Oracle Financial Services Reporting for Reserve Bank of India - Lombard Risk Integration Pack

User Guide

Release 8.1.1.0.0

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Financial Services

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Oracle Financial Services Reporting for Reserve Bank of India - Lombard Risk Integration Pack User Guide

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1 Preface

Welcome to Release 8.1.1.0.0 of the Oracle Financial Services Regulatory Reporting for Reserve Bank of India – Lombard Risk Integration Pack User Guide.

This section provides a brief description of the scope, the audience, the references, concepts, and the organization of the user guide and conventions incorporated into the user guide.

Topics:

- What is New in this Release for OFS REG REP RBI
- Scope of the guide
- Intended Audience
- Access to Oracle Support
- Related Information Sources
- How this Guide is Organized
- Conventions Used

1.1 What is New in this Release for OFS REG REP RBI

This section lists new features and changes in OFS REG REP RBI release v8.1.1.0.0 and v8.1.1.0.1.

1.1.1 New Features for 8.1.1.0.1

The new features introduced in this release are as follows:

- Introduced new reports SLR2 and CCR.

1.1.2 New Features for 8.1.1.0.0

The new features introduced in this release are as follows:

- Introduced new reports RCAIII version 8 and CRILC version 9.
- Conversion of existing Run Rule Framework runs to the new OFSAAI Process Modelling Framework feature.
  For more information, see the Executing Run through Process Modelling Framework in OFS REG REP RBI.
- New RBI Menu to access Process Execution Summary, Metadata Browser, and Reports (Report Summary and Data Elements Summary).
  For more information, see the Process Execution Summary, Metadata Browser, and Viewing Report Summary.
- Enabling the Reporting Flag for a run through the new Process Execution Summary module.
  For more information, see the Reporting Flag for Run through Process Execution Summary

- New Drill down User Interface.
  For more information see the Report Verification – Drill down from AgileREPORTER to OFSAA Results Area

1.1.3 Deprecated Features

There are no deprecated features in this release.

1.1.4 Desupported Features

The desupported feature for OFS REG REP RBI Release v8.1.1.0.0 is the Run execution and management through Run Rule Framework and the report RCAIII v7.

1.2 Scope of the Guide

The objective of this user guide is to provide comprehensive working knowledge on Oracle Financial Services Regulatory Reporting for Reserve Bank of India – Lombard Risk Integration Pack (OFS REG REP RBI), Release 8.1.1.0.0. This user guide is intended to help you understand the key features and functionalities of OFS REG REP RBI release 8.1.1.0.0 and details the process flow and methodologies used.

1.3 Intended Audience

This guide is intended for:

- Regulatory Reporting Analyst who maintain the dimensional values across multiple reporting requirements, maintain results area structure of Oracle Financial Services Data Foundation and ensure data quality.
- Data Analysts who clean, validate, and import data into the Oracle Financial Services Download Specification format, and ensure that data is populated in the relevant tables as per the specifications and executions required for regulatory reporting.
- System Administrator (SA), instrumental in making the application secure and operational and configures the user roles providing necessary access to users.

1.4 Access to Oracle Support

Oracle customers 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.

1.5 Related Information Sources

In addition to this user guide, you can refer to the following documents in the OHC Documentation Library:

- *Oracle Financial Services Regulatory Reporting for Reserve Bank of India – Lombard Risk Integration Pack Installation Manual Release 8.1.1.0.0*
- *Oracle Financial Services Data Foundation User Guide Release 8.1.1.0.0*

- *Oracle Financial Services Data Foundation Installation Manual Release 8.1.1.0.0*
- *Oracle Financial Services Analytical Applications Infrastructure User Guide Release 8.1.1.0.0* (present in the OHC Documentation Library)

1.6 How this Guide is organized

The OFS Regulatory Reporting for Reserve Bank of India with Lombard Risk Integration User Guide includes the following topics:

- Chapter 2: Introduction
- Chapter 3: Getting Started
- Chapter 4: Regulatory Reporting Solution Data Flow
- Chapter 5: OFSAA Features
- Chapter 6: Executing Run through Process Modelling Framework in OFS REG REP RBI
- Chapter 7: Report Submission
- Chapter 8: Maintenance
- Chapter 9: Troubleshooting Guidelines

1.7 Conventions Used

Table 1 lists the conventions used in this guide.

Table 1: Conventions Used in this Guide

Conventions	Description
References to sections or chapters in the manual are indicated in *Italics*. Screen names are indicated in the following manner: **Introduction** screen Options and buttons are indicated in **Bold**. Code related text is indicated in `Monospace`.	
OFSAAI	Oracle Financial Services Analytical Applications Infrastructure
OFS AAAI	Oracle Financial Services Advanced Analytical Applications Infrastructure Application Pack
RHEL	Red Hat Enterprise Linux
Atomic Schema	Database schema where the application data model is uploaded
Config Schema	Database schema which contains setup related configurations and metadata
OFS REG REP RBI	Oracle Financial Services Regulatory Reporting for Reserve Bank of India -Lombard Risk Integration Pack (OFS REG REP RBI)

2 Introduction

This chapter provides an understanding of the Oracle Financial Services Regulatory Reporting for Reserve Bank of India – Lombard Risk Integration Pack (OFS REG REP RBI) application and its scope.

Topics:

- Overview
- OFSAA Regulatory Reporting Architecture
- Scope

2.1 Overview

Oracle Financial Services Regulatory Reporting for Reserve Bank of India – Lombard Risk Integration Pack (OFS REG REP RBI) helps the banks to comply with various guidelines issued by RBI, including BCBS 239 regulations. It provides integrating risk data reporting systems and enhances the accuracy of reporting in banks. OFS Risk Regulatory Reporting (REG REP) Solution helps in achieving the objectives by enabling preset steps based on the generalization of a set of solutions. This is made possible by:

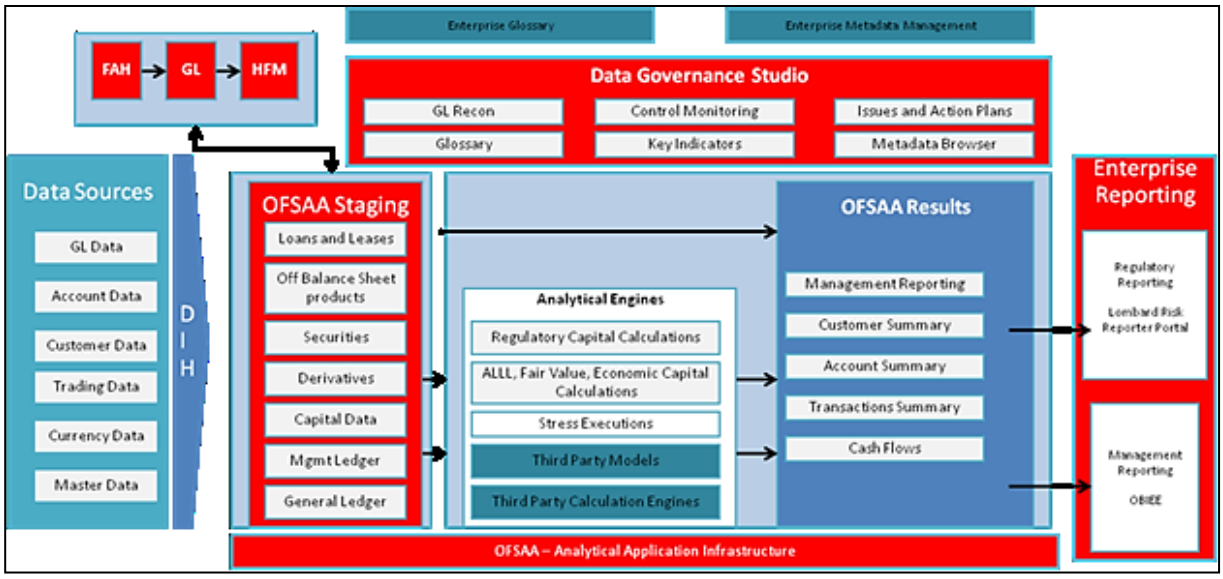
- Providing centralized data storage for risk data through relevant subject areas of the Financial Services Data Foundation (FSDF).
- Interfacing with a third-party reporting tool such as Lombard Risk Reporter Portal to build necessary template reports to meet the regulatory expectations.

The OFS REG REP RBI solution enables financial services organizations to manage and execute regulatory reporting in a single integrated environment. It automates end-to-end processes from data capture through submission with industry-leading solutions. It leverages Oracle Financial Services Analytical Application (OFSAA) and Oracle Financial Services Data Foundation (OFSDF) for managing analytical application data. The AgileREPORTER in Regulatory Reporting (REG REP) Solution enables firms to automate the final mile of the reporting process. It provides pre-built integration to Lombard Risk Reporting, eliminating the need for further manual intervention. The solution ensures data integrity allowing banks to focus more time on analyzing and gaining new business insight from their growing stores of data instead of preparing data and reports with the sole objective of meeting submission deadlines.

2.2 OFSAA Regulatory Reporting Architecture

OFS REG REP RBI supports the regulatory requirements for various reporting requirements such as DSB3ROR, FORM X, BSR VII, RCA111, CRILC and so on, which require enterprise-level data spanning multiple areas of banking. Each of these business areas has different applications to answer their respective processing requirements. REG REP warehouses this data for reporting purposes at a single place. An intermediate data transfer layer specific to the source applications enables data loading to REG REP by using the provided download specifications.

Figure 1: Regulatory Reporting (REG REP) Solution Architecture



This interface connects the Oracle FSDF to Lombard Risk. As shown in the Architecture of **Error! Reference source not found.**, Data flows from OFSAA to Lombard Risk.

OFSDF is an analytical data warehouse platform for the Financial Services industry. OFSDF combines an industry data model for Financial Services along with a set of management and infrastructure tools that allows Financial Services Institutions to develop, deploy, and operate analytical solutions spanning key functional areas in Financial Services, including:

1. Enterprise Risk Management
2. Enterprise Performance Management
3. Customer Insight
4. Financial Crime and Compliance Management OFSDF

It is a comprehensive data management platform that helps institutions to manage the analytical data life cycle from sourcing to reporting and business intelligence/BI using a unified, consistent platform and toolset.

AgileREPORTER is a form and workflow tool that enables both creation and submission of regulatory returns. AgileREPORTER addresses the financial reporting requirements of both domestic and international banks and financial institutions by automating compliance with mandated reports to central banks, regulatory agencies. AgileREPORTER works easily with multiple sources of information as it standardizes data elements and automates regulatory report production in prescribed templates with the associated workflow for automatic submission. It is a reliable and efficient infrastructure to compile, generate, and submit regulatory reports. It collects data from a wide universe (not just OFSAA Results). It provides automated repeated manual adjustments, variance analysis, and validation checks. It provides features to explain and justify a number quickly, including links to OBIEE.

The solution provides a pre-built interface or integration between FSDF and AgileREPORTER. With this integration, end-user can automate end to end reporting processes covering data preparation to the last mile of reporting.

2.3 Scope

Oracle Financial Services Regulatory Reporting for Reserve Bank of India – Lombard Risk Integration Pack covers the following regulatory reports for specified release as mentioned in the table.

Table 2: Scope of Regulatory Reports and Schedules

Report Name	Report Code as per Lombard Portal	Report Description	Report Section Covered in 8.1.1.0.0
LR REPORT	LR V7	Structural Liquidity Return	Additional Mapping for certain sections of the report.
RCAIII	RCAIII_V8	Return on Capital Adequacy	Revised version upgrade along with some fixes.
CRILC	CRLIC_V9	Central Repository of Information on Large Credits	Revised version upgrade along with some fixes.

3 Getting Started

This chapter provides an understanding of the prerequisites, general, and data preparation assumptions and logging into the application.

Topics:

- Prerequisites
- Assumptions
- Logging in to the OFSDF Interface with Lombard Risk for RBI
- Organization of the Interface for User Roles
- Metadata Browser

OFS Regulatory Reporting for Reserve Bank of India with Lombard Risk Integration allows you to perform the following activities:

- Manage Data Loading and Transformation from various source systems to staging, processing, and results.
- Manage relevant OFSAA metadata for regulatory reporting purposes. This includes creating, modifying, and viewing the metadata used in reporting.
- View the report metadata for mapping.
- Drill down from AgileREPORTER to OFSAA results area.

3.1 Prerequisites

For detailed prerequisites and instructions on installing this Interim Release, see the Oracle Financial Services Regulatory Reporting for Reserve Bank of India – Lombard Risk Integration Pack Installation Guide Release 8.1.1.0.0.

3.2 Assumptions

OFSDF interface with Lombard Risk for RBI is a reporting application and it does not perform any risk/stress calculations. The following are the assumptions for the application:

- Data required for risk and compliance regulatory report templates are available in FSDF as per data requirements.
- Lombard Risk Reporter Portal supports other non-risk and non-compliance related regulatory templates and Oracle Financial Services Analytical Application (OFSAA) may not supply all the necessary data for such reports.
- Textual and other related portions of reports like personal details, contact details, Yes / No choices must be updated on Report Portal directly and FSDF does not have a placeholder for it.
- Data provided is post reconciliation to ensure that accuracy of data being reported (non-prescribed by regulators) are performed in OFSAA using various components – General Ledger (GL) reconciliation, data quality checks, and variance reporting.
- Validity checks such as edit checks, cross-validation checks, and so on prescribed by the regulator are performed within the AgileREPORTER.

- All monetary amounts are expected to be positive in number, except valuation outputs which can be positive or negative. Rules are constructed assuming the negative sign of valuation amounts wherever applicable.
- The application populates a few specific dimension tables, known as seeded / sample tables as part of the installation script. Since they are used in the metadata, changes in data values have an impact on overall functioning.
- All percentage data are expected in decimal format meaning 9% must be provided as 9 and not 0.09.
- For data provided as of date, such as the last day of the quarter of the reporting year: Quarterly and Year to Date (YTD) report for the given date display the same value for those measures which are of as of the date in nature. For example the Annual and Quarterly Balance Sheet and BASEL report generated as of 31-MAR show the same values for all measures such as Account Balance.
- Account Balances such as End of Period Balances are expected to be provided as Net of (without) Unearned Income.
- RCA III - Mkt Risk Specific-CDS: As per the reporting requirement, we must use `Fct_reg_market_risk_exposures.f_cds_undrly_party_cre_nbfc` flag to identify CDS counterparty type. DM change for the same is handled in subsequent model. To support template for 8.0.5.1.0 releases, use the unused column, `Fct_reg_market_risk_exposures.V_eff_credit_score_source`. This column is populated from Basel tables, that is, `Fct_market_risk_exposures.f_cds_undrly_party_cre_nbfc`.
- RCA III - CR On BS excl. Sec: Reporting in this schedule is as per Asset Class (for example Domestic PSE, Foreign Bank, and so on) for Pre CRM amount and CRM Amount. There is no separate reporting for Non-Sec Covered Amount / RWA (Covered by mitigant) anywhere in the template. So we are assuming the following:
    - If the mitigant is Guarantor or Credit Derivative, then the amount covered by that mitigant will be reported as per Effective Asset Class in its respective line in the template. So, each reporting line will have two parts added to it for the Amount of Exposure column. The first part will report Exposure based on Original Asset Class to report Uncovered RWA, the second part will report Exposure based on Mitigant's Effective Asset Class to report Covered RWA column.
- RCA III - Securitization Related Schedules: Regarding RW reporting of Unrated Eligible Liquidity Facilities in Line 1.2 and 1.2 of all 4 schedules related to securitization exposures, RW is taken as maximum RW assigned to any of the Unrated Eligible Liquidity Facilities. RCA III template issued by RBI has only one cell for the reporting of RW of such unrated facilities. If a reporting bank has more than one such facility, the maximum RW assigned to any one of these facilities is reported. This is taken as the interpretation of the template.
- RCA III - Securitization Related Schedules: Line Items 1.1. III, 1.1. IV, 2.1. III, and 2.1. IV is not mapped for all 4 schedules related to securitization exposures. The reason behind not mapping these is that they are already covered in 1.2 and 2.2.
- RCA III - Capital Structure Schedules: Some line Items are not mapped in Capital Schedules. The following table explains the reason for not mapping these line items.

Table 3: Capital Structure Schedules

Line Item	Comments
The shortfall in regulatory capital instruments in the unconsolidated entities - Amounts subject to Pre-Basel III Treatment.	For this line, there is no amount subject to Pre-Basel III Treatment.
Regulatory adjustments applied to Common Equity Tier 1 in respect of amounts subject to Pre-Basel III treatment (please specify the details in the remarks column).	All items falling under this category are already captured in previous reporting lines of the template, hence null mapping for this line.
The shortfall in the Additional Tier 1 capital of majority-owned financial entities that are not consolidated with the bank.	As per our interpretation of RBI Basel Guidelines, the deduction must be from CET1 alone, and not from respective Tier (CET1, AT1, and T2).
Regulatory adjustments applied to Additional Tier 1 in respect of amounts subject to Pre-Basel III treatment (please specify the details in the remarks column).	All items falling under this category are already captured in previous reporting lines of the template, hence null mapping for this line.
Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions - Amounts subject to Pre-Basel III Treatment.	For this line, there is no amount subject to Pre-Basel III Treatment.
The shortfall in the Tier 2 capital of majority-owned financial entities that are not consolidated with the bank.	As per our interpretation of RBI Basel Guidelines, the deduction must be from CET1 alone, and not from respective Tier (CET1, AT1, and T2).
Regulatory adjustments applied to Tier 2 capital in respect of amounts subject to Pre-Basel III treatment (please specify the details in the remarks column).	All items falling under this category are already captured in previous reporting lines of the template, hence null mapping for this line.

- CRILC Section 1 - Line 'In case SMA-0 under SMA, the reason thereof': is not mapped as this is expected to be a user input field, where you can directly update the SMA reason.
- ALE - Section 2 Part F1 and F2 - Line 'b) Credit event payments (cash-settled)': is interpreted to be derived from subsequent two lines – 'paid' and 'received'.

