, and to avoid displaying results from multiple Dimension Hierarchies at the same time, a mandatory driver to select “Prod Hierarchy Name” must be selected with only a single value simultaneously.
- **Prod Leaf Name**: You can use this filter to select the Prod Leaf Name that is related to the underlying Management Ledger data.

Figure 8-161 Canvas Prompt Filters for Management Ledger Key Attributes (2/2)



- **Balance Type Name**: You can use this filter to select a specific Balance type, such as Debit and Credit.
- **Consolidation Code Name**: You can use this filter to select a specific Consolidation type as it identifies the values for Actual, Budget, Forecast, Forecast Prior.
- **Currency Name**: You can use this filter to select a specific Currency Name to be applied to the underlying Management Ledger data.

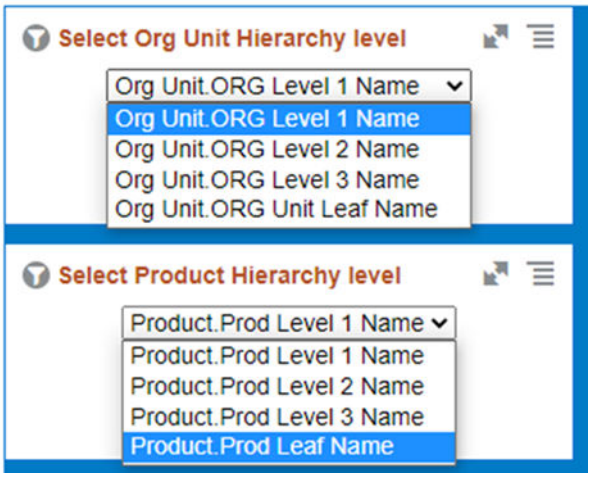
8.1.8.2.2 Report Hierarchies

The Report provides you with the roll-up and drill down capability on the Financial Statement Reporting Lines derived out of the Management Ledger data, leveraging the available levels for the two following Hierarchies:

- Org Unit Entity Hierarchy
- Product Hierarchy

Following screenshot displays the two available selections for the aforementioned hierarchies.

Figure 8-162 Variable Prompt for Management Ledger Key Processing Dimension Hierarchies



8.1.8.2.3 Report Data Action

The Data Actions provide the capability to perform drill down analysis across the downstream report canvases. The drill-down is enabled through three data actions.

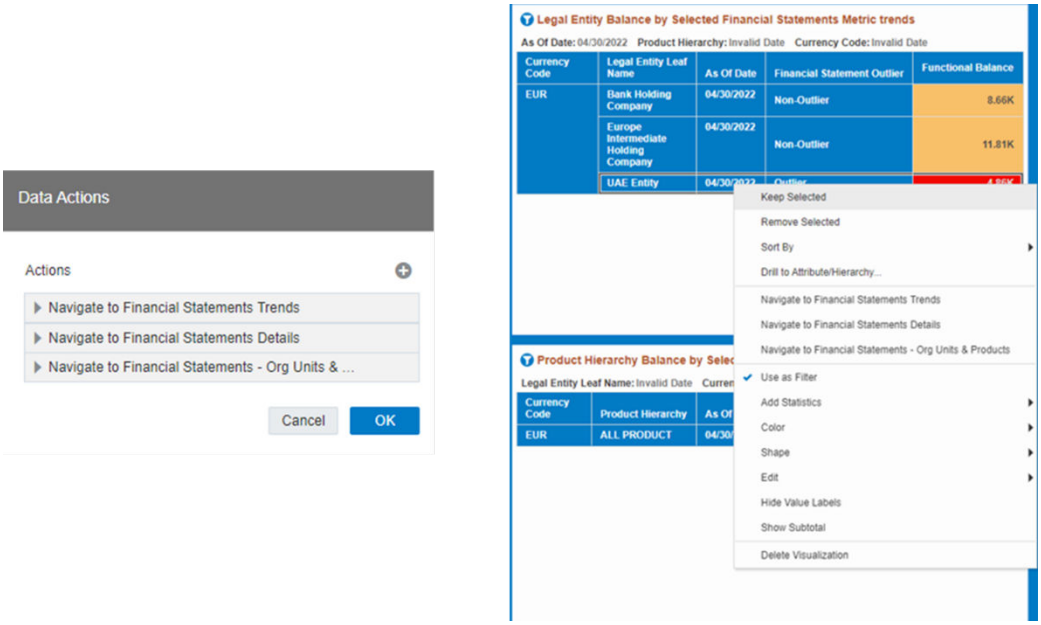
From every chart available in the report, you can select a combination of values, and then perform the navigation to the other report canvases.

In order to do so, with a right-click on the chart selection, the Data Action options will appear for you to be able to navigate further as described in the following mapping:

- **Navigate to Financial Statements Trends** – the Data Action will be drilling through the “Financial Statements - Trends” canvas.
- **Navigate to Financial Statements Details** – the Data Action will be drilling through the “Financial Statements - Detail” canvas.
- **Navigate to Financial Statements - Org Units & Products** – the Data Action will be drilling through the “Financial Statements - Org Units & Products” canvas.

The following screenshot shows the Data Actions list as well as the navigation options that appears once you right click on the desired selection.

Figure 8-163 Data Action Configuration



8.1.8.2.4 Financial Statements - Outliers

This canvas allows you to look at the Financial Statements reporting lines outliers that are calculated using the Standard Deviation capability available off the shelf with Oracle Analytics.