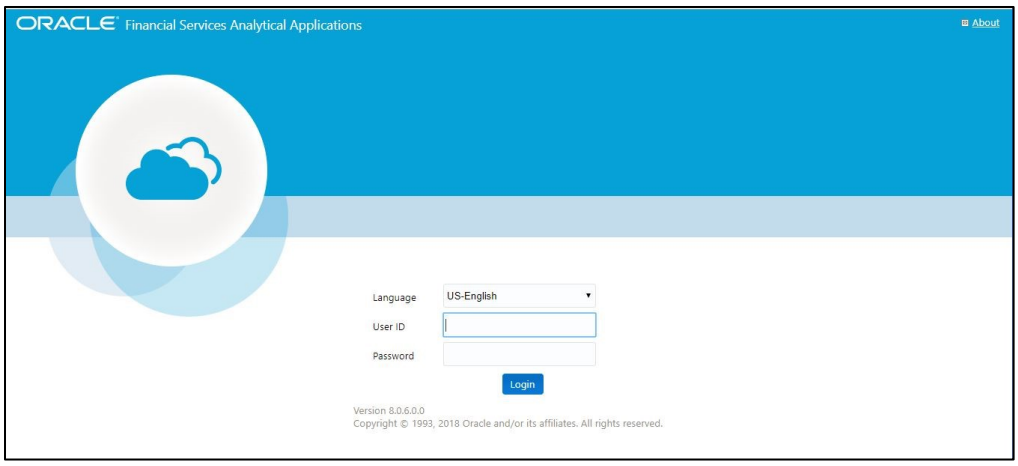
3.3 Accessing the OFSDF Interface or RBI Interface

After the application is installed and configured, to access the OFSDF Interface with Lombard Risk for RBI application you need to log into the OFSAAI environment using the OFSAAI login page.

To access application, follow these steps:

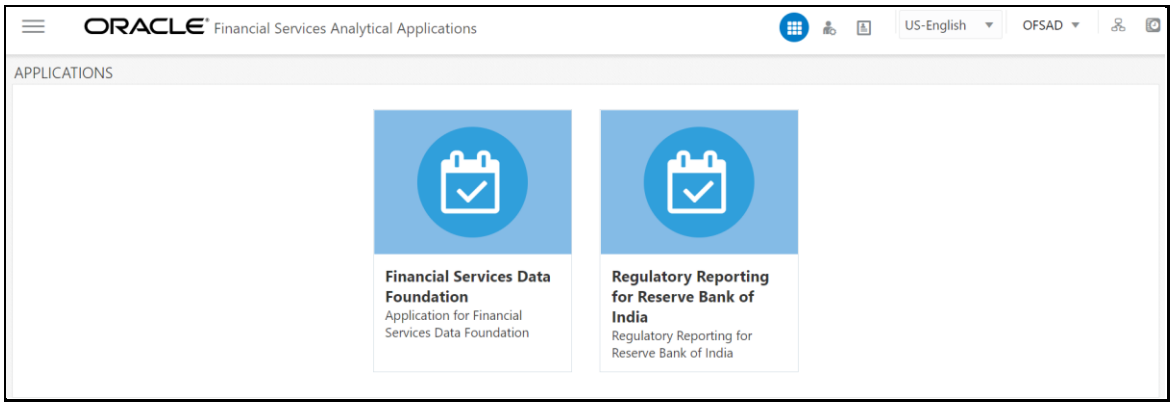
1. Enter the OFSAAI URL in your browser. The OFSAAI login page is displayed.

Figure 2: OFSAAI Log In



2. Select the desired language from the **Language** drop-down list.
3. Enter your **User ID** and **Password**. When you log into OFSAAI, the OFSAAI Applications page is displayed. Select **Financial Services Data Foundation**.

Figure 3: OFSAAI Application Page



4. Select the **Financial Services Data Foundation** option to navigate to the **FSDF** application or select the **Oracle Financial Services Regulatory Reporting for Reserve Bank of India** to navigate to the **OFS REG REP RBI** application.

3.4 Organization of Interface for User Roles

This section explains the various features used by an analyst. It describes the organization of the user interface and provides step-by-step instructions for navigating through the application to carry out these activities.

To access the Process Execution Summary, the following roles must be assigned to the user:

1. Modify Run Parameters
2. Approve Reporting Flag
3. Override Reporting Flag
4. Request Reporting Flag

5. Run Reporting Flag
6. View Run Details

Data Analysts are expected to perform the following activities:

1. Executing Batch to Refresh Derived Entities
2. Drill down from AgileREPORTER to OFSDF

Regulatory Report Analysts are expected to perform the following activities:

1. Drill down from AgileREPORTER to OFSDF
2. Using Metadata Browser to check schedule wise metadata
3. Using Metadata Browser to check metadata usage across schedules

Topics:

- Process Execution Summary
- Marking Run as Final
- Reporting Flag for Run through Process Execution Summary
- Executing Batch to Resave Derived Entities
- Executing Batch to Refresh Derived Entities
- Report Verification - Drill Down from AgileREPORTER to OFSAA Results Area
- Retrieving the Returns from AgileREPORTER

3.4.1 Process Execution Summary

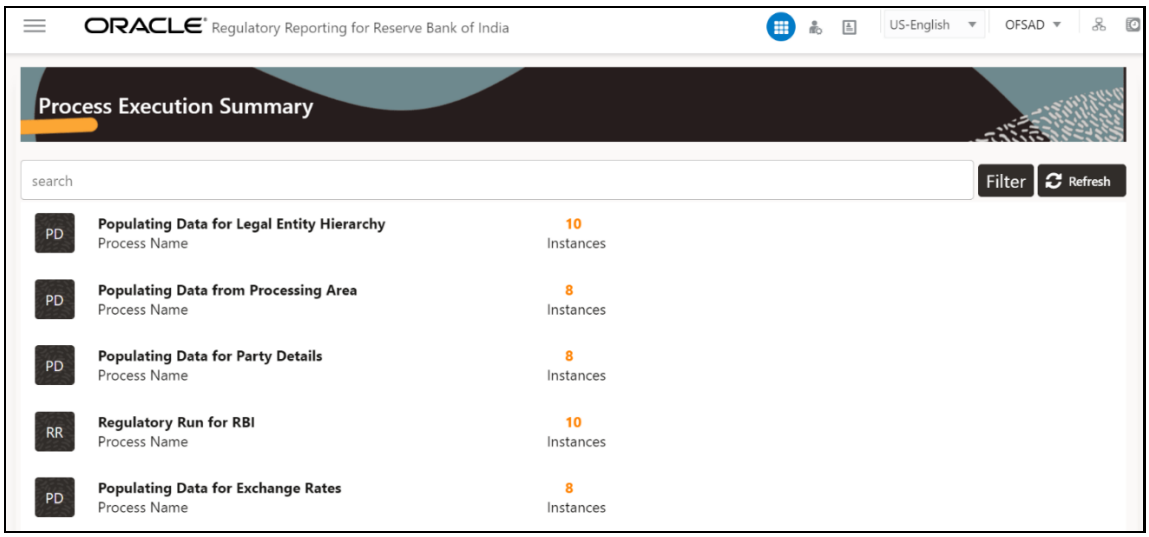
This section provides information on the Runs that are applicable for RBI. The Process Execution Summary is launched once the Runs are executed from the Processing Modelling Framework. The following figure displays the Process Execution Summary with the data that is retrieved from the Process Modeler.

3.4.2 Marking Run as Final

Various applications provide data for regulatory reporting. You must mark specific executions for regulatory reporting as the final run.

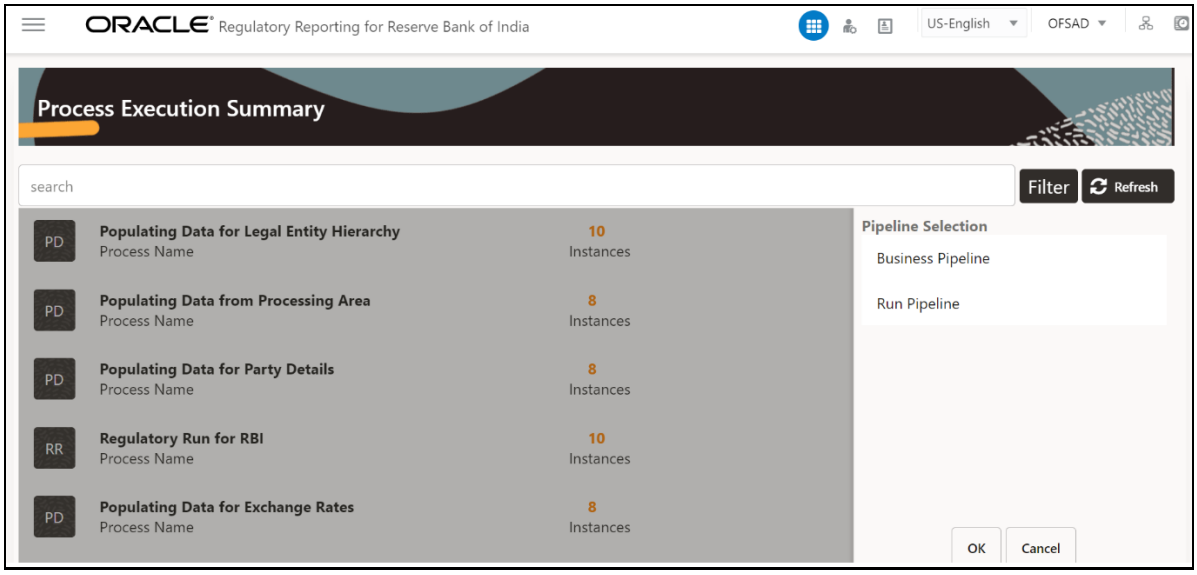
1. After logging into OFSAAI applications page, navigate to **Oracle Financial Services Regulatory Reporting for Reserve Bank of India** and select **Process Execution Summary.**

Figure 4: Process Execution Summary Screen



2. Scroll towards the right and click **Filter**, select the **Run Pipeline** from the available pipeline selection list. Click **OK**.

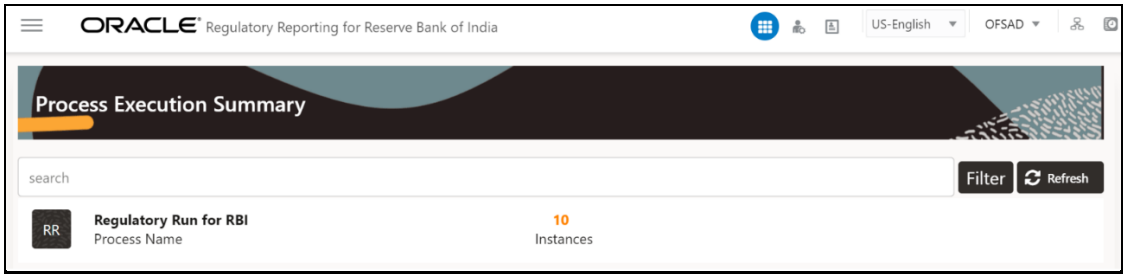
Figure 5: Pipeline Selection Screen



3. After the Run execution, the Process Execution Summary is generated in the list format as illustrated in the following steps. The summary page displays the **Process Names** for which the **Run Parameters** are generated.

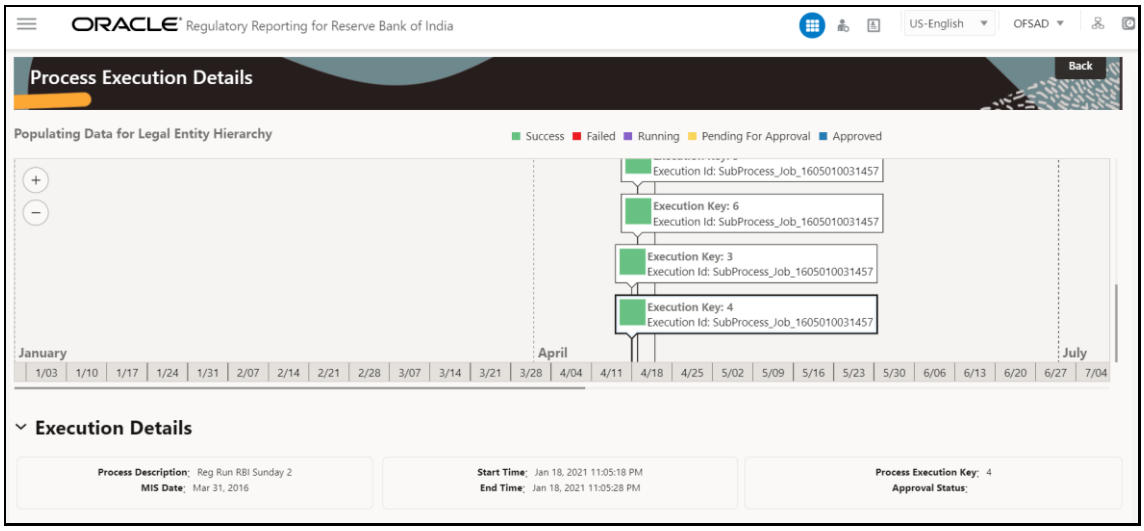
4. Scroll towards the right and click **View** in the **Process Name** row.

Figure 6: Process Execution Summary View Screen



You can view the detailed definition of a Run on a read-only mode. The **Process Execution Details** page displays the execution details for the selected Execution Key with the color band displaying the status of each Execution Key.

Figure 7: Process Execution Details Screen



The execution keys and the corresponding execution details are as follows:

- **Process Description**: The RBI Regulatory Common Process Run appears as the process description when the user executes the Regulatory Run.
- **MIS Date**: The extraction date is displayed in this field.
- **Start Time**: It displays the Execution Date and the Execution Time when the Execution Run starts.
- **End Time**: It displays the End Execution Date and Execution Time.
- **Process Execution Key**: Unique identifier assigned to each Process Execution.
- **Approval Status**: It displays the Approval status of the Execution as Completed, Failed, or Ongoing.
- **Process Monitor**: This helps to show the run definition as defined in the process modeling framework. There are four icons in the Process Monitor as follows:
  - **PMF Launch**: Click **View** to view the Process flow associated with the selected run.

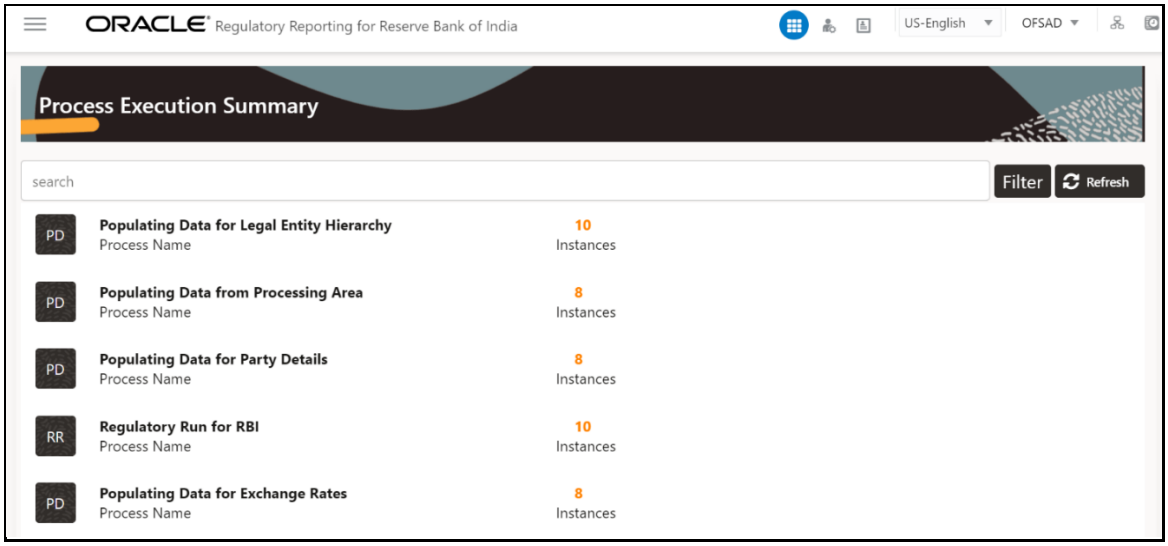
- **Request Report Flag**: To request for a Reporting Run, select an Execution ID in the **Process Execution Summary** page and click the **Request Report Flag** . A dialog box will appear for you to input your comments. Click **Submit** and the status of this Run is displayed in the **Reporting Flag** section. Only a successful execution can be requested for reporting. For the selected Run and Execution date, there can be only one reporting flag.
- **Approve Report Flag**: After submitting the Reporting Run in the earlier section, the **Approve Report Flag** is enabled. When you click the **Approve Report Flag**, a dialog box is displayed with User Comments and Approver Comments. The Approver can update the comments in the **Approver Comments** field and then click **Approve** or **Reject**.
- **Override Report Flag**: Any reporting execution can be overwritten with another execution. Select a successfully triggered batch in the **Process Execution Summary** page. The **Override Report Flag** is enabled if an execution is already marked as a Reporting Flag. You can override the execution by updating your comments. This must be approved by the approver and the procedure is similar to the procedure detailed in the Approve Report Flag for a Run section.

3.4.3 Reporting Flag for Run through Process Execution Summary

To request, approve, and override a flag for the process execution, perform the following steps:

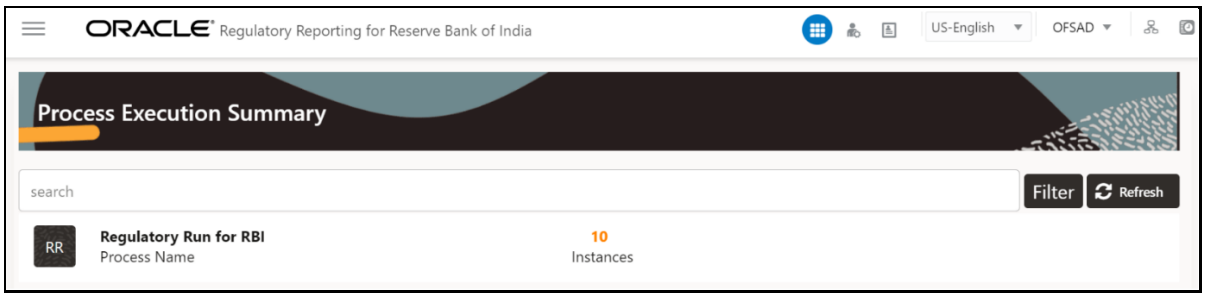
1. Navigate to **Oracle Financial Services Regulatory Reporting for Reserve Bank of India** and select **Process Execution Summary**.

Figure 8: Process Execution Summary Page



2. Scroll towards the right and click **Filter**, select the **Run Pipeline** from the available pipeline selection list. Click **OK**.

Figure 9: Process Execution Summary Filter Search Result Pane



3. Scroll towards the right and click **View** in the **Process Name** row.
4. Select **Request Report Flag** to request a report flag for the selected run execution.
5. Enter information in the **Comments** field and click **Submit**. The request report flag for a run is saved successfully.

3.4.3.1 Approve Report Flag for a Run

To approve the report flag, perform the following steps:

1. Navigate to the **Process Execution Summary** page and select the process name for which the report flag must be approved.
2. Click **Approve** to approve the request.
3. Enter the information in the **Approve Request Flag** page.
4. Click **Approve** to approve the requested report flag.

3.4.3.2 Override Report Flag for a Run

To override the report flag for a successful run, perform the following steps:

1. Navigate to the **Process Execution Summary** page and select the process name for which the report flag must be overridden.
2. Click **Override Report Flag** to override the report flag.
3. Enter the information in the **Override Report Flag** window.
4. Click **Override** to override the requested report flag.
5. Click **Approve Report Flag** to approve the override report flag request.
6. Enter the information in the **Approver Comments** field and click **Approve** and the report flag is overridden successfully.

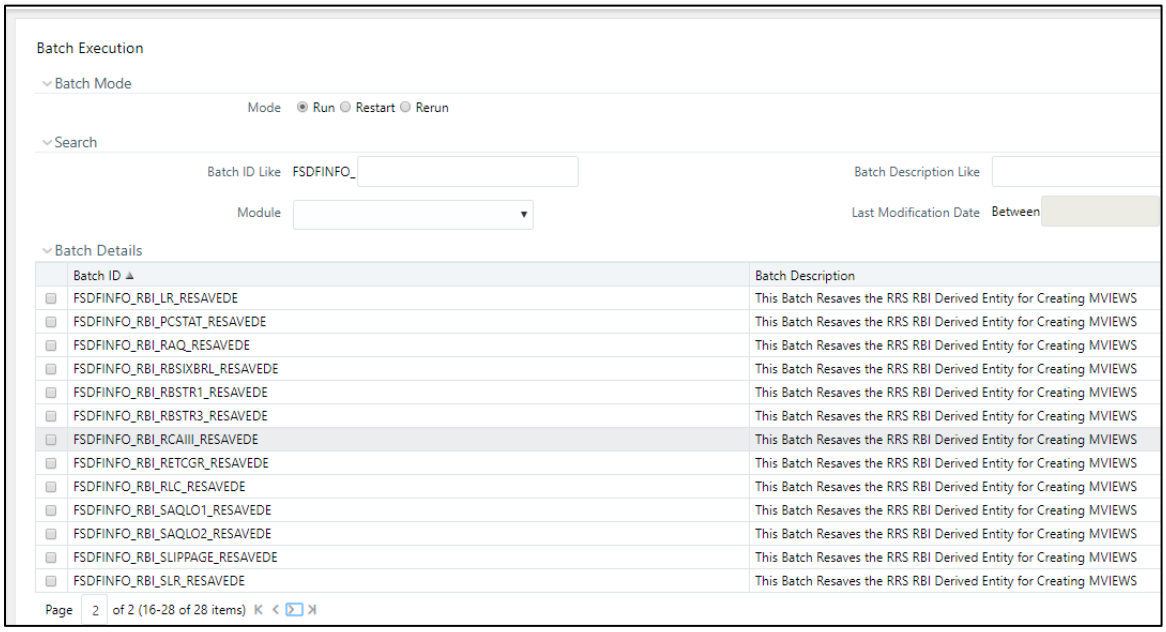
3.4.4 Executing Batch to Resave Derived Entities

To execute the batch to resave derived entities, follow the below steps:

1. Navigate **Financial Services Data Foundation,** then select **Operations,** and then select **Batch Execution.**

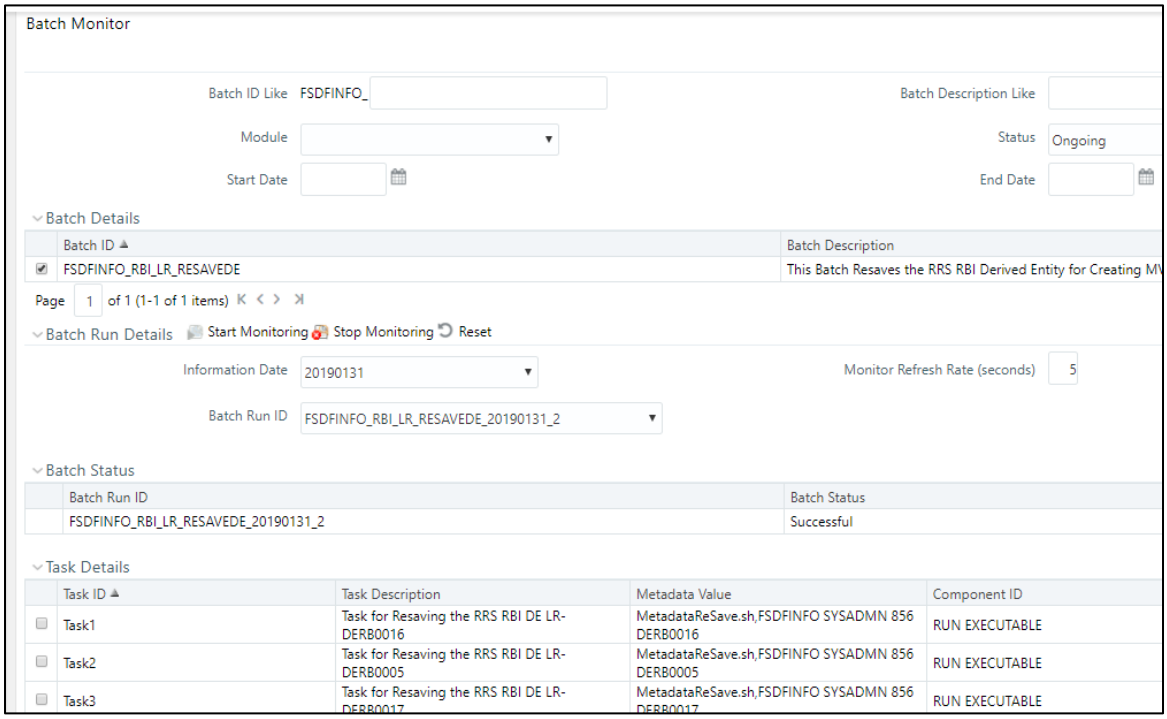
2. Select the batch **<<INFODOM>>_RBI_<<REPORT NAME>>_RESAVEDE** to resave all the DEs used in that **<<REPORT NAME>>**.

Figure 10: Batch Execution Screen



3. Monitor the status of the batch using the **Batch Monitor** link.

Figure 11: Batch Monitor Screen



The batches available for this release are:

Table 4: List of Resave Batches

RESAVE Batch	Description
<<INFODOM>>_RBI_ADJUSTMENT_RESAVEDE	This batch resaves the RRS RBI ADJUSTMENT Derived Entities
<<INFODOM>>_RBI_BSRII_RESAVEDE	This batch resaves the RRS RBI BSRII Derived Entities
<<INFODOM>>_RBI_BSRVII_RESAVEDE	This batch resaves the RRS RBI BSRVII Derived Entities
<<INFODOM>>_RBI_CICDP_RESAVEDE	This batch resaves the RRS RBI CICDP Derived Entities
<<INFODOM>>_RBI_CRILC_RESAVEDE	This batch resaves the RRS RBI CRILC Derived Entities
<<INFODOM>>_RBI_CUSTAT_RESAVEDE	This batch resaves the RRS RBI CUSTAT Derived Entities
<<INFODOM>>_RBI_DSB3ROR_RESAVEDE	This batch resaves the RRS RBI DSB3ROR Derived Entities
<<INFODOM>>_RBI_DSBIALE_RESAVEDE	This batch resaves the RRS RBI DSBIALE Derived Entities
<<INFODOM>>_RBI_EXPI_RESAVEDE	This batch resaves the RRS RBI EXPI Derived Entities
<<INFODOM>>_RBI_FORMAS42_RESAVEDE	This batch resaves the RRS RBI FORMAS42 Derived Entities
<<INFODOM>>_RBI_FORMVIII_RESAVEDE	This batch resaves the RRS RBI FORMVIII Derived Entities
<<INFODOM>>_RBI_FORMX_RESAVEDE	This batch resaves the RRS RBI FORMX Derived Entities
<<INFODOM>>_RBI_GTCAII_RESAVEDE	This batch resaves the RRS RBI GTCAII Derived Entities
<<INFODOM>>_RBI_IRS_RESAVEDE	This batch resaves the RRS RBI IRS Derived Entities
<<INFODOM>>_RBI_LCRBLR_RESAVEDE	This batch resaves the RRS RBI LCRBLR Derived Entities
<<INFODOM>>_RBI_LEVRATIO_RESAVEDE	This batch resaves the RRS RBI Leverage Ratio Derived Entities

RESAVE Batch	Description
<<INFODOM>>_RBI_LR_RESAVEDE	This batch resaves the RRS RBI LR Derived Entities
<<INFODOM>>_RBI_PCSTAT_RESAVEDE	This batch resaves the RRS RBI PCSTAT Derived Entities
<<INFODOM>>_RBI_RAQ_RESAVEDE	This batch resaves the RRS RBI RAQ Derived Entities
<<INFODOM>>_RBI_RBSIXBRL_RESAVEDE	This batch resaves the RRS RBI RBSIXBRL Derived Entities
<<INFODOM>>_RBI_RBSTR1_RESAVEDE	This batch resaves the RRS RBI RBSTR1 Derived Entities
<<INFODOM>>_RBI_RBSTR3_RESAVEDE	This batch resaves the RRS RBI RBSTR3 Derived Entities
<<INFODOM>>_RBI_RCAIII_RESAVEDE	This batch resaves the RRS RBI RCAIII Derived Entities
<<INFODOM>>_RBI_RETCGR_RESAVEDE	This batch resaves the RRS RBI RETCGR Derived Entities
<<INFODOM>>_RBI_RLC_RESAVEDE	This batch resaves the RRS RBI RLC Derived Entities
<<INFODOM>>_RBI_SAQLO1_RESAVEDE	This batch resaves the RRS RBI SAQLO1 Derived Entities
<<INFODOM>>_RBI_SAQLO2_RESAVEDE	This batch resaves the RRS RBI SAQLO2 Derived Entities
<<INFODOM>>_RBI_SLIPPAGE_RESAVEDE	This batch resaves the RRS RBI SLIPPAGE Derived Entities
<<INFODOM>>_RBI_SLR_RESAVEDE	This batch resaves the RRS RBI SLR Derived Entities

3.4.5 Executing Batch to Refresh Derived Entities

To execute the batch to refresh derived entities, follow the below steps:

1. Navigate to **Financial Services Data Foundation,** then select **Operations,** and then select **Batch Execution.**
2. Select the batch **<<INFODOM>>_RBI_<<REPORT NAME>>_REFRESH** to refresh all the DEs used in that **<<REPORT NAME>>**.

Table 5: List of Refresh Batches

REFRESH Batch	Description
<<INFODOM>>_RBI_ADJUSTMENT_REFRESH	This batch refreshes the RRS RBI ADJUSTMENT Derived Entities
<<INFODOM>>_RBI_BSRII_REFRESH	This batch refreshes the RRS RBI BSRII Derived Entities
<<INFODOM>>_RBI_BSRVII_REFRESH	This batch refreshes the RRS RBI BSRVII Derived Entities
<<INFODOM>>_RBI_CICDP_REFRESH	This batch refreshes the RRS RBI CICDP Derived Entities
<<INFODOM>>_RBI_CRILC_REFRESH	This batch refreshes the RRS RBI CRILC Derived Entities
<<INFODOM>>_RBI_CUSTAT_REFRESH	This batch refreshes the RRS RBI CUSTAT Derived Entities
<<INFODOM>>_RBI_DSB3ROR_REFRESH	This batch refreshes the RRS RBI DSB3ROR Derived Entities
<<INFODOM>>_RBI_DSBIALE_REFRESH	This batch refreshes the RRS RBI DSBIALE Derived Entities
<<INFODOM>>_RBI_EXPI_REFRESH	This batch refreshes the RRS RBI EXPI Derived Entities
<<INFODOM>>_RBI_FORMAS42_REFRESH	This batch refreshes the RRS RBI FORMAS42 Derived Entities
<<INFODOM>>_RBI_FORMVIII_REFRESH	This batch refreshes the RRS RBI FORMVIII Derived Entities
<<INFODOM>>_RBI_FORMX_REFRESH	This batch refreshes the RRS RBI FORMX Derived Entities
<<INFODOM>>_RBI_GTCAII_REFRESH	This batch refreshes the RRS RBI GTCAII Derived Entities
<<INFODOM>>_RBI_IRS_REFRESH	This batch refreshes the RRS RBI IRS Derived Entities
<<INFODOM>>_RBI_LCRBLR_REFRESH	This batch refreshes the RRS RBI LCRBLR Derived Entities
<<INFODOM>>_RBI_LEVRATIO_REFRESH	This batch refreshes the RRS RBI Leverage Ratio Derived Entities

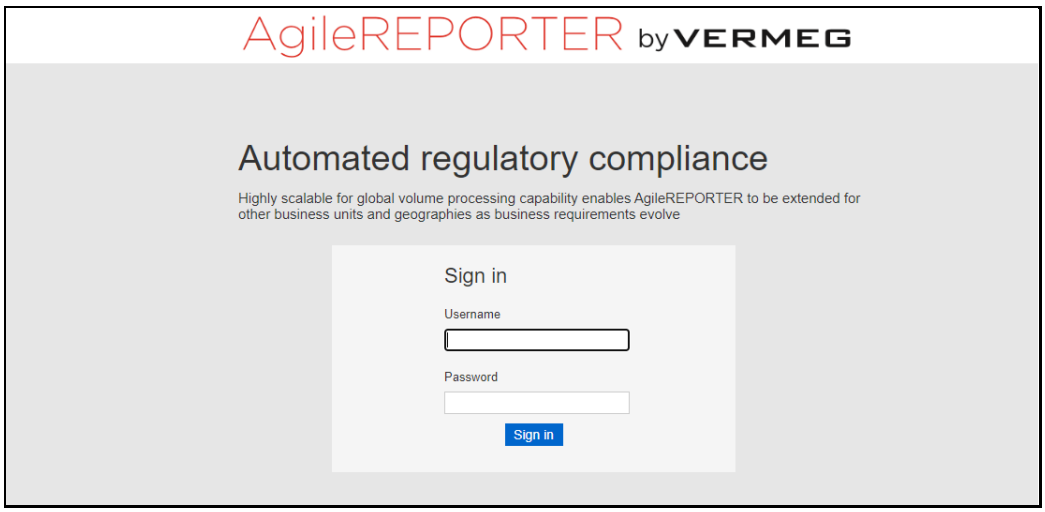
REFRESH Batch	Description
<<INFODOM>>_RBI_LR_REFRESH	This batch refreshes the RRS RBI LR Derived Entities
<<INFODOM>>_RBI_PCSTAT_REFRESH	This batch refreshes the RRS RBI PCSTAT Derived Entities
<<INFODOM>>_RBI_RAQ_REFRESH	This batch refreshes the RRS RBI RAQ Derived Entities
<<INFODOM>>_RBI_RBSIXBRL_REFRESH	This batch refreshes the RRS RBI RBSIXBRL Derived Entities
<<INFODOM>>_RBI_RBSTR1_REFRESH	This batch refreshes the RRS RBI RBSTR1 Derived Entities
<<INFODOM>>_RBI_RBSTR3_REFRESH	This batch refreshes the RRS RBI RBSTR3 Derived Entities
<<INFODOM>>_RBI_RCAIII_REFRESH	This batch refreshes the RRS RBI RCAIII Derived Entities
<<INFODOM>>_RBI_RETCGR_REFRESH	This batch refreshes the RRS RBI RETCGR Derived Entities
<<INFODOM>>_RBI_RLC_REFRESH	This batch refreshes the RRS RBI RLC Derived Entities
<<INFODOM>>_RBI_SAQLO1_REFRESH	This batch refreshes the RRS RBI SAQLO1 Derived Entities
<<INFODOM>>_RBI_SAQLO2_REFRESH	This batch refreshes the RRS RBI SAQLO2 Derived Entities
<<INFODOM>>_RBI_SLIPPAGE_REFRESH	This batch refreshes the RRS RBI SLIPPAGE Derived Entities
<<INFODOM>>_RBI_SLR_REFRESH	This batch refreshes the RRS RBI SLR Derived Entities

3.4.6 Report Verification - Drill Down from AgileREPORTER to OFSAA Results Area

Drill down functionality enables the user to view the accounts included in the aggregation. Following these steps to drill down from AgileREPORTER to OFSAA:

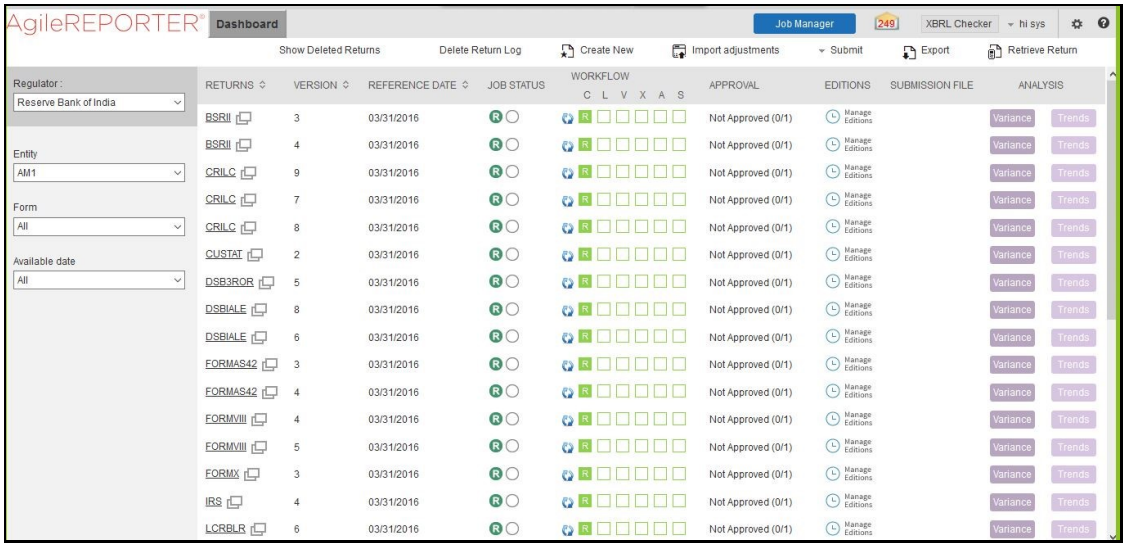
1. Log in to the AgileREPORTER.