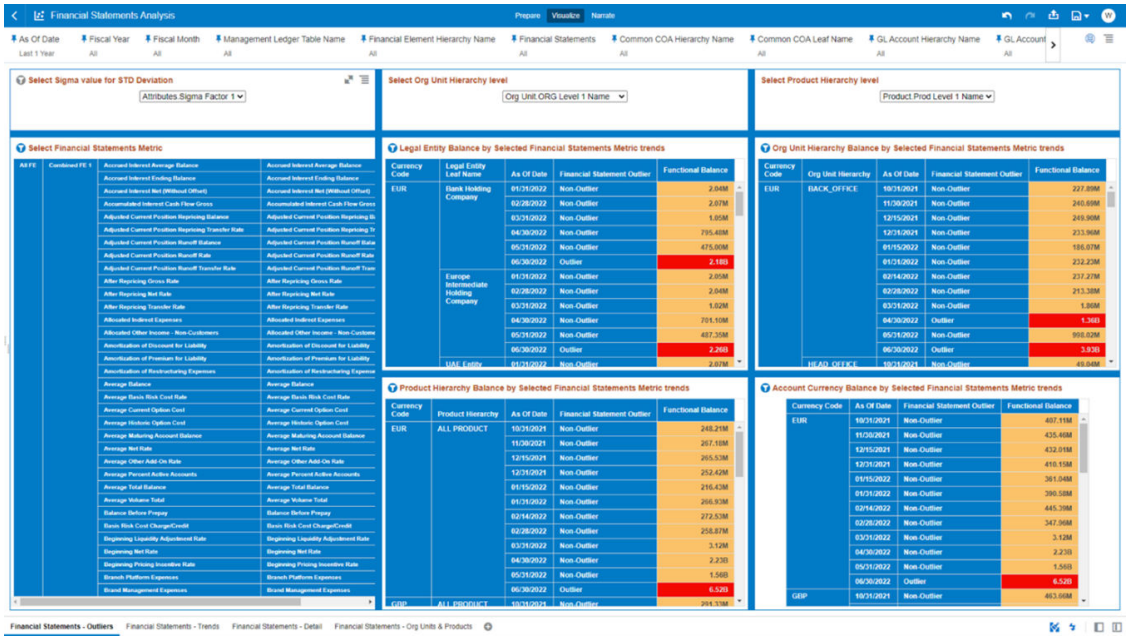
The Financial data is segregated between “Outlier” and “Non-Outlier” in the report column “Financial Statement Outlier”.

“Outlier” refers to a Financial data that lies outside the confidence interval of the deviation that we are adopting in our technique.

“Non-Outlier” would refer to a Financial data that lies inside the confidence interval of the deviation.

The outliers are calculated on the Financial Elements balance aggregated by the respective combination of KPDs, such as Legal Entity, Org Unit, and Product, against the As-of-Date available.

Figure 8-164 "Financial Statements – Outliers" Report Canvas



A Financial data can be identified as an outlier or a non-outlier based on the standard deviation confidence interval that we adopt.

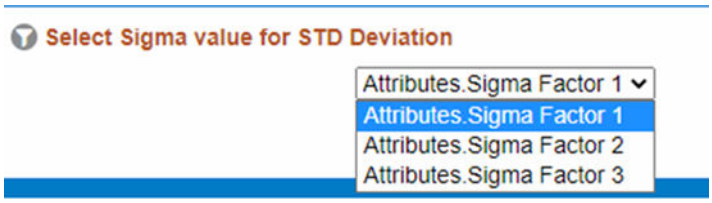
This Confidence Interval is parametrized with the list of the Sigma values available in the report, that is, "Attributes.Sigma Factor 1", "Attributes.Sigma Factor 2", and "Attributes.Sigma Factor 3".

The Sigma Factors are integer values that range from "Attributes.Sigma Factor 1" to "Attributes.Sigma Factor 3" in the increasing order of the conservativeness or the confidence interval of the Standard Deviation.

This means will have more outliers when you perform analysis with "Attributes.Sigma Factor 1" than with the "Attributes.Sigma Factor 3".

The following screenshot shows the selection for the Sigma Factor available in the report canvas.

Figure 8-165 Sigma Factor selection for STD Deviation



8.1.8.2.4.1 Working with Financial Statement Reporting Lines

The default canvas view displays all the FE's under the "Financial Statement" canvas prompt filter, hence all the balances available in each of the canvas charts are showing the cumulative value of the balances across all the available FE's.

Therefore, to perform a correct analysis, you should select a single FE Reporting Line that you want to use for your analysis.

You can either select a single FE Reporting Line via the “Financial Statement” canvas prompt filter (option “A”) or use the left-hand side “Select Financial Statements Metric” chart on the “Financial Element Leaf Name” column (option “B”).

Figure 8-166 FE Reporting Line selection Option “A”

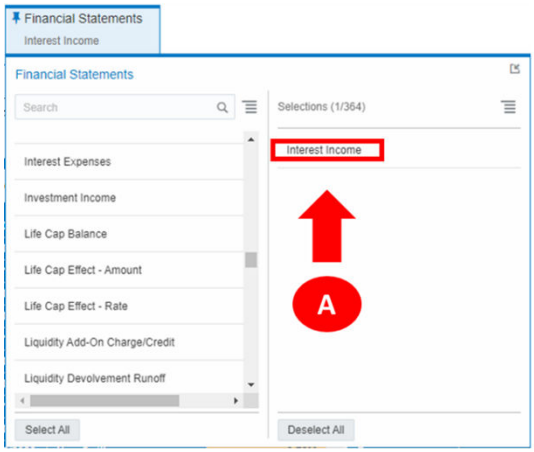


Figure 8-167 FE Reporting Line Selection Option “B”

You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying Management Ledger data.

The report displays the underlying management ledger data according to the following Charts’ logic:

- **Select Sigma Value for STD Deviation**: The chart provides you with a selection capability for the desired Sigma value to be used by the STD Deviation, the possible selection values are “Attributes.Sigma Factor 1”, “Attributes.Sigma Factor 2”, and “Attributes.Sigma Factor 3”.

- **Select Org Unit Hierarchy level**: The chart provides you with a selection capability for the desired Org Unit Hierarchical level.
- **Select Product Hierarchy level**: The chart provides you with a selection capability for the desired Product Hierarchical level.
- **Select Financial Statements Metric**: The chart provides you with a selection capability for the desired Financial Element reporting line. The Financial Element Leaf Name is the actual data on which the reporting is based whereas the chart provides with the parent levels for ease of finding out the Financial Element Leaf member.
  The columns displayed in the chart are the following:
  - Financial Element Level 1 Name
  - Financial Element Level 2 Name
  - Financial Element Level 3 Name
  - Financial Element Leaf Name
- **Legal Entity Balance by Selected Financial Statements Metric trends**: This chart deduces if a Financial data (that is the Functional Balance of a Financial Element Leaf Name) is a “Outlier” or “Non-Outlier” for a combination of As-of-Date, Currency (transaction currency) and Legal Entity. The columns displayed in the chart are the following:
  - Currency Code
  - Legal Entity Leaf Name
  - As Of Date
  - Financial Statement Outlier
  - Functional Balance
- Org Unit Hierarchy Balance by Selected Financial Statements Metric trends: This chart deduces if a Financial data (that is the Functional Balance of a Financial Element Leaf Name) is a “Outlier” or “Non-Outlier” for a combination of As-of-Date, Currency (transaction currency) and Org Unit (the Org Unit display is based on the Org Unit Hierarchy level you’re analyzing).
  The columns displayed in the chart are the following:
  - Currency Code
  - Org Unit Hierarchy
  - As Of Date
  - Financial Statement Outlier
  - Functional Balance
- **Product Hierarchy Balance by Selected Financial Statements Metric trends**: This chart deduces if a Financial data (that is the Functional Balance of a Financial Element Leaf Name) is a “Outlier” or “Non-Outlier” for a combination of As-of-Date, Currency (transaction currency) and Product (the Product display is based on the Product Hierarchy level you’re analyzing).
  The columns displayed in the chart are the following:
  - Currency Code
  - Product Hierarchy
  - As Of Date
  - Financial Statement Outlier
  - Functional Balance

- **Account Currency Balance by Selected Financial Statements Metric trends**: This chart deduces if a Financial data (that is the Functional Balance of a Financial Element Leaf Name) is a “Outlier” or “Non-Outlier” for a combination of As-of-Date and Account Currency (transaction currency).
  The columns displayed in the chart are the following:
  - Currency Code
  - As Of Date
  - Financial Statement Outlier
  - Functional Balance

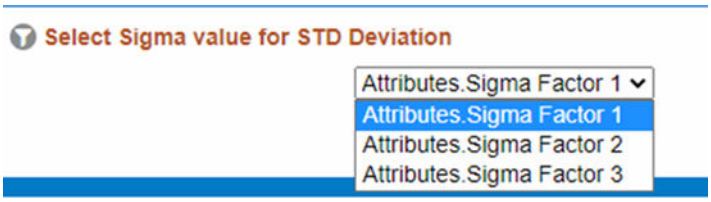
8.1.8.2.4.2 Use Case Flow for Outliers Analysis

You can refer this use case to best leverage the advanced analytics capabilities of the reports.

Starting from the canvas “Financial Statements – Outliers” you can perform a series of actions as following described.

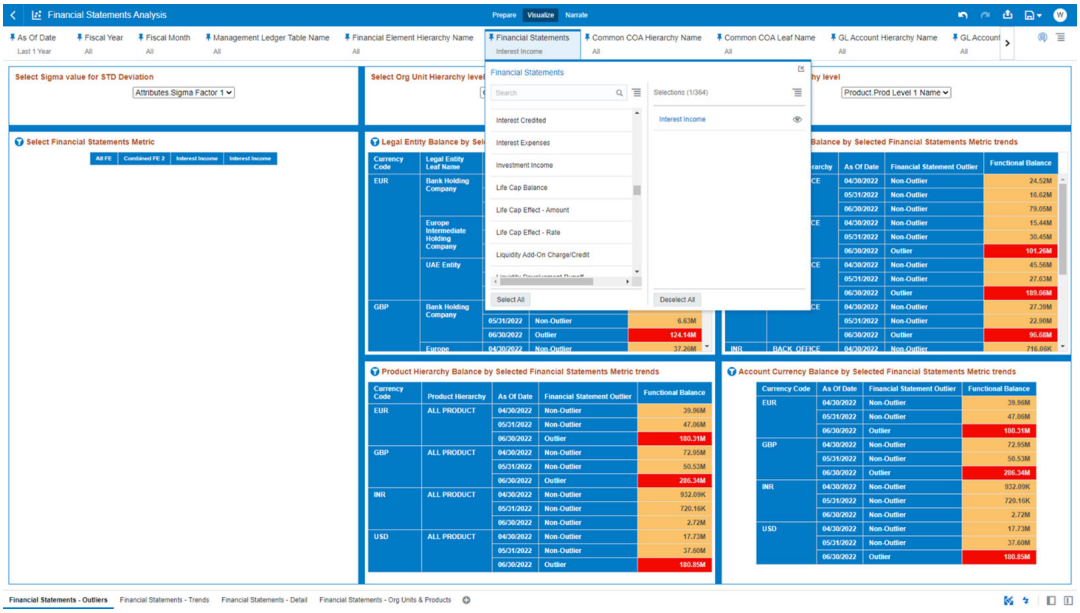
1. Select your desired Sigma value on which the outlier analysis will be generated.

Figure 8-168 Sigma Value Selection



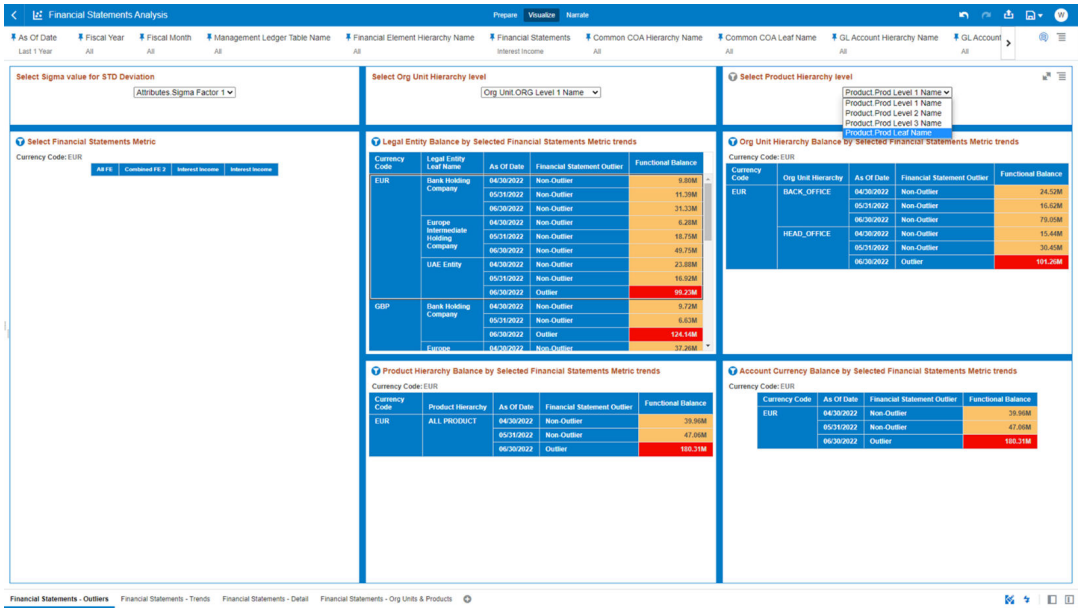
2. Select the Financial Statements, as described in the previous section Working with Financial Statement Reporting Lines.