Figure 12: AgileREPORTER Login Page



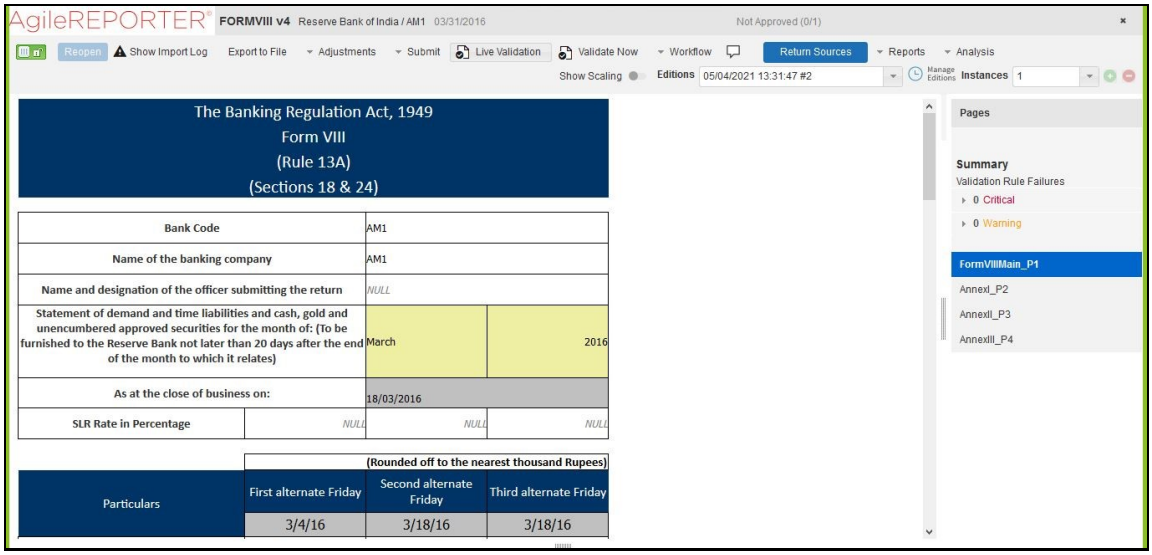
2. The user can view the list of reports on the main page. Click any report name in the Returns column, for example, **FORMVIII**.

Figure 13: AgileREPORTER Main Page



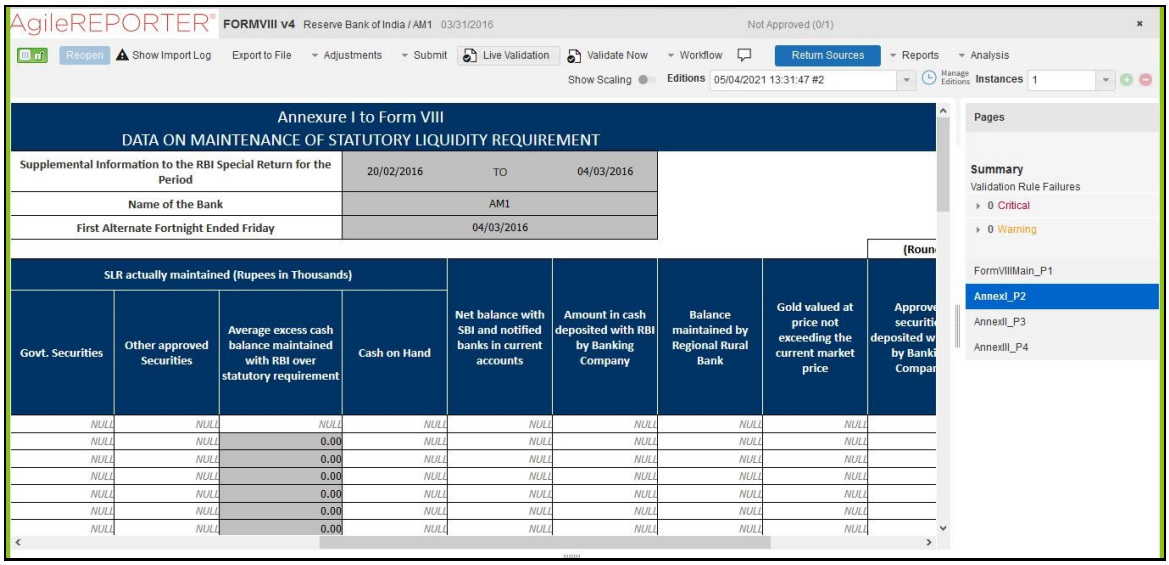
3. The schedule list is displayed on the left-hand side. Click any schedule name, for example, **AnnexI_P2**.

Figure 14: AgileREPORTER Page Displaying List of Schedules



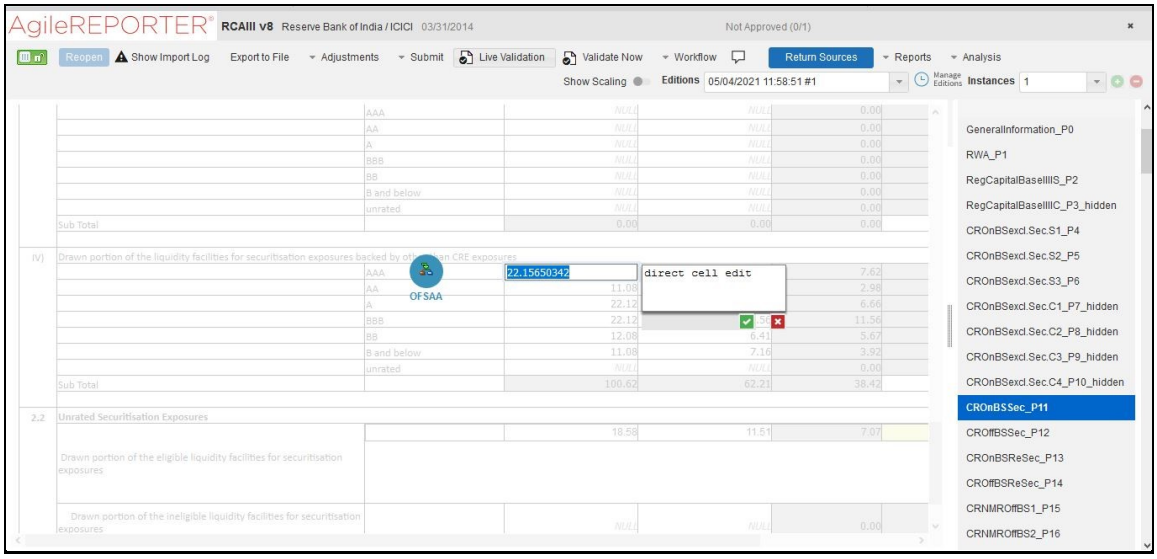
4. Click any cell to drill down.

Figure 15: AgileREPORTER Schedule Details Page



5. **Error! Reference source not found.** displays drill down for the first cell in Column F. The OFSAA icon is displayed. Click the OFSAA icon to view how this cell was populated from OFSAA results. You are redirected to the OFSAA drill-down page.

Figure 16: AgileREPORTER Drill Down



6. Click the OFSAA icon, to view how this cell was populated (provides information about the amounts reported in a cell) from OFSAA results. You are redirected to the OFSAA Drill down page.
7. Click the **Column Selector** button on the header of the second table.

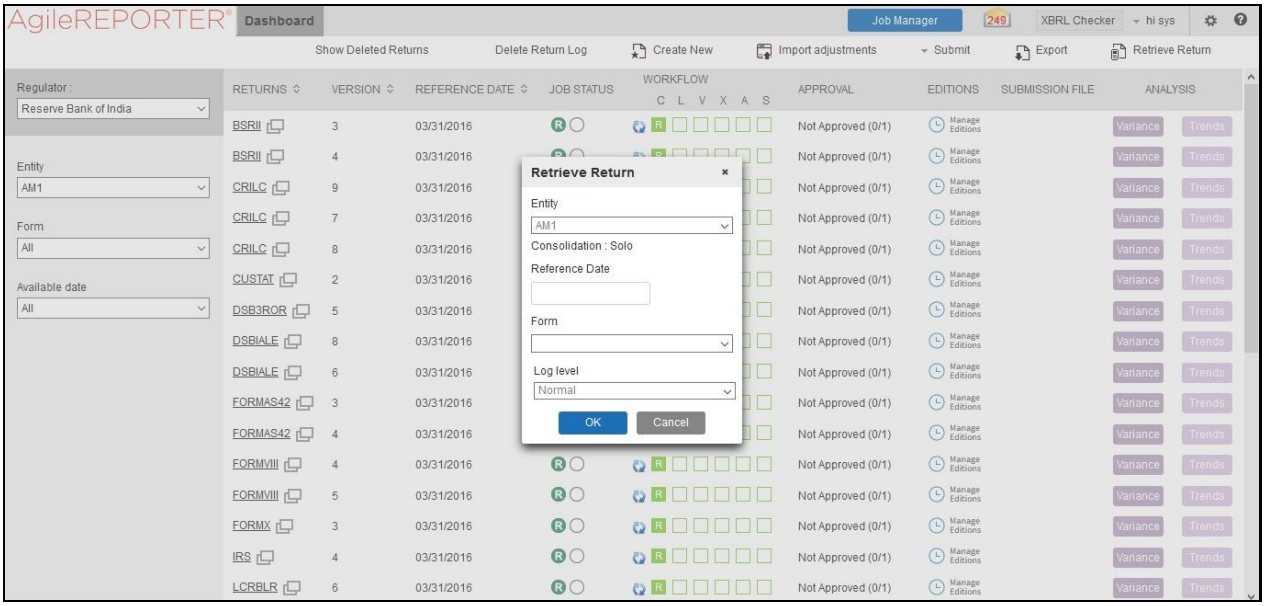
> **NOTE** Select the required Data Source, from the Available Attributes list and click **Move** . You can press the **Ctrl** key and click **Move** for multiple selections to map all the listed Data Sources to the application.
>
> Select the required Data Source, from the Selected Attributes list and click **Remove** to remove the mapped Data Source from the application.

8. Expand **Dataset** and select the **Attribute** to be shown in the Drill down. Click **Apply.**
9. Click **Export** to export the report details.

3.4.7 Retrieving the Returns from AgileREPORTER

The Retrieve Return functionality in AgileREPORTER fetches data from OFSAA derived entities and embeds them on AgileREPORTER templates. This runs the decision table process in Lombard Risk. You can view the relevant OFSAA data on various schedules of the AgileREPORTER using this functionality.

Figure 17: Retrieve Returns Page



3.5 Metadata Browser

This section helps you to navigate through the Metadata Browser and guides you in tracing the source of the metadata. The Metadata Browser function allows you to view and analyze all aspects of the metadata used in the OFSAAI. It provides extensive browsing capabilities of metadata, helps in tracking the impact of changes to metadata, and trace through to the source of originating data.

Metadata Browser (Object and Application View) provides a common repository of metadata objects created in OFSAAI and applications hosted in OFSAAI. Using this view, you can identify the usage of base objects in higher-level objects and the mapping of Objects to Application, thus enabling traceability. It also allows you to view the data flow and the workflow of the application and understand the usage of objects within the application.

The new visualization of Metadata Browser (MDB) supports the Application view and Object view. In the Application view, you can browse through the metadata created using the applications hosted in OFSAAI. In the Object view, you can view the metadata created in OFSAAI.

To access the Metadata Browser (Object and Application View), your role must be mapped to the SCR_MDB function.

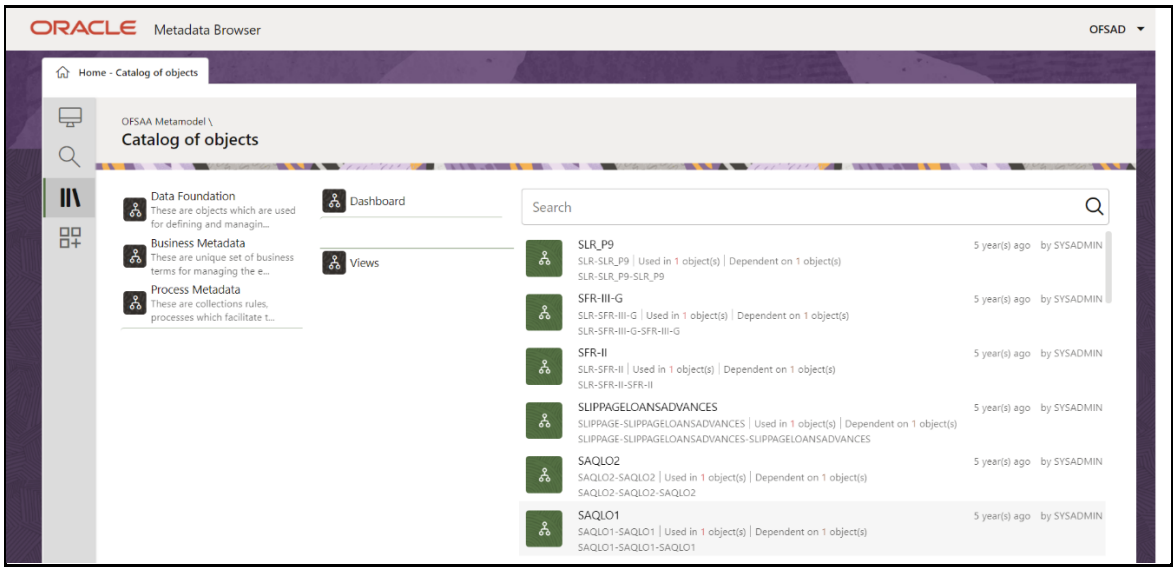
Analysts review the metadata used for a particular report schedule to verify the data. Data verification can require looking for metadata used in a given schedule or it can be scheduled in which particular metadata is used. Data Analysts and Reporting Analysts perform the report verification. Metadata refers to business measures, hierarchies, data sets, derived entities used for a given schedule.

3.5.1 Reporting Metadata

To use MDB for schedule-wise metadata, and to use MDB for metadata wise schedule, identify the metadata used, perform the following steps:

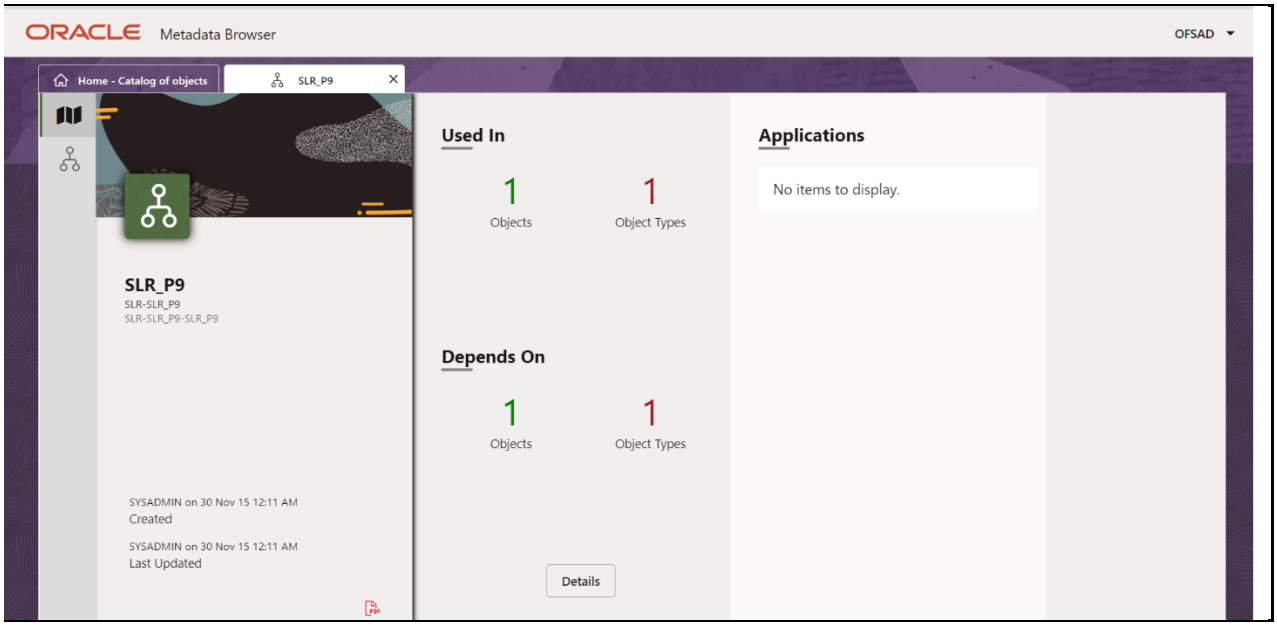
1. You can verify the data for related data elements in results using this information. Navigate to **Catalog of Objects,** select **OFSAA Metamodel,** select **Reporting Metadata,** and then select **Reports**. The MDB Reporting Metadata screen is displayed.

Figure 18: MDB - Reporting Metadata Page



2. Click the object view SLRP9 to view the list of schedules. The **Reporting Metadata Schedule View** page is displayed.