Figure 8-169 Financial Statements Selection



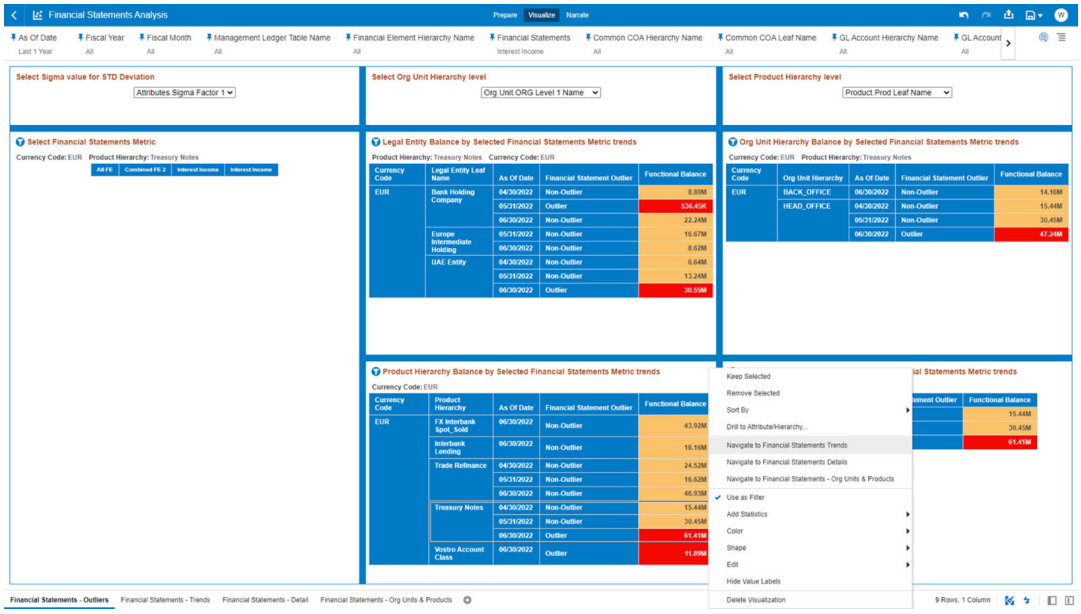
3. Select the Outliers and change the desired Hierarchy level for any of the available Key Processing Dimensions.

Figure 8-170 Outliers Selection



4. After you have selected a combination of outliers and related Dimensions, you can use the Data Actions to navigate to the other Report Canvases.

Figure 8-171 Navigation to Report Canvases



8.1.8.2.5 Financial Statements - Trends

The “Financial Statements – Trends” Report describes the trend of the Financial Statements reporting lines with respect to As-of-Date.

You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying Management Ledger data.

As described in the previous section Working with Financial Statement Reporting Lines, to perform a correct analysis, you should select a single FE Reporting Line that you want to use for your analysis. The report displays the underlying data according to the following Charts' logic:

- **Select Org Unit Hierarchy level**: The chart provides you with a selection capability for the desired Org Unit Hierarchical level.
- **Select Product Hierarchy level**: The chart provides you with a selection capability for the desired Product Hierarchical level.
- **Select Financial Statements Metric**: The chart provides you with a selection capability for the desired Financial Element reporting line. The Financial Element Leaf Name is the actual data on which the reporting is based whereas the chart provides with the parent levels for ease of finding out the Financial Element Leaf member.
  The columns displayed in the chart are the following:
  - Financial Element Level 1 Name
  - Financial Element Level 2 Name
  - Financial Element Level 3 Name
  - Financial Element Leaf Name
- **Organization Unit Hierarchy**: The chart provides you with two levels of the hierarchy – the selected level from the "Select Org Unit Hierarchy level" as well as the Org Unit leaf nodes. You use this chart to further filter down the "Financial Statements – Trends" charts.
- **Product Hierarchy**: The chart provides you with two levels of the hierarchy – the selected level from the "Select Product Hierarchy level" as well as the Product leaf nodes. You use this chart to further filter down the "Financial Statements – Trends" charts.
- **Financial Statements Line by Organization Unit and As-of-Date**: The chart reports the trend analysis of the Financial Statements reporting lines with respect to As-of-Date and it is split by Currency and Org Unit (the Org Unit display is based on the Org Unit Hierarchy level you're analyzing).
  The columns displayed in the chart are the following:
  - Currency Code
  - Org Unit Hierarchy
  - As Of Date
  - Functional Balance
- **Financial Statements Line by Product and As-of-Date**: The chart reports the trend analysis of the Financial Statements reporting lines with respect to As-of-Date and it is split by Currency and Product (the Product display is based on the Product Hierarchy level you're analyzing).
  The columns displayed in the chart are the following:
  - Currency Code
  - Product Hierarchy
  - As Of Date
  - Functional Balance

- **Financial Statements Line by Account Currency and As-of-Date**: The chart reports the trend analysis of the Financial Statements reporting lines with respect to As-of-Date and it is split further by Currency.
  The columns displayed in the chart are the following:
  - Currency Code
  - As Of Date
  - Functional Balance

Figure 8-172 "Financial Statements – Trends" Report

8.1.8.2.6 Financial Statements - Detail

The "Financial Statements – Detail" Report provides the details of the Financial Statements reporting lines with respect to As-of-Date, with the possibility to analyze multiple reporting lines in the same view or to focus the analysis on one or more specific reporting lines.

You can use a series of Report Prompts, as previously described, to filter the data according to key attributes pertaining to the underlying management ledger data.

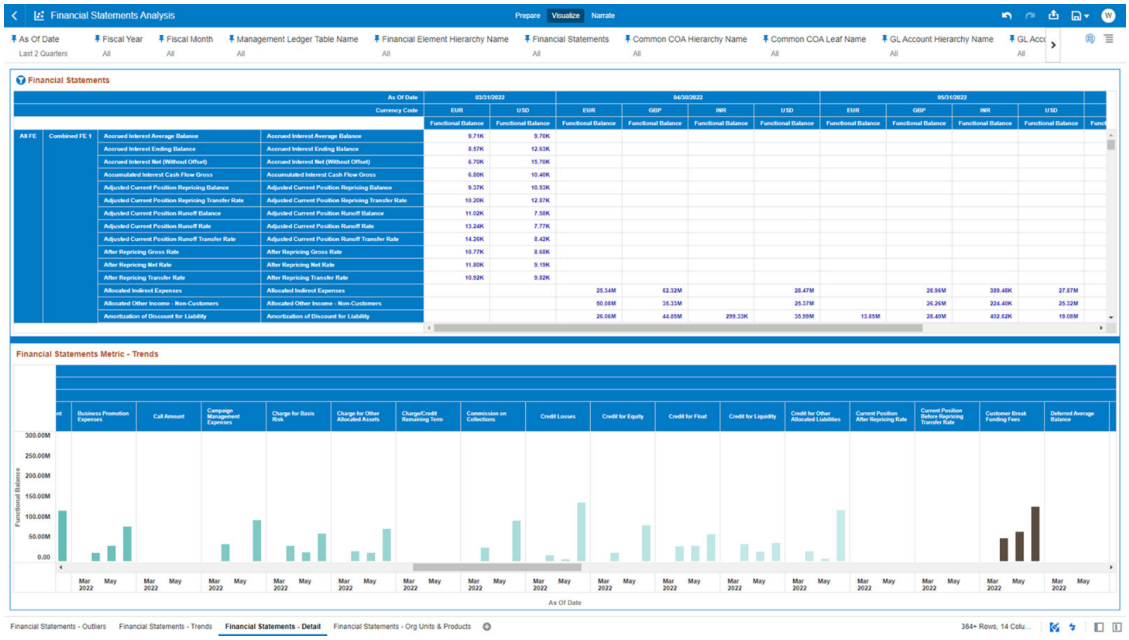
The report displays the underlying data according to the following Charts' logic:

- **Financial Statements**: The chart reports the detail analysis, in a tabular manner, of the Financial Statements reporting lines with respect to As-of-Date, and it is split by Currency.
  The columns displayed in the chart are the following:
  - Currency Code
  - Financial Element Level 1 Name
  - Financial Element Level 2 Name
  - Financial Element Level 3 Name
  - Financial Element Leaf Name

  - As Of Date
  - Functional Balance

- **Financial Statements Metric – Trends**: The chart reports the trend analysis of the Financial Statements reporting lines with respect to As-of-Date and it is split by Currency. The columns displayed in the chart are the following:
  - Currency Code
  - Financial Element Level 1 Name
  - Financial Element Level 2 Name
  - Financial Element Level 3 Name
  - As Of Date
  - Functional Balance

Figure 8-173 “Financial Statements – Detail” Report



8.1.8.2.7 Financial Statements - Org Units & Products

The “Financial Statements – Org Units & Products” Report ranks the top/bottom Org Units and Product based on the Financial Statements reporting lines balances with respect to As-of-Date.

As described in the previous section Working with Financial Statement Reporting Lines, to perform a correct analysis, you should select a single FE Reporting Line that you want to use for your analysis.

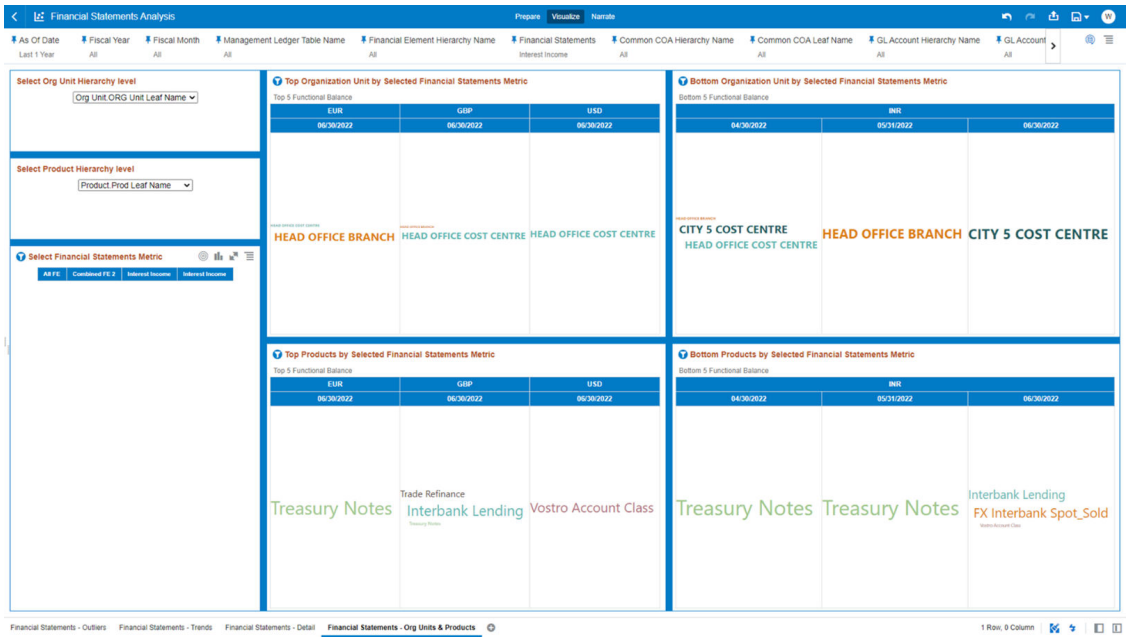
The report displays the underlying data according to the following Charts’ logic:

- **Select Org Unit Hierarchy level**: The chart provides you with a selection capability for the desired Org Unit Hierarchical level.
- **Select Product Hierarchy level**: The chart provides you with a selection capability for the desired Product Hierarchical level.