Figure 19: MDB - Reporting Metadata - Schedule View



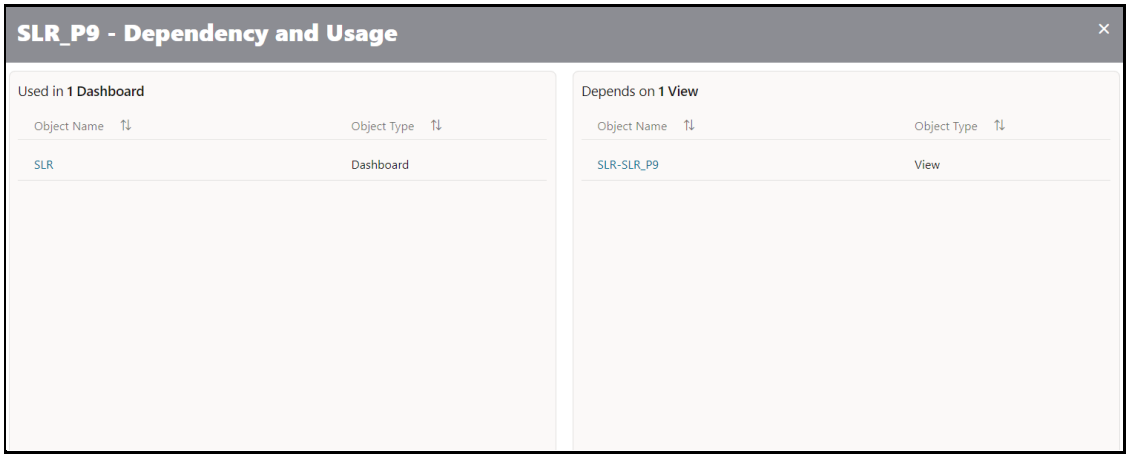
You can view the following information in the **Schedule Details** page:

- **Depends On**: This section displays the metadata used in a given schedule.
- **Used In**: This section displays the Reports in which this schedule is used.

- **Applications**: This section displays the applications in which this schedule is used.

3. Click **Details** to view the dependency and usage information such as the **Object Name** and the **Object Type**.

Figure 20: MDB - Reporting Metadata - Schedule View 1



4. From the **Schedule View** page, click the **Dependency** tab to view the report tree structure.

Figure 21: MDB - Reporting Metadata Tree Structure Page

Starting from common metadata used across the application, you may want to know the list of reports or derived entities this metadata has used. Let us take an example of a measure. To identify how value is computed, perform the following steps to trace it back to the metadata.

3.5.2 Business Metadata

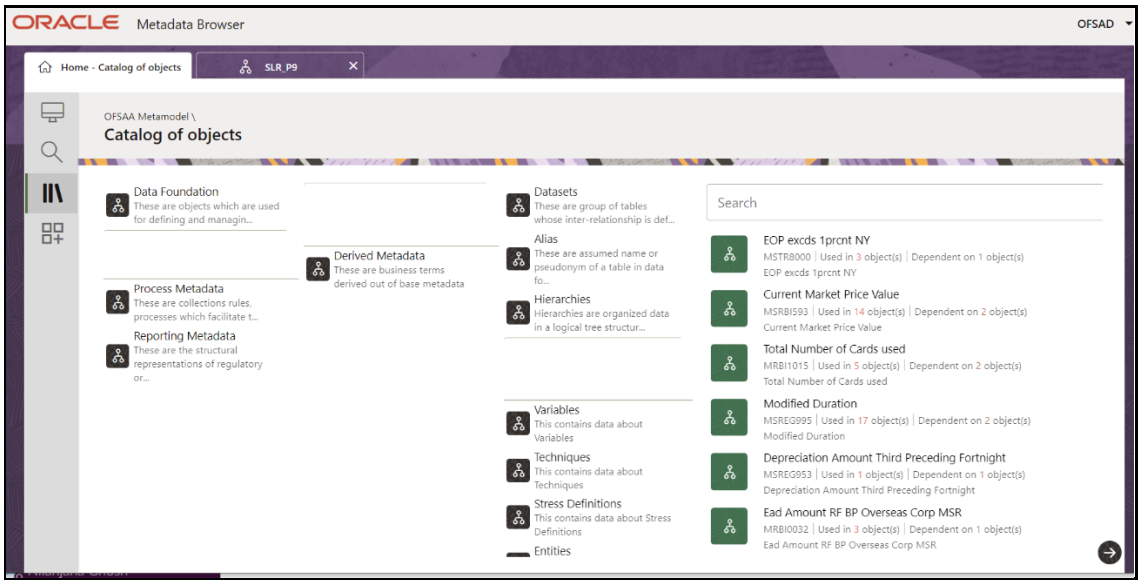
This section provides information on the Business metadata objects which include Base Metadata and Derived Metadata.

3.5.2.1 Base Metadata

The following are the steps to perform to view the Base metadata details. For example, Measures.

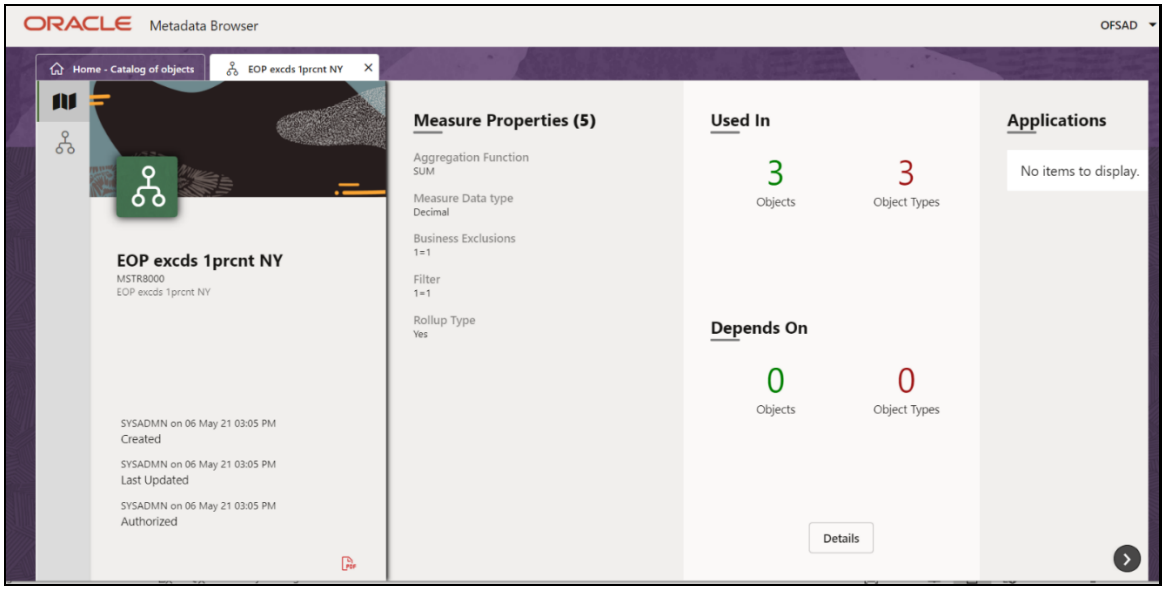
1. To view the measures, navigate to **Catalog of Objects,** select **OFSAA Metamodel,** select **Business Metadata,** select **Base Metadata,** and then select **Measures**. The **MDB Business Metadata** page is displayed.

Figure 22: MDB - Business Metadata - Measure View Page



2. Click the **Measure** that you wish to view. The **MDB Business Metadata Measure Details** page is displayed.

Figure 23: MDB - Business Metadata Measure Details Page



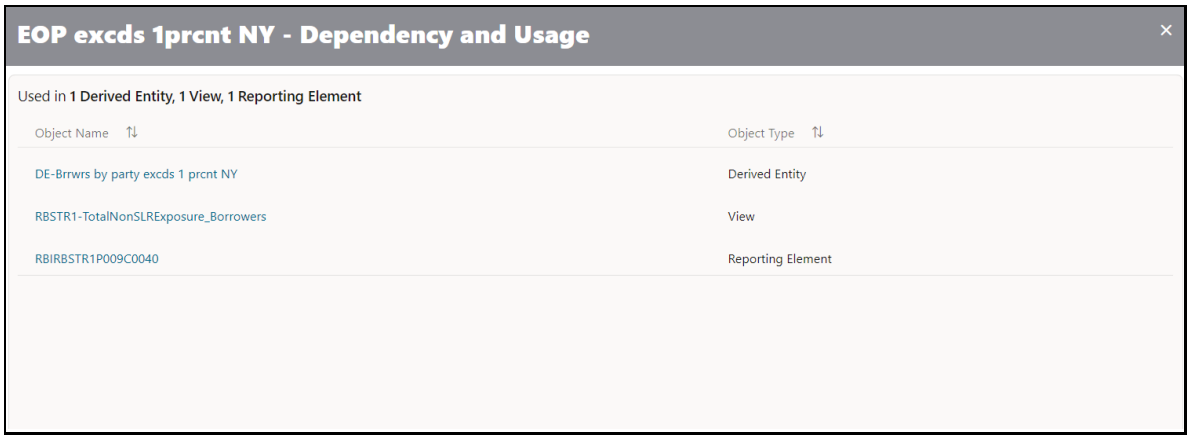
You can view the following information on this page:

- **Measure Properties**: It provides information on the properties of Business measures. For example, aggregation function, Measure Data Type, Business Exclusions, Filter, and Rollup Type.

- **It depends on**: This section displays all the object names and their types, such as Entities, Columns, and so on.
- **Used In**: This section displays the Objects in which this schedule is used.
- **Applications**: This section displays the applications in which this schedule is used.

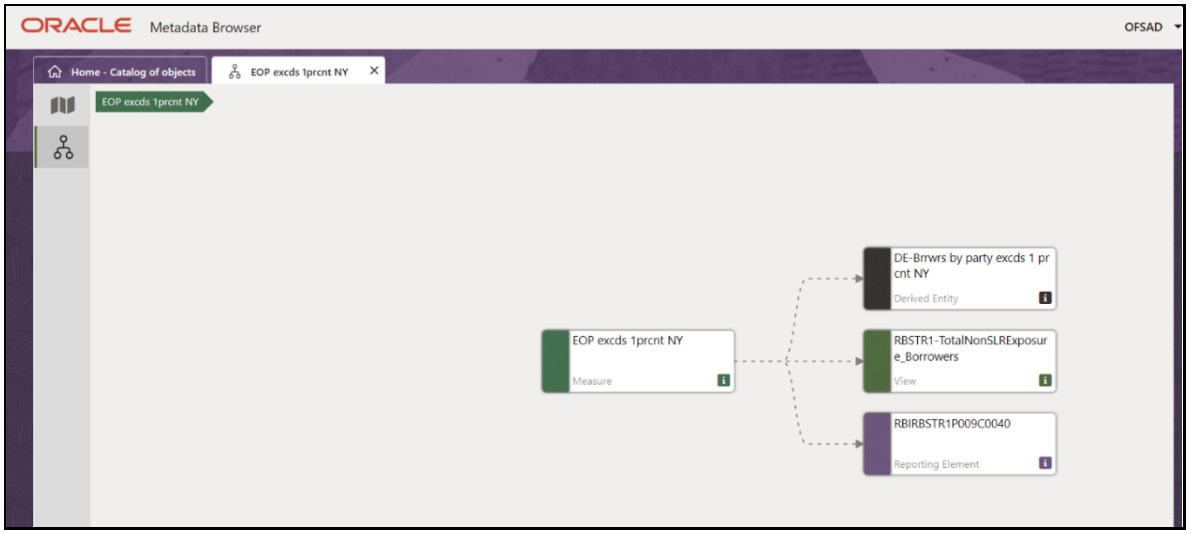
3. Click **Details** to view the measure dependency and usage information.

Figure 24: Measure Dependency and Usage Details Page



4. From the **Measure Details** page, click the **Dependency** tab to view the measure tree structure.

Figure 25: Business Metadata Measure Tree Page



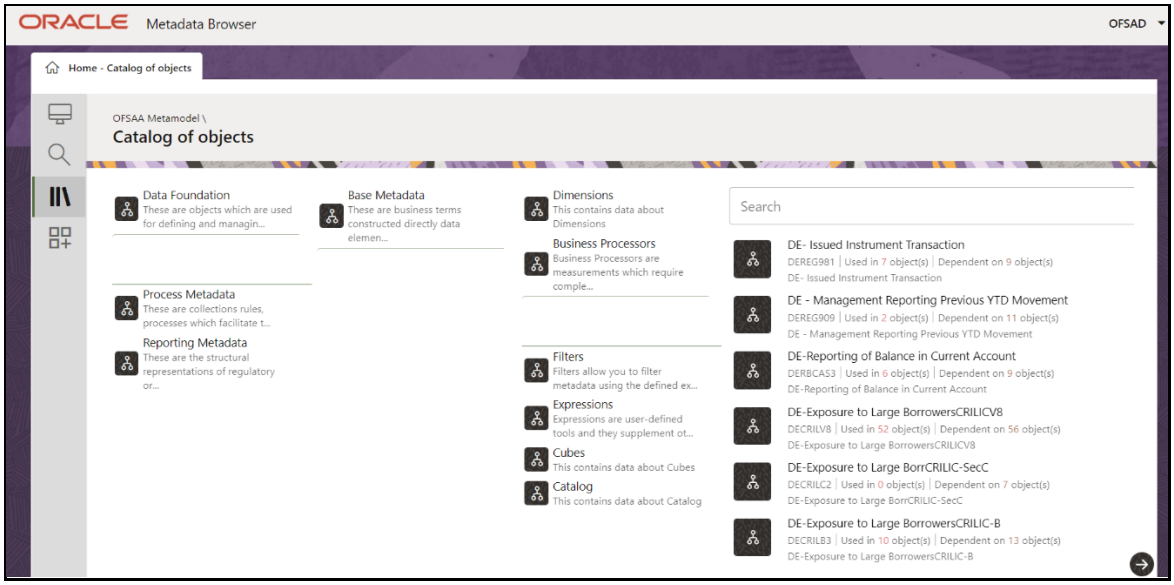
NOTE The similar steps as mentioned in this section are applicable for other metadata such as Business Metadata (Hierarchies, Measures, Variables, and so on) and Derived Metadata (Dimensions, Filters, and so on), Process Metadata (Process, Rules, and so on) and Data Foundation (Target Model, Sources, Connectors, and so on).

3.5.2.2 Derived Metadata

The following are the steps to perform to view the Derived Metadata details. For example, Derived Entities.

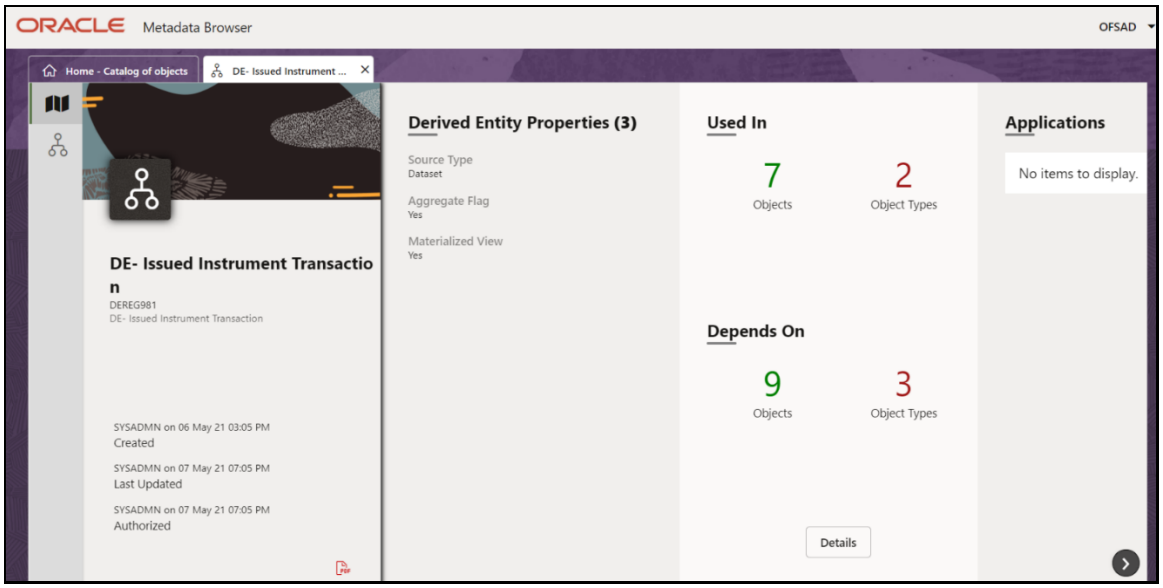
1. To view the schedule-wise derived entities, navigate to Catalog of **Objects,** select **OFSAA Metamodel,** select **Business Metadata,** select **Derived Metadata,** and then select **Derived Entities**.

Figure 26: MDB - Business Metadata – Derived Entity Page



2. Click the **Derived Entity** that you wish to view. The **Derived Entity Details** page is displayed.

Figure 27: Derived Entity Details Page



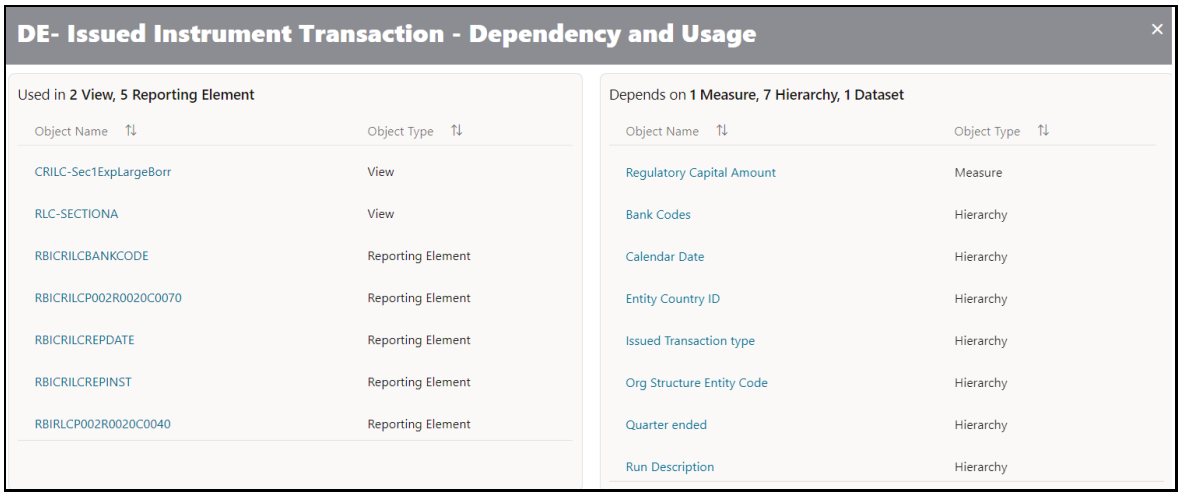
You can view the following information on this page:

- **Derived Entity Properties**: It provides information on properties of derived entities, such as Source Type, Aggregate Flag, and Materialized View.

- **It depends on**: This section displays all the object names and their types, such as Dataset, Hierarchy, and so on.
- **Used In**: This section displays the Objects in which this schedule is used.
- **Applications**: This section displays the applications in which this schedule is used.