- **Select Financial Statements Metric**: The chart provides you with a selection capability for the desired Financial Element reporting line. The Financial Element Leaf Name is the actual data on which the reporting is based whereas the chart provides with the parent levels for ease of finding out the Financial Element Leaf member.
  The columns displayed in the chart are the following:
  - Financial Element Level 1 Name
  - Financial Element Level 2 Name
  - Financial Element Level 3 Name
  - Financial Element Leaf Name
- **Top Organization Unit by Selected Financial Statements Metric**: The chart ranks the top Org Units (the Org Units display is derived from the Org Unit Hierarchy level you're analyzing) based on the Financial Statements reporting lines balances with respect to As-of-Date and it is split by Currency. The top count has been defaulted to 5 and you can change the count value as required.
  The columns displayed in the chart are the following:
  - Currency Code
  - As Of Date
  - Org Unit Hierarchy
  - Functional Balance
- **Bottom Organization Unit by Selected Financial Statements Metric**: The chart ranks the bottom Org Units (the Org Units display is derived from the Org Unit Hierarchy level you're analyzing) based on the Financial Statements reporting lines balances with respect to As-of-Date and it is split by Currency. The bottom count has been defaulted to 5 and you can change the count value as required.
  The columns displayed in the chart are the following:
  - Currency Code
  - As Of Date
  - Org Unit Hierarchy
  - Functional Balance
- **Top Products by Selected Financial Statements Metric**: The chart ranks the top Products (the Products display is derived from the Product Hierarchy level you're analyzing) based on the Financial Statements reporting lines balances with respect to As-of-Date and it is split by Currency. The top count has been defaulted to 5 and you can change the count value as required.
  The columns displayed in the chart are the following:
  - Currency Code
  - As Of Date
  - Product Hierarchy
  - Functional Balance
- **Bottom Products by Selected Financial Statements Metric**: The chart ranks the bottom Products (the Products display is derived from the Product Hierarchy level you're analyzing) based on the Financial Statements reporting lines balances with respect to As-of-Date and it is split by Currency. The bottom count has been defaulted to 5 and you can change the count value as required.
  The columns displayed in the chart are the following:
  - Currency Code

- As Of Date
- Product Hierarchy
- Functional Balance

Figure 8-174 "Financial Statements – Org Units & Products" Report



8.2 Dashboard

The Dashboard UI helps users get a quick glimpse of the highlights and the low-lights of the application metrics. The Dashboard is placed as the top-most menu item in the application LHS menu and welcomes the user to the application. The Dashboard contains a header where the application name is specified and contains a Refresh button that refreshes the data points in the dashboard.

The Dashboard essentially contains widgets through which it offers the users useful insights into the different business metrics and the application parameters.

This version releases four widgets namely:

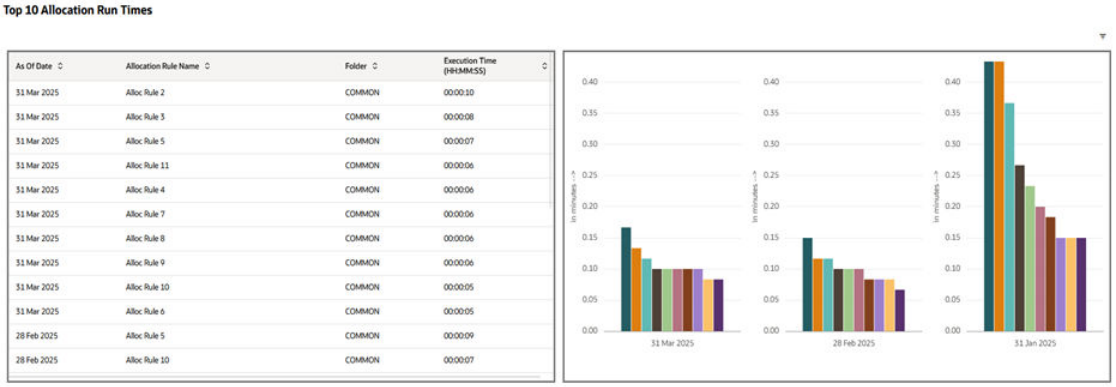
- Top 10 Allocation Run Times
- Top 10 Allocation Run Times – Current period Analysis
- Pinned Allocation Models
- Pinned Allocation Rules

The following topics describe each of the above widgets.

8.2.1 Top 10 Allocation Run Times

This widget shows a table and a chart adjacent to each other. The widget looks like the following:

Figure 8-175 Top 10 Allocation Run Times



The table on the left hand side showing columns As Of Date, Allocation Rule Name, Folder, Execution Time. The table lists the top ten most time consuming allocation rules in the last three consecutive As-of-date allocation runs. This means the table ideally should always list 30 rows that corresponds to the 10 most time consuming allocation rule executions in each of the last three consecutive As-of-date executions. The table can list less than 30 rows when any As-of-date execution has resulted into less than 10 rule executions.

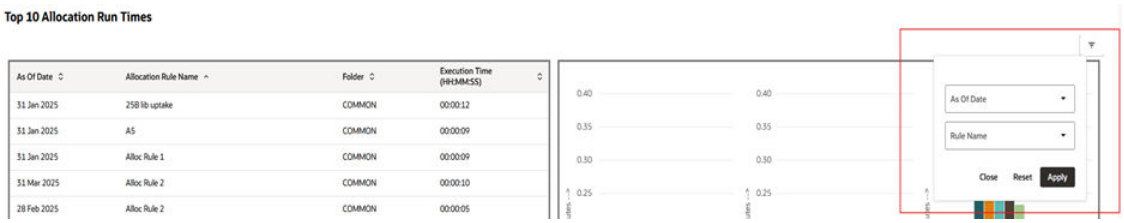
This table helps the users to identify the slowest running rules for the most recent three As-of-date executions allowing for user analysis of slowness in execution and to take corrective action if needed.