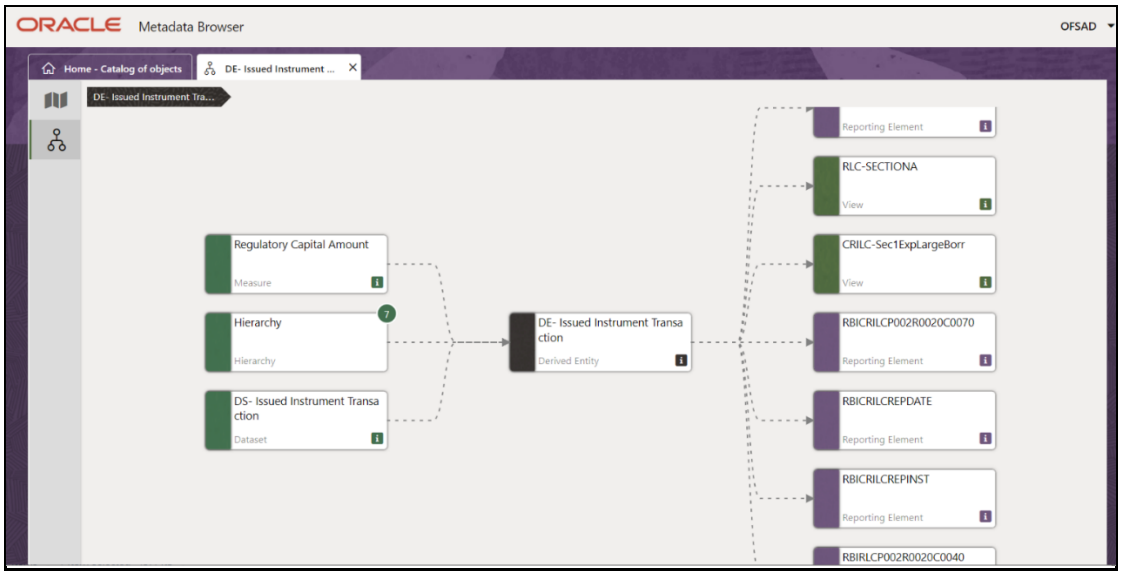
3. Click **Details** to view the derived entity dependency and usage information.

Figure 28: Derived Entity Dependency and Usage Page



4. From the **Derived Entity Details** page, click the **Dependency** tab to view the Derived Entity tree structure.

Figure 29: Derived Entity Tree Structure Page



For more information about the Metadata and its usage, see the OFSAA Metadata Browser User Guide.

4 Regulatory Reporting Solution Data Flow

This chapter provides an understanding of the data flow. It explains what happens within data flow and how various processing aspects are integrated with the overall data flow.

Topics:

- Data Preparation
- Overview of OFS REG REP RBI User Interface
- Mapping of Results to Line Items in Reporting
- Mapping Metadata
- AgileREPORTER: Submission

4.1 Data Preparation

This section explains the input data preparation from OFSAA.

Topics:

- Assumptions for Data Preparation
- RBI Run Chart
- Reclassification of Standard Dimensions
- Mappers for Reclassification of Reg Dimensions
- Configuring Setup Tables for Standard Set of Values
- Run or Execution Expectations
- Consolidation
- Projection Data
- Data Flow from Sources Systems to Staging Area
- Data Flow from Staging to Results Area
- Data flow from Staging to Processing Area
- Data Flow from Processing to Results Area
- Guidelines for Data Loading to Result Area Tables in Data Foundation for Regulatory Reporting Implementations
- FSDF Entity Information
- Fact Tables or Entities

4.1.1 Assumptions for Data Preparation

The following assumptions must be considered before Data preparation:

1. REG REP is a reporting solution, which uses data from underlying fact tables directly for reporting. The end-user is expected to prepare the load for the required data in the reporting area accordingly.

Although this has a thin processing layer to reclassify to regulatory dimensions and bands, all the processing measures are expected to be from respective applications and provide as required.

2. It is integrated with the results area of the respective processing application, and any change in the underlying processing can disturb the REG REP data sourcing.
3. Baseline and stress data must be populated with appropriate codes. Inaccurate mappings lead to inaccurate results. For details please refer to *Relationship between Run and Stress*.
4. For usage of consolidation dimension (which has values like Actual, Budget, Forecast, and so on), all historical data is expected to be tagged as actual to report vintage data, as per report requirements. For projection data, for a given run and Projection Period (quarter/year), only one set of data is expected to be stored.
5. All processing reporting requirements requiring cash flows, integration package expects bucketed cash flow as an input (meaning a time bucket for cash flow and cash flow amount is expected as input).
6. Need to Populate MPIN_ACC_PROD_REG_PROD;MPIN_ACC_PARTY_REG_PARTY mapper tables.

4.1.2 RBI RUN CHART

Oracle Financial Services Regulatory Reporting for Reserve Bank of India – Lombard Risk Integration Pack provides the RBI RUN Chart listing the tasks required for the population of data for RBI Reports. This covers the following tasks:

- Setup Table Population
- Stage Dimension Load
- Seeded Dimension Data Population
- Common data Population
- Common Tasks like Exchange Rate Population
- RBI Specific Data Population and Transformation
- Derived Entity Refresh

Download the OFS REG REP RBI 8.1.1.0.0 Run Chart from the *MOS*.

4.1.3 Reclassification of Standard Dimensions

This section provides information about Standard Dimension Tables in the Regulatory Reporting for Reserve Bank of India – Lombard Risk Integration Pack (OFS REG REP RBI) application and step-by-step instructions to use this section.

Topics:

- Overview of Reclassification of Standard Dimensions
- Overview of Reclassification of Standard Dimensions Population
- Dimension Data Expectations through SCD
- Overview of Mappers for Reclassification of Standard Dimensions
- Maintenance of Mapper for Reclassification of Standard Dimensions

- Loading Mapper Maintenance through Backend
- Usage of Mapper Tables in Data Flow and Reports

4.1.3.1 Overview of Reclassification of Standard Dimensions

There are certain Standard Dimensions in OFS REG REP RBI, which are pre-populated with a standard set of values. These values are used by downstream applications for various reporting requirements. There are equivalent customer-specific dimension tables that are populated using the Slowly Changing Dimension (SCD) process. It is required to reclassify these user-specific values to standard specific values as the reporting expects these standard set of values. The reclassification is done using out of the box Mapper Definitions under the Mapper Maintenance screen.

4.1.3.2 Overview of Reclassification of Standard Dimensions Population

These are the out of the box User Specific dimensions to Standard Dimensions reclassification available in OFS REG REP RBI.

Table 6: Reclassification of Standard Dimensions Population

User Specific Dimension		Standard Dimension	
DIM_BALANCE_CATEGORY	Balance Category	DIM_STD_BALANCE_CATEGORY	Standard Balance Category
DIM_CREDIT_LINE_PURPOSE	Credit Line Purpose	DIM_STD_CREDIT_LINE_PURPOSE	Standard Credit Line Purpose
DIM_CREDIT_LINE_TYPE	Credit Line Type	DIM_STD_CREDIT_LINE_TYPE	Standard Credit Line Type
DIM_IRC	Interest Rate Curve	DIM_STANDARD_IRC	Standard Interest Rate Curve
DIM_LOB	Line of Business	DIM_STANDARD_LOB	Standard Line of Business
DIM_MITIGANT_TYPE	Mitigant Type	DIM_STD_MITIGANT_TYPE	Standard Mitigant Type
DIM_PARTY_TYPE	Party Type	DIM_STANDARD_PARTY_TYPE	Standard Party Type
DIM_PRODUCT	Product	DIM_STANDARD_PRODUCT_TYPE	Standard Product Type
DIM_GL_ACCOUNT	General Ledger	DIM_STD_GL_TYPE	Standard General Ledger Type
DIM_VEHICLE_TYPE	Vehicle Type	DIM_STD_VEHICLE_TYPE	Standard Vehicle Type
DIM_WRITE_OFF_REASONS	Write Off Reasons	DIM_STD_WRITE_OFF_REASONS	Standard Write Off Reasons
DIM_RECOVERY_TYPE	Recovery Type	DIM_STD_RECOVERY_TYPE	Standard Recovery Type

4.1.3.3 Dimension Data Expectations through SCD

By default, all standard dimensions will be pre-populated with seeded data. It is mandatory to have data in user-specific dimensions and then maintain the reclassifications. Therefore, you must execute the SCDs and then map the reclassification codes under Mapper Maintenance.

> **NOTE** For BSRII .report to have expected page instances created on Branch BSR Code , the same branch codes are expected to be populated in stg_geography_master.v_branch_code_part1.

4.1.3.4 Overview of Mappers for Reclassification of Standard Dimensions

These are out of the box mappers that are available in OFS REG REP RBI for the standard dimension reclassifications:

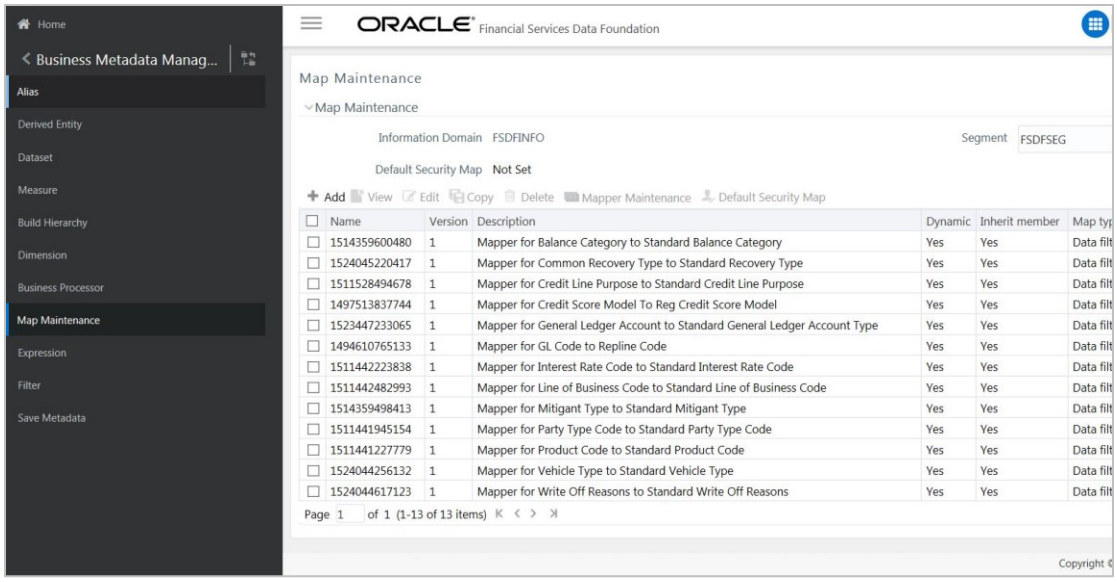
- MAP_PROD_CODE_STD_PROD_TYPE: Mapper for Product Code to Standard Product Code
- MAP_PARTY_TYP_STD_PARTY_TYP: Mapper for Party Type Code to Standard Party Type Code
- MAP_CRDLN_TYP_STD_CRDLN_TYP: Mapper for Credit Line Type to Standard Credit Line Type
- MAP_DIM_IRC_STD_IRC: Mapper for Interest Rate Code to Standard Interest Rate Code
- MAP_DIM_LOB_STD_LOB: Mapper for Line of Business Code to Standard Line of Business Code
- MAP_BAL_CAT_STD_BAL_CAT: Mapper for Balance Category to Standard Balance Category
- MAP_CRDLN_PUR_STD_CRDLN_PUR: Mapper for Credit Line Purpose to Standard Credit Line Purpose
- MAP_MITG_TYP_STD_MITGN_TYP: Mapper for Mitigant Type to Standard Mitigant Type
- MAP_CREDIT_SCR_MDL_REG_MDL: Mapper for Credit Score Model To Reg Credit Score Model
- MAP_DIM_GL_ACCT_STD_GL_TYPE: Mapper for General Ledger Account to Standard General Ledger Account Type
- MAP_GL_CODE_REP_LINE: Mapper for GL Code to Repline Code
- MAP_RECVR_TYP_STD_RECVR_TYP: Mapper for Common Recovery Type to Standard Recovery Type
- MAP_VEHCL_TYP_STD_VEHCL_TYP: Mapper for Vehicle Type to Standard Vehicle Type
- MAP_WRTOFF_STD_WRTOFF_REASN: Mapper for Write Off Reasons to Standard Write Off Reasons

4.1.3.5 Maintenance of Mapper for Reclassification of Standard Dimensions

The mapper can be maintained under OFSAAI.

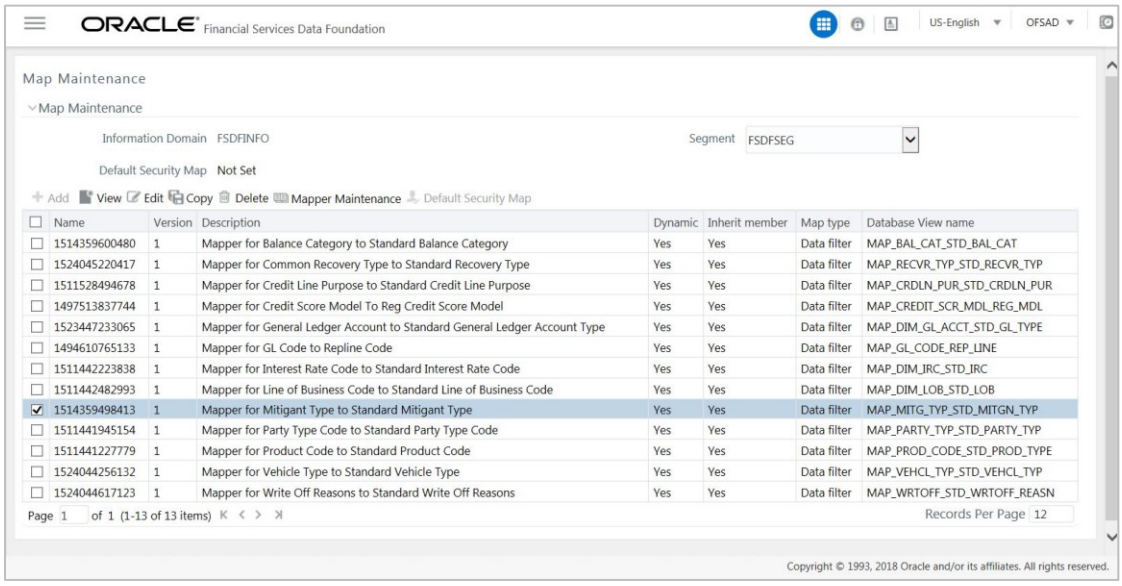
1. Login to OFSAAI application.
2. Navigate to **Financial Services Data Foundation,** then select **Unified Analytical Metadata,** then select **Business Metadata Management,** and then select **Map Maintenance**.

Figure 30: Map Maintenance page



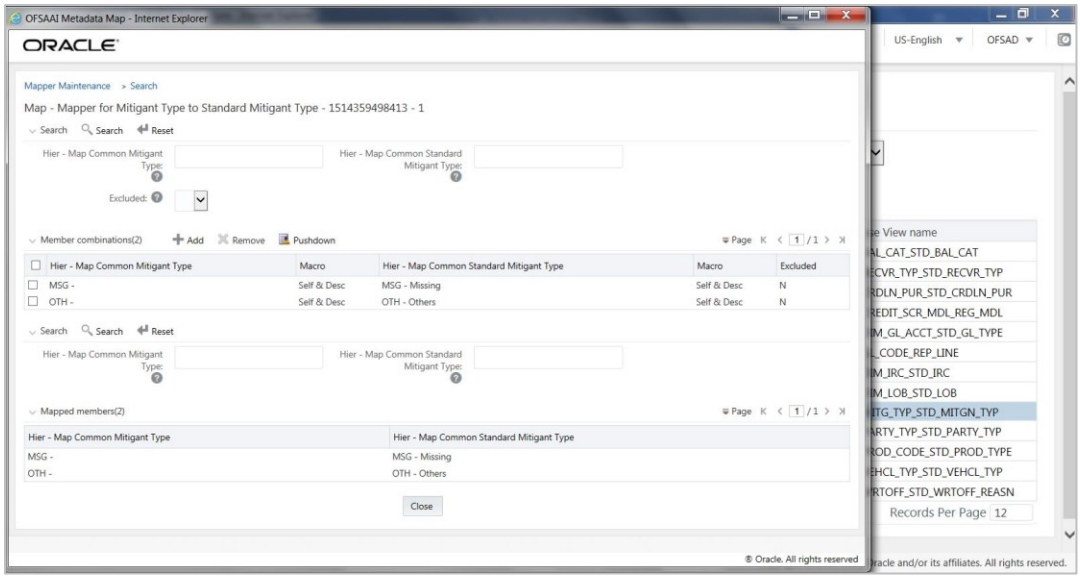
3. For illustration, we have selected **Mapper for Mitigant Type to Standard Mitigant Type**. Click **Mapper Maintenance**.

Figure 31: Map Maintenance Search results page



The OFS REG REP RBI maps OTH and MSG ready-to-use for this mapper. The remaining mappings can be maintained by the user according to user-specific values.

Figure 32: Mapper Maintenance Edit Page

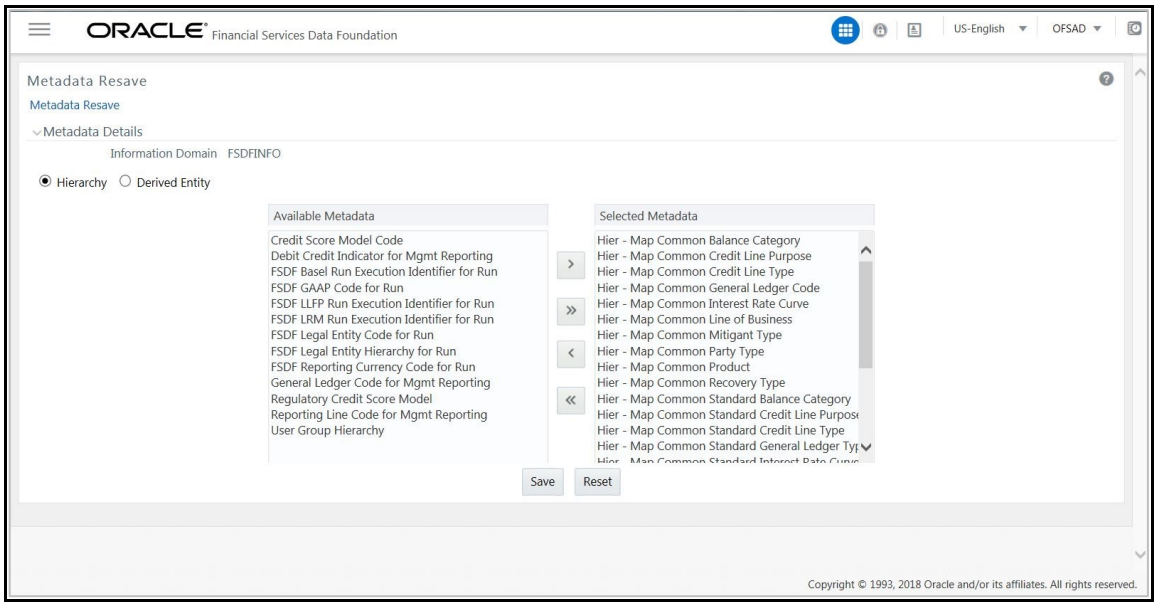


Prerequisites for Mapper Maintenance

1. Login to OFSAAI application.
2. Navigate to **Financial Services Data Foundation,** then select **Unified Analytical Metadata,** then select **Business Metadata Management,** and then select **Save Metadata**. Load all the required user-specific dimensions using SCD.
3. To Resave these hierarchies, select these hierarchies and click **Save**
   - HCMDF001 - Hier - Map Common Product
   - HCMDF002 - Hier - Map Common Standard Product Type
   - HCMDF003 - Hier - Map Common Party Type
   - HCMDF004 - Hier - Map Common Standard Party Type
   - HCMDF005 - Hier - Map Common Interest Rate Curve
   - HCMDF006 - Hier - Map Common Standard Interest Rate Curve
   - HCMDF007 - Hier - Map Common Line of Business
   - HCMDF008 - Hier - Map Common Standard Line of Business
   - HCMDF009 - Hier - Map Common Credit Line Type
   - HCMDF010 - Hier - Map Common Standard Credit Line Type
   - HCMDF011 - Hier - Map Common Credit Line Purpose
   - HCMDF012 - Hier - Map Common Standard Credit Line Purpose
   - HCMDF013 - Hier - Map Common Mitigant Type
   - HCMDF014 - Hier - Map Common Standard Mitigant Type
   - HCMDF015 - Hier - Map Common Balance Category
   - HCMDF016 - Hier - Map Common Standard Balance Category

- HCMDF017 - Hier - Map Common General Ledger Code
- HCMDF018 - Hier - Map Common Standard General Ledger Type
- HCMDF019 - Hier - Map Common Vehicle Type
- HCMDF020 - Hier - Map Common Standard Vehicle Type
- HCMDF021 - Hier - Map Common Write Off Reasons
- HCMDF022 - Hier - Map Common Standard Write Off Reasons
- HCMDF023 - Hier - Map Common Recovery Type
- HCMDF024 - Hier - Map Common Standard Recovery Type

Figure 33: Metadata Resave Page



Possible Mapping Combinations

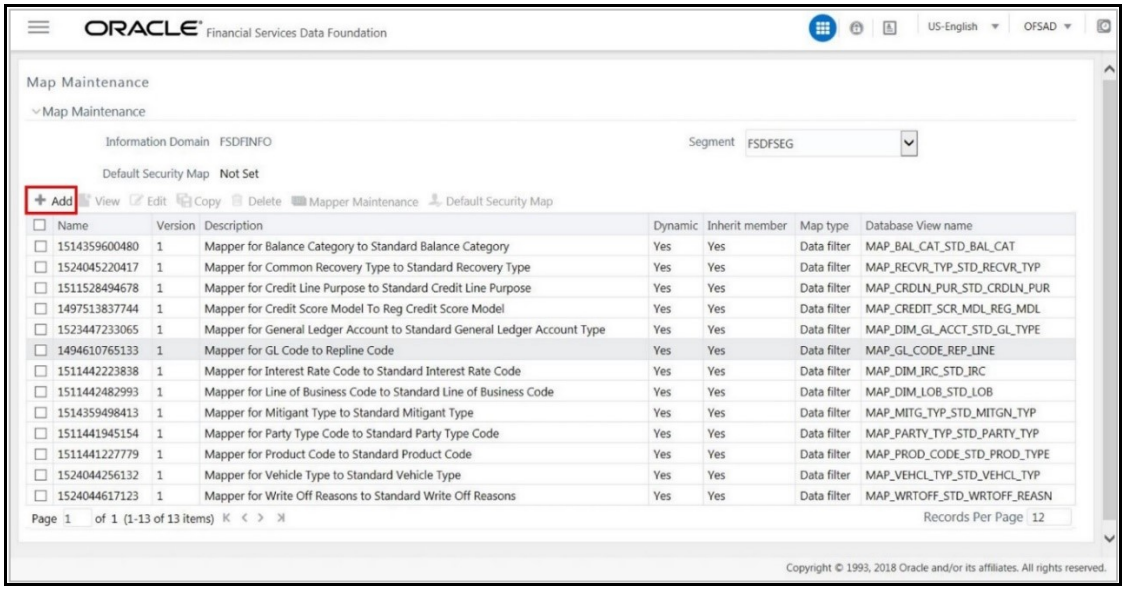
One Standard Dimension table in the source can be mapped only to one Standard Dimension table. One to Many or Many to Many mapping leads to error in T2T as the records are duplicated. From the illustration, the possible combinations for Mitigant Type to Standard Mitigant Type mapping are One to One and Many to One mapping.

- **One to One Mapping**: You can map one Mitigant Type data model to one Standard Mitigant Type data model using the Mapper Maintenance screen. Here, you must select one value in the Mitigant Type data model and one value in the Standard Mitigant Type data model.
- **Many to One Mapping**: You can map many values in the Mitigant Type data model to one value in the Standard Mitigant Type data model using the Mapper Maintenance screen.

To conduct One to One or Many to One mapping:

1. Login to OFSAAI application.
2. Navigate to **Financial Services Data Foundation,** then select **Unified Analytical Metadata,** then select **Business Metadata Management,** and then select **Map Maintenance**

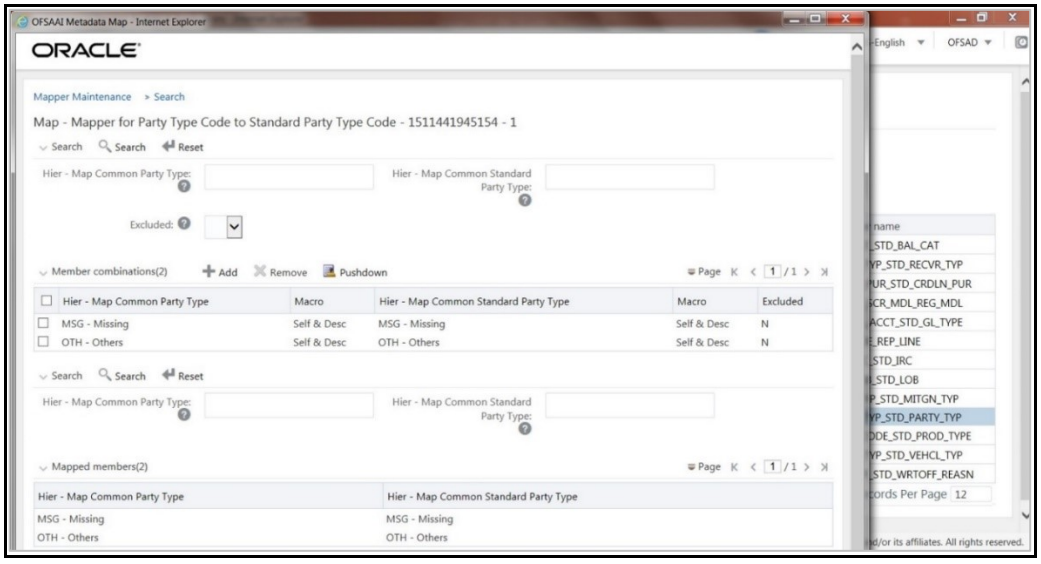
Figure 34: Map Maintenance Add Page



3. Click the **+Add** icon to create a new map; otherwise, select an existing Map. For illustration, **Mapper for Party Type Code to Standard Party Type Code** value is selected. Click the **Mapper Maintenance** icon.

4. The **Mapper** Maintenance window opens (in this illustration, the **Map - Mapper for Party Type Code to Standard Party Type Code** window opens). To conduct One to One or Many to One mapping, in the Member Combinations section, click **Add**.

Figure 35: Map Maintenance Details Page

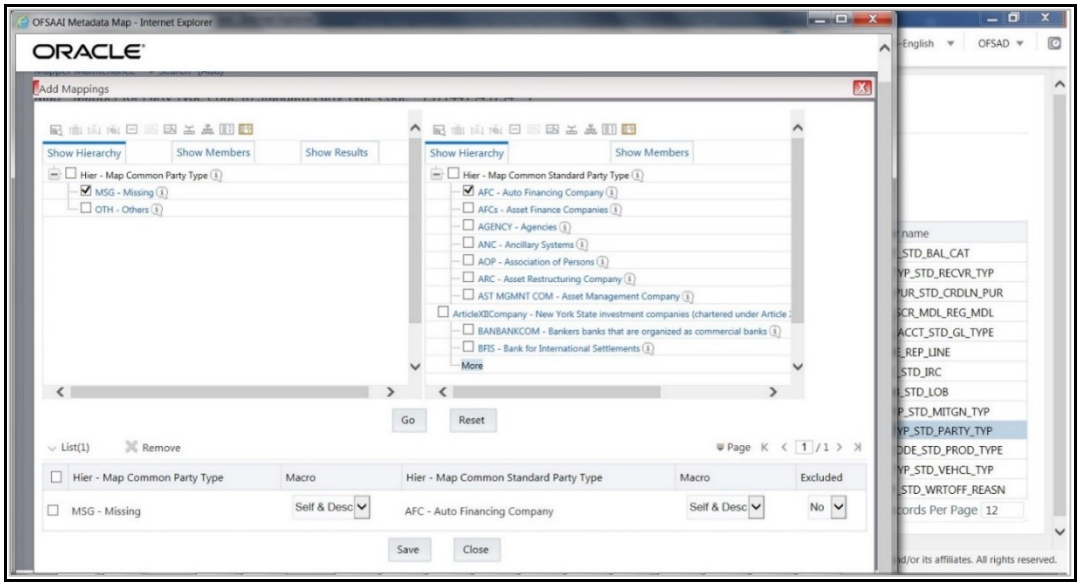


5. The **Add Mappings** pop-up window opens. In this illustration:

   - To map One to One, select one value in the Hier - Map Common Mitigant Type data model and one value in the Hier - Map Common Standard Mitigant Type data model, and click **Go**. Repeat this step for each One to One data model mapping, and then click **Save**.

     In this illustration, **MSG - Missing** is mapped to **AFC - Auto Financing Company**.

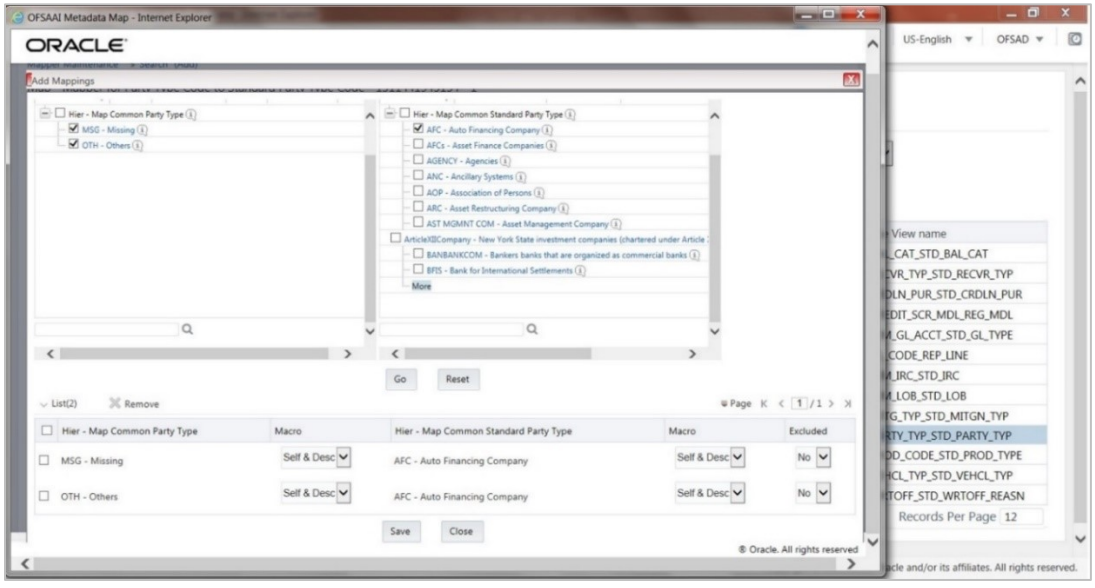
Figure 36: One to One Mapping Page



- To map Many to One, select multiple (two in this illustration) values in the Hier - Map Common Mitigant Type data model and one value in the Hier - Map Common Standard Mitigant Type data model, and then click **Go**. Click **Save**.

  In this illustration, **MSG-Missing** and **OTH-Others** are mapped to the **AFC-Auto Financing Company**.

  Figure 37: Many to One Mapping Page



6. An acknowledgment is displayed: Confirm Save?
7. Click **Yes** to confirm and save data. In the **Mapper** Maintenance window, in the Mapped combinations and the Mapped member's sections, you can see the newly conducted mapping.

4.1.3.6 Loading Mapper Maintenance through Backend

Load each Physical table in Atomic Schema with V_MAP_ID as mentioned against each mapper,

V_MEMBER_1 => Customer Specific Value Dimension's Member Code, V_MEMBER_2 => Standard Dimension's Member Code.

This is the list of Mapper Physical Tables and required details:

Table 7: Mapper Physical Table

PHYSICAL TABLE	V_MAP_ID
MAP_MITG_TYP_STD_MITGN_TYP	1514359498413
MAP_DIM_IRC_STD_IRC	1511442223838
MAP_PROD_CODE_STD_PROD_TYPE	1511441227779
MAP_DIM_LOB_STD_LOB	1511442482993
MAP_CRDLN_PUR_STD_CRDLN_PUR	1511528494678
MAP_PARTY_TYP_STD_PARTY_TYP	1511441945154
MAP_BAL_CAT_STD_BAL_CAT	1514359600480
MAP_CRDLN_TYP_STD_CRDLN_TYP	1511527713328
MAP_CREDIT_SCR_MDL_REG_MDL	1497513837744
MAP_DIM_GL_ACCT_STD_GL_TYPE	1523447233065
MAP_GL_CODE_REP_LINE	1494610765133
MAP_RECVR_TYP_STD_RECVR_TYP	1524045220417
MAP_VEHCL_TYP_STD_VEHCL_TYP	1524044256132
MAP_WRTOFF_STD_WRTOFF_REASN	1524044617123

4.1.3.7 Usage of Mapper Tables in Data Flow and Reports

The mapper maintenance output is always physically stored in underlying tables. These tables are registered in OFSAA as an object. Therefore, these tables can be used, without any restrictions, in any of the metadata that requires reclassification. OFS REG REP RBI Data Flows (T2Ts) make use of this information to populate the Standard Dimension Surrogate Keys of Results area tables.

4.1.4 Mappers for Reclassification of Reg Dimensions

The following Mapper tables must be configured as a prerequisite for LR v7 report (V_MEMBER_1 => Customer Specific Value Dimension's Member Code and V_MEMBER_2 => Reg Dimension's Member Code):

- MPIN_ACC_PARTY_REG_PARTY: Mapper for Party to Reg Party
- MPIN_ACC_PROD_REG_DEPOSIT: Mapper for Product to Reg Deposit
- MPIN_ACC_PROD_REG_PROD: Mapper for Product to Reg Product

4.1.5 Configuring Setup Tables for Standard Set of Values

The setup configurations which are required to be done before executing the RBI Regulatory Reporting Run are as follows.

Topics:

- SETUP_MASTER Table

4.1.5.1 SETUP_MASTER Table

The SETUP_MASTER table in the Atomic Schema must be modified with the required values for RBI.

Figure 38: Setup Master Table

V_COMPONENT_CODE	V_COMPONENT_DESC	V_COMPONENT_VALUE	Description
DEFAULT_FINANCIAL_ELEMENT	Default Financial Element	DEFAULT	Component Value to be updated according to the values used in STG_GL_DATA.V_FINANCIAL_ELEMENT_CODE. This is used for Fact Management Reporting T2T.
DEFAULT_FX_RATE_SRC	Default FX Rate Source	DEFAULT	Component Value to be updated according to the values used in STG_EXCHANGE_RATE_HIST.V_RATE_DATA_ORIGIN. This is used for Calculating the Reporting Currency.
DEFAULT_MARKET_CENTER	Market Center Identifier	DEFAULT	Component Value to be updated according to the values used in STG_INSTRUMENT_MARKET_PRICES.V_MKT_CENTER_ID. This is used for Calculating the Instrument Close Price.
RBI_DEFAULT_PD_MODEL	PD Model for RBI Regulatory Reporting	DEFAULT	Component Value to be updated according to the values used in STG_PD_MODEL_MASTER.V_PD_MODEL_CODE. This is used for Calculating PD Model Band Skey.

4.1.6 Run or Execution Expectations

Run refers to execution. It is assumed that at different periods, different combinations of parameters, and different data require different executions. From a reporting perspective, as required by regulators, RRDF Application requires data for the following executions:

1. Current Data or Execution
   a. Reporting month-end data
   b. Projection Data
2. Historical (trend or vintage) Data
   a. Yearly

b. Quarterly

3. Stressed Data

For the DSBROR, RBSTR3, SLR2, CRR, SLR and FORMVIII reports, the SETUP_MASTER table should be updated as follows:

1. **DSBROR:** It is expected to display Domestic and Overseas data separately. In such cases, Data is expected separately at each legal entity level within the organization structure. Domestic Data is populated in the report as data for the legal entities within India. Overseas Data is populated in the report as data for the legal entities outside India.
2. **RBSTR3:** It is expected to display the Year-To-Date (YTD) balance reported quarterly.
3. **SLR2, CRR, SLR, FORMVIII:** It is expected to update the CURRENT_MIS_DATE in the SETUP_MASTER table.