The rules are default sorted by the As-of-date and the Execution Time in decreasing order of the As-of-date and the Execution Time values. The Execution Time are reported in HH:MM:SS format denoting the appropriate figures in hours, minutes and seconds.

Individual column sorting option is provided at each column level through the column header.

The widget has a filter option at the top right corner allowing to filter table data and chart data either by As-of-date or by allocation rule names. The filter is shown in the following screen shot with the red colored square.

Figure 8-176 Top 10 Allocation Run Times



The right hand side of the widget contains a bar chart of the execution time (in minutes) for each allocation rule executed per As-of-date.

The height of each bar corresponds to the allocation rule execution timing represented in minutes, while the color of each bar helps to distinguish among different allocation rules. The chart holds three separate groups of bar-charts, each group representing each executed As-of-date. The bar-chart for the most recent executed As-of-date appears on the left most side, followed by the earlier As-of-date execution in the middle and finally the earliest one appearing on the right most side.

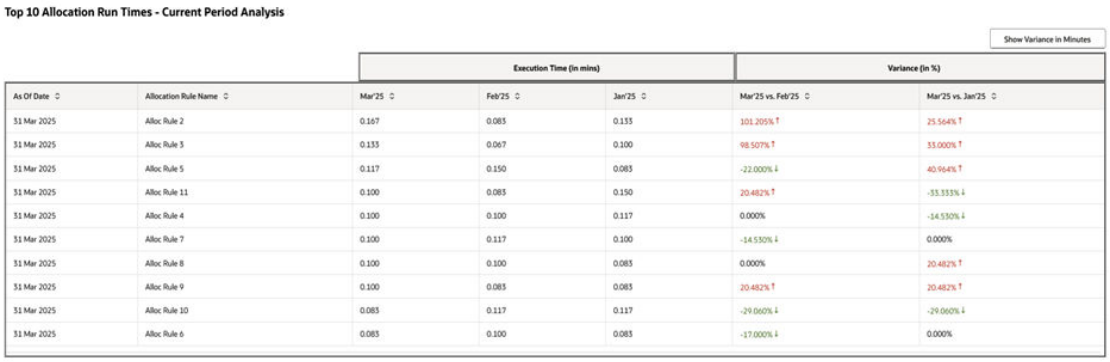
The chart holds exactly the same data as the table. The chart should ideally hold 30 bar graphs always, each set of 10 corresponding to each executed As-of-date. The chart can list less than 30 rows when any As-of-date execution has resulted into less than 10 rule executions.

The bar chart serves the same purpose as the table information but the chart gives an additional visual representation of the slowest running rules for each As-of-date. Similar to the table, the chart can be filtered either by As-of-date or by allocation rule names through the same filter option explained earlier.

8.2.2 Top 10 Allocation Run Times – Current period Analysis

This widget is a table type widget derived from the earlier widget. The widget looks like the following:

Figure 8-177 Top 10 Allocation Run Times – Current period Analysis



This table is similar to the table in the **Top 10 Allocation Run Times** widget but now listed with only the top ten most time consuming rules from the latest As-of-date run. We exhibit a periodic analysis for these rules based on how they performed in the current period versus how they performed in the last two execution runs.

The execution timings of the current As-of-date run (in our example, March 2025) of these allocation rules are compared with the execution timings of these same rules in the earlier two As-of-date run periods (in our example, February 2025 and January 2025). We display these comparison figures under the column **Variance** and the actual execution timings under the column **Execution Time (in mins)**.

The variance is expressed either in minutes or in percentages. The default is expressing Variance in percentages. The formula for Variance (in %) is illustrated through the following example:

- Variance (in %) for Mar'25 vs. Feb'25 =
  [[Execution Time (Mar'25) - Execution Time (Feb'25)]/ Execution Time (Feb'25)] x 100%
- Variance (in %) for Mar'25 vs. Jan'25 =
  [[Execution Time (Mar'25) - Execution Time (Jan'25)]/ Execution Time (Jan'25)] x 100%

The formula for **Variance (in mins)** is illustrated through the following example:

- Variance (in mins) for Mar'25 vs. Feb'25 =
  [Execution Time (Mar'25) - Execution Time (Feb'25)]

- Variance (in mins) for Mar’25 vs. Jan’25 =
  [Execution Time (Mar’25) - Execution Time (Jan’25)]

The Variance expression can be toggled between expressing in minutes or in percentages through the **Show Variance** button at the top right corner of the widget.

The Up arrow and the Down arrow adjacent to the Variance values denotes whether the variance is on the Upside (positive value) or on the Downside (negative value) respectively.

The Upside (positive) values are colored as Red and the Downside (negative) values are colored as Green. Let us understand the reason for this coloring through the example of Mar’25 vs. Feb’25 column. This is because a positive value of (Mar’25 vs. Feb’25) denotes that in Mar’25 the rule has taken more execution time than in Feb’25 which is a cause of concern for the current period (Mar’25). Thus this positive value is marked in red. Similarly, a negative value of (Mar’25 vs. Feb’25) denotes that in Mar’25 the rule has taken lesser execution time than in Feb’25 which is a green flag suggesting that the performance of the rule might have improved in the current period (Mar’25). Thus this negative value is marked in green.

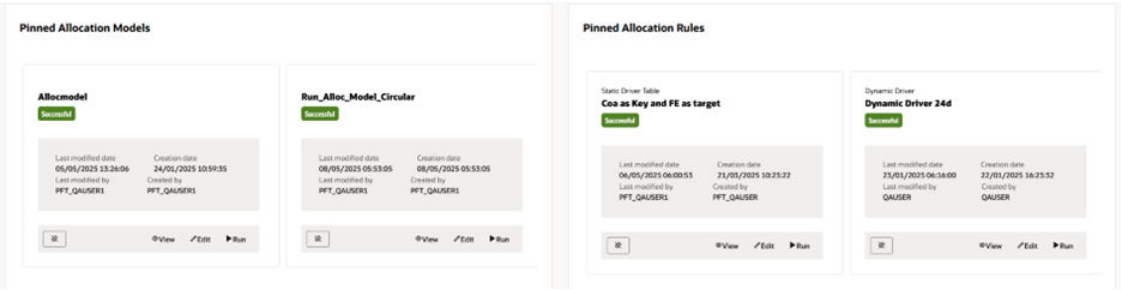
It is understood that a lesser rule execution time can be due to several other factors like lesser amount of source data available thereby lesser amount of output data generated, or due to change in rule definition or due to database optimizations or change in database configurations, etc. The widget just gives a symbolic idea with the variance and detailed analysis is not in scope of this widget.

> **Note:**
>
> A more detailed analysis on the longest running allocation rules per As-of-date can be done from the Analytics menu under **Processing Analytics**.

8.2.3 Pinned Allocation Models and Pinned Allocation Rules

These two widgets are twin widgets that describes the Allocation Models and the Allocation Rules pinned by the user.

Figure 8-178 Pinned Allocation Models and Pinned Allocation Rules



Pinning here refers to setting certain objects as favorites. Pinning is a user-specific action from Summary screens inside the application and hence these two widgets are user specific.

Each widget is laid in the form of a set of tiles, each tile representing a rule or a model. The user can use the horizontal scroll bar available at the bottom these widgets to horizontally scroll through the list of the pinned models or rules.

A user can launch into the pinned Model or Rule Detail screen in either of View or Edit mode through the **View** and **Edit** buttons available at the bottom in these widgets. The user can also

execute the models and rules through these same widgets by clicking on the **Run** button. The Run time parameters are to be picked from the user settings saved at the Preference level. The user can use these widgets to unpin the models or rules through the Unpin button available at the bottom left corner of the screen. Once unpinned, the model or rule will be removed from the widget and not be visible to the user.

These widgets are to be enhanced in the next version of the Dashboard, which is the R25B version where more objects are to be included under the Pinned widgets. A more detailed explanation is to be available under the R25B version.

9
Technical Documents

This chapter covers the following topics:

- **Data Requirements**: Profitability Management Data Requirements are available at the MOS page Doc ID: 2869409.1. This document contains detail of account, ledger, reference, and market data needed to deliver business functionality. They are required at a pre-defined granularity / format and can come from your source systems and external data providers.

Table 9-1 STAGE and INSTRUMENT Tables

STAGE_TABLE_NAME	INSTRUMENT_TABLE_NAME	INSTRUMENT_TYPE_CODE	NAME
STG_ASSET	FSI_D_ASSET	COMMLOANS	Commercial Loans
		CONSLOANS	Consumer Loans
		MORTGAGES	Mortgages
		INVESTMENT	Investments
		ABS	Asset Backed Securities
		CCARDS	Credit Cards
		CREDITLINES	Credit Lines
		LEASES	Leases
		LOANCONTRACTS	Loan Contracts
STG_ASSET, STG_LIABILITY	FSI_D_ASSET,FSI_D_LIABILITY	MMCONTRACTS	Money Market Contracts
STG_LIABILITY	FSI_D_LIABILITY	ANNUITYCONTRACTS	Annuity Contracts
		BORROWINGS	Borrowings
		DEPOSITS	Deposits
		CASA	Checking and Savings
		WHOLESALEFUNDING	Wholesale Funding
		TD	Term Deposits
		RETIREMENTACCOUNTS	Retirement Accounts
STG_LEDGER_INSTRUMENT	FSI_D_LEDGER_INSTRUMENT	LEDGERINSTRUMENTS	Ledger Instruments
STG_FEE_BASED_SERVICE	FSI_D_FEE_BASED_SERVICE	MERCHANTCARDS	Merchant Cards
		MUTUALFUNDS	Mutual Funds
		OTHERSERVICES	Other Services
		TRUSTS	Trusts
STG_DERIVATIVE	FSI_D_DERIVATIVE	DERIVATIVES	Derivatives
		FRA	Forward Rate Agreements
		FUTURES	Futures
		FXCONTRACTS	Foreign Exchange Contracts

Table 9-1 (Cont.) STAGE and INSTRUMENT Tables

		OPTIONS	Caps, Floors, Collars
		SWAPS	Interest Rate Swap
		FXSWAP	Foreign Exchange Swap
STG_OFF_BALANCE_SHEET	FSI_D_OFF_BALANCE_SHEET	GUARANTEES	Guarantees
STG_LOAN_COMMITMENTS	FSI_D_LOAN_COMMITMENTS	RATELOCK	Rate Lock Commitments

While loading data into Instrument tables, we need to remember:

1. If the user is providing a valid Instrument_type_code value in the loaded Instrument data file, the record gets loaded into Stage Instrument table, and also in the Processing Instrument table with the corresponding Instrument_type_cd value. The list of valid Instrument_type_code values. is specified in table 8-1.
2. If the user is providing an invalid Instrument_type_code value in the loaded Instrument data file, the record gets loaded into Stage Instrument table with the invalid Instrument_type_code, but the record gets rejected when the data loading happens from Stage table into Processing Instrument table. Thus, users need to take care that they use only valid values for Instrument_type_code, as specified in table 8-1. Note: Table 8-1 is a limited set and extension beyond this list is not allowed.
3. If column Instrument_type_code is included in Instrument data file but the user is not providing value for it, the concerned records will get rejected as it is a not null column. If column Instrument_type_code is not included in Instrument data file, the value of Instrument_type_code is defaulted as 'NA' in Stage table. When this record gets loaded into the Processing table, the value for Instrument_type_cd will be inserted as -1 (Default).

> **Note:**
>
> PFTCS engine execution uses valid Instrument_type_code values to partition the Instrument dataset and thereby improves execution performance for rules that use Instrument_type_code as a filter. If customer is not providing the value for Instrument_type_code, the engine will scan all Instrument records as the execution would be based out of the default partition alone, that is, -1.

- **Reporting Data Model**: Refer to the Doc ID: 2869409.1 to retrieve the Profitability and Balance Sheet Management Cloud Service Glossary of the Reporting Data Model (RPD Subject Areas).
- **FRC Analytics - Exporting Files from Oracle Analytics**: Please refer to the doc FRC Analytics - Exporting Files from Oracle Analytics: This document helps you to use Oracle Analytics Server (OAS) to aggregate the data to required level and downloading it from Object Storage.