   Run execution is expected to be carried out for the fortnightly reports SLR2 and CRR for the below mentioned set of dates.

   The FIC MIS DATE is referred as **T** in the below table.

Table 8: Run Execution Dates for Fortnightly Reports

Run Execution Date	Sample Date
T-13	12-Mar-16
T-12	13-Mar-16
T-11	14-Mar-16
T-10	15-Mar-16
T-9	16-Mar-16
T-8	17-Mar-16
T-7	18-Mar-16
T-6	19-Mar-16
T-5	20-Mar-16
T-4	21-Mar-16
T-3	22-Mar-16
T-2	23-Mar-16
T-1	24-Mar-16
T	25-Mar-16
T-28	26-Feb-16

Populate the following tables before executing reports in Reporter Portal, and after populating data in the OFSAA results tables through a scheduled batch:

- SETUP_MASTER: The following parameters must be updated before every regulatory reporting Runs.

Figure 39: Setup Master Table for Run Execution

V_COMPONENT_CODE	V_COMPONENT_DESC	V_COMPONENT_VALUE (Sample Value)
CURRENT_QUARTER_NAME	Current Quarter Name	2014-Q2
PREVIOUS_YEAR	Previous Year	2013-2014
PREVIOUS_QUARTER_NAME	Previous Quarter Name	2014-Q1
CURRENT_YEAR	Current Year	2014-2015
CURRENT_MIS_DATE	Current MIS Date	2014-06-30
DEFAULT_GAAP	DEFAULT_GAAP	INGAAP

NOTE For the LR v7 report, SETUP_MASTER should be updated for DEFAULT_GAAP value as 'INGAAP' before executing the Account Dimension SCD (<INFODOM>_REG_RBI_ACCOUNT_SCD: This Batch is for Account Dimension from Product Processor Tables for RBI Regulatory Reporting).

- FCT_REG_RUN_LEGAL_ENTITY_MAP: As an Organization should have a hierarchical structure and reporting could happen for the entity at any level in the hierarchy, the applicable reporting entity should be provided as part of every regulatory reporting Run in this table.

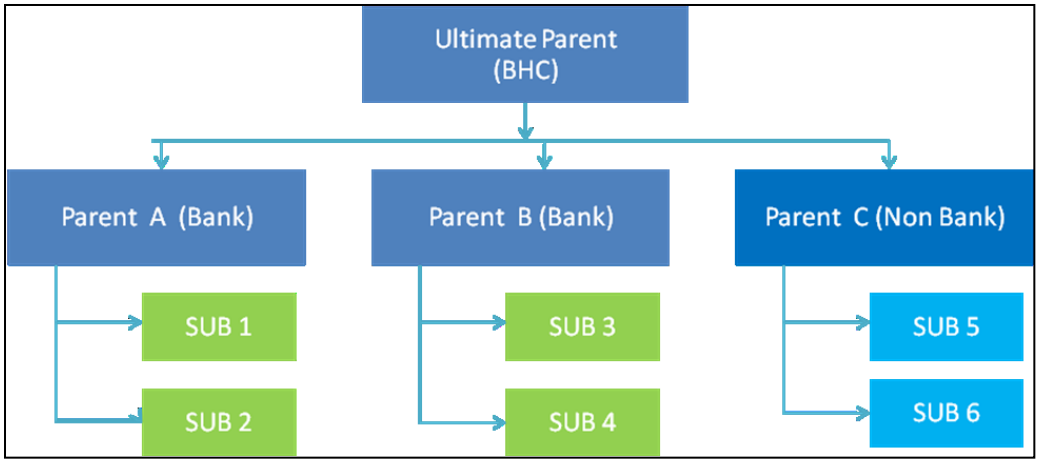
4.1.7 Consolidation

Consolidation is handled as part of the Financial Services Data Foundation (FSDF). Consolidation in FSDF refers to the elimination of intracompany transactions, that is, any kind of transactions between two parties or entities which are part of the reporting organizational hierarchy for a given execution. When there is only one legal entity involved in an execution, it is called as SOLO Entity vs earlier one as CONSOLIDATED Entity.

It is expected that in the staging area, the customer loads the data from the source system and then uses consolidation logic to arrive at the consolidated output for results.

- The scope of consolidation is about the list of Entities that participate in consolidation.
- Legal Entity Structure is looked through ORGANIZATION STRUCTURE DIMENSION. This store's a parent-child relationship. This is stored only once.
- While moving the data, Legal Entity can move related entities to the processing/reporting area.
- The legal structure being finalized once, this structure only stores one parent-child relationship.

Figure 40: Consolidation



- The transaction/exposure between SUB 1 and SUB 2 must be eliminated when reporting for Parent A.
- The transaction/exposure between SUB 1 and SUB 3 must not be eliminated when reporting for Parent A.
- It is the customer for banking products and the issuer for traded securities that are considered for the intracompany elimination.

  Consider the following example:

Figure 41: Account Summary Table

FSDF AREA	ENTITY CODE	ACCOUNT NUMBER	CUSTOMER	ISSUER
STAGE LOAN CONTRACTS	SUB 1	ACCOUNT 1	SUB 2	
STAGE LOAN CONTRACTS	SUB 1	ACCOUNT 2	PARTY 1	
STAGE INVESTMENT CONTRACTS	SUB 1	ACCOUNT 3	PARTY 1	SUB 2
FCT COMMON ACCOUNT SUMMARY	SUB 1	ACCOUNT 2	PARTY 1	
FSI INTRA COMPANY ACCOUNT	SUB 1	ACCOUNT 1	SUB 2	
FSI INTRA COMPANY ACCOUNT	SUB 1	ACCOUNT 3	PARTY 1	SUB 2

As shown in the preceding table, Account 1 is moved to the FSI INTRA COMPANY ACCOUNT and Account Summary tables. Run Enabled tables contain records specific to the selected legal entity and consolidation type.

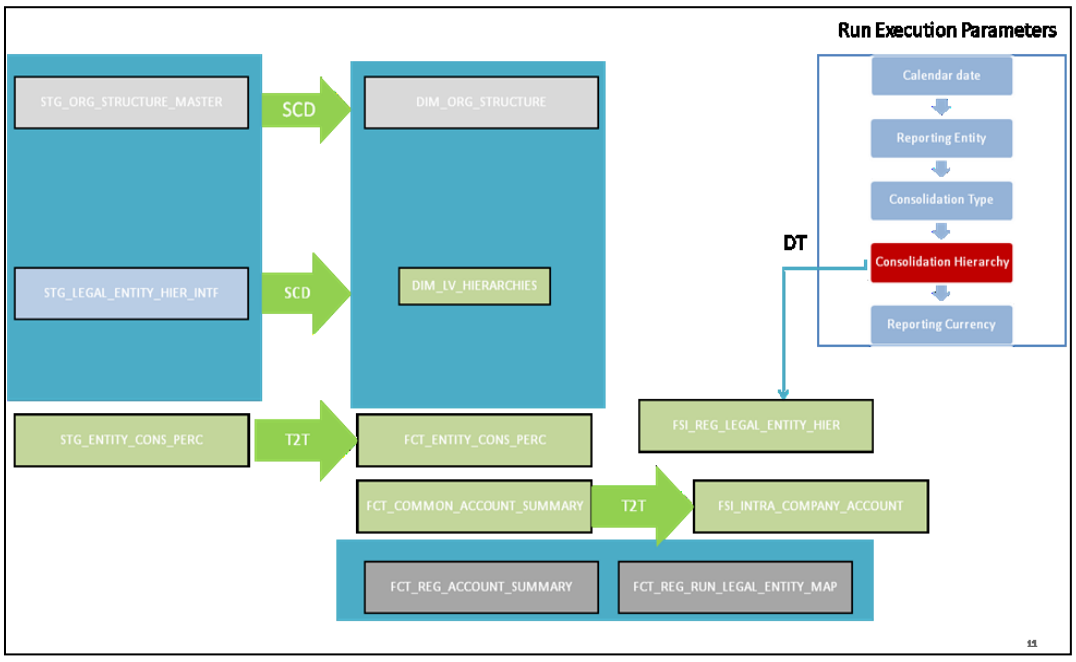
Consolidation is also linked to multiple hierarchies banking organizations have. Multiple hierarchies refer to the different grouping of group entities under different parents for given regulatory requirements.

The hierarchy structure is thus primary input to the consolidation process. Depending on whether you have multiple hierarchies or not, there are two data flows.

Consolidation with Multiple Organization Structure Hierarchy:

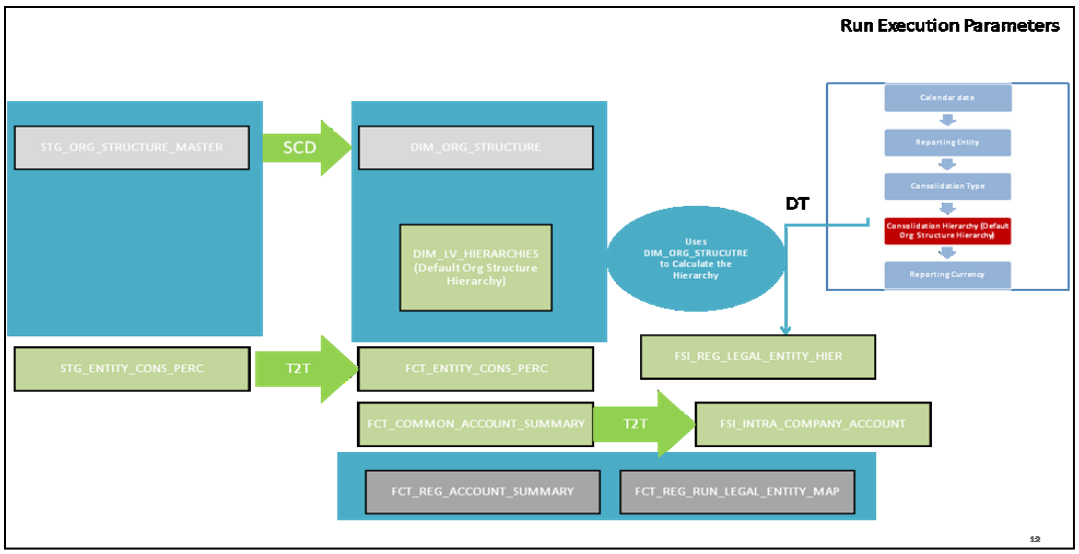
1. You load Organization Structure Hierarchy to STAGE ORG STRUCTURE MASTER table, which is moved to the ORG STRUCTURE DIMENSION using the SCD component.
2. Execution specific organization structure hierarchies along with parent and child entity codes are populated in STAGE LEGAL ENTITY HIERARCHY INTERFACE table, which is moved to LEGAL ENTITY HIERARCHIES DIMENSION using SCD component.
3. Execution specific Consolidation percentage is loaded in STAGE ENTITY CONSOLIDATION PERCENTAGE table, where the child entity code, the parent entity code, and the consolidation percentage is populated. This is moved to FACT ENTITY CONSOLIDATION PERCENTAGE table using Table to Table transformation. In FSDF 804 release, this feature is not supported yet.
4. The STAGE LEGAL ENTITY HIERARCHY is used for the Consolidation process and not the one from ORGANIZATION STRUCTURE DIMENSION.

Figure 42: Consolidation with Multiple Organization Structure Hierarchy



5. If you do not have Multiple Hierarchy, STAGE LEGAL ENTITY HIERARCHY which is used for the Consolidation process can be populated from ORG STRUCTURE DIMENSION instead of the STAGE LEGAL ENTITY HIERARCHY.

Figure 43: Consolidation without Multiple Organization Structure Hierarchy



NOTE A Solo Run does not require any type of consolidation of the elimination of accounts with other entities.

Additional Data Preparations to handle Consolidation

The entity FCT_REG_RUN_LEGAL_ENTITY_MAP is used once you select REPORTING ENTITY from AgileREPORTER. This table is populated as part of the RBI Run Execution.

Figure 44: Data Preparation for Consolidation

RUN TYPE	FIC MIS DATE	REPORTING ENTITY	RUN EXECUTION
SOLO	20160330	LE1	12
SOLO	20160330	LE2	14
CONSOLIDATED	20160330	LE1	16
CONSOLIDATED	20160330	LE2	16
CONSOLIDATED	20160330	LE3	16

For the solo run, only one reporting entity is expected to be included whereas consolidated run includes all entities involved in execution. This entity provides flexibility to select one REPORTING ENTITY in AgileREPORTER and select relevant data for the particular execution based on if it is consolidated or solo.

Topics:

- Relationship between Run and Stress

4.1.7.1 Relationship between Run and Stress

In the **OFS REG REP RBI** application, for example, the BSR II Annual report picks up reporting data based on the Reporting Run that populates the underlying Fact Table(s). Reporting Run is a flag, which must be marked as 'Y' in a DIM_RUN table so that, the OBIEE reporting layer selects a particular run execution.

In this application, a Run comprises:

1. **Baseline Run**: The Bank Holding Company (BHC) may have multiple runs. The run used for reporting is marked with a **Reporting Flag = Y**. This is the Baseline run for a given reporting date. It is referred to as Baseline because the values that it represents are not stressed and the BHC may use these base values for stressing them according to various scenarios. A history of such runs accumulated over some time provides historical runs. For more information on updating the reporting flag, refer section *Updating Reporting Flag*.
2. **Stress Run**: Stress runs hold data, which are stressed by a certain percentage/basis point over the Baseline figures. The BHC expects these figures to reflect the business/risk position under predetermined business scenarios/economic conditions.
3. Identification of Baseline and Stress run occurs from STRESS DIMENSION.

In this application, the required stress runs are tagged to a Baseline run. If the BHC performs stress runs, the relevant runs which are intended for reporting are identified and tagged with a reporting Baseline run using the V_RUN_ID in the DIM_RUN.

DIM RUN stores n_run_skey / v_execution_id, which are execution specific for every run definition which is v_run_id. Therefore, the run definition can remain constant over some time and different executions provide different outputs due to underlying data changes.

DIM_STRESS conveys the stress definition. Additionally, it links the original run Definition (v_run_id) and Stressed run ID (v_stressed_run_id). You must refer to the DIM_RUN table to get the expected run execution of these runs definitions about a particular date / n_mis_date_skey.

The same fact table stores both the Baseline data and the Stressed data, uniquely identified through Scenario codes (and Run Skeys).

Refer to the Business Metadata.xls present in the installer package for details on different Fact Tables used for related reports.

4.1.8 Projection Data

The following points provide information on the projection data:

1. Baseline run also populates projected date data.
2. This application requires projected data at two levels - Quarterly and Annual.
3. The **DIM_CONSOLIDATION** table is used to identify the projections. It contains the codes for projected quarters and years as required by the templates.
4. In the Fact tables, projection data is referred to with respective Consolidation codes (scenario code for **FCT_MGMT_REPORTING**). BHC must populate the data accordingly.
5. In the following example, FQ1 means Financial Quarter 1, FY1 means Financial Year 1, and so on.

Table 9: Projection Data Example 1

Consolidation Code	Consolidation Description	Reporting Line	Scenario	EOP Balance
100	Actual	100	BSL	426,367
400	FQ1	100	BSL	608,618
401	FQ2	100	BSL	870,502
402	FQ3	100	BSL	567,736
403	FQ4	100	BSL	846,196
404	FQ5	100	BSL	775,027
410	FY1	100	BSL	470,092
411	FY2	100	BSL	473,880
412	FY3	100	BSL	942,034
413	FY4	100	BSL	497,889
414	FY5	100	BSL	807,813

NOTE

- For Movement measures data is not carried from one reporting period to another. For example, Profit or Loss. Where General ledger balances such as loan outstanding are carried forward from one year to another, profit and loss are period specific.
- Therefore, unlike End of Period (EoP) balance, movement values for quarter actuals must be derived for reporting. For historical data, net sales for quarter 3 is the difference between the sales figure as of the end of quarters 2 and 3. You do not need to provide this difference as a download. Movement data for actual is identified through different runs and the respective values are summed up.
- Only those records, whose corresponding runs fall between the fiscal month start date and end date of the reporting quarter are selected for summation. Each Run has an associated date, and runs can be performed daily. Assuming that runs are performed daily in a given quarter (90 days), REG REP sums up data points across all 90 days to arrive at a quarter-end movement figure.

Table 10: Projection Data Example 2

Code	Projected Period	Reporting Line	Scenario	Run ID	Date	Projected Amount	Movement
100	Actual	100	BSL	RUNID001	10-Oct-13	300,000	900,000
100	Actual	100	BSL	RUNID002	15-Nov-13	100,000	

Code	Projected Period	Reporting Line	Scenario	Run ID	Date	Projected Amount	Movement
100	Actual	100	BSL	RUNID003	20-Nov-13	300,000	
100	Actual	100	BSL	RUNID004	30-Dec-13	200,000	
400	FQ1	100	BSL	--	--	--	608,618
401	FQ2	100	BSL	--	--	--	870,503
402	FQ3	100	BSL	--	--	--	567,736
410	FY1	100	BSL	--	--	--	470,093
411	FY2	100	BSL	--	--	--	473,881
412	FY3	100	BSL	--	--	--	942,035

However, when the projection of net sales for quarter 2 next year is to be performed, no derivation is required. Projections data for the said quarter can be directly downloaded in the respective Fact table(s) for reporting.

4.1.9 Data Flow from Source Systems to Staging Area

The staging area is populated with data from various data sources, such as GL data, Account data, Customer data, Trading data, Currency data, and Master data. Refer to *Data Integration Hub (DIH) User Guide* in *OHC* Documentation Library for details. DIH enables to load the data from the source systems to the OFSAA staging tables, through logical interfaces, known as Application Data Interfaces (ADI). DIH provides a set of User Interfaces (UI), which is used to define and maintain External Data Descriptor (EDD), Application Data Interfaces, and map the EDDs and ADIs through connectors.

4.1.10 Data Flow from Staging to Results Area

This section details the pass-through data, transformed data, and classification.

> **NOTE** Data flow from Staging to Results Area is available only for LR/STL, BSRII, and Leverage Ratio.

Topics:

- Pass-Through Data

4.1.10.1 Pass-Through Data

Pass-through data refers to the static data that is pre-processed and flows to the results area directly. The Common Staging Area (CSA) model represents the data entry point into the FSDF. CSA provides a simplified, unified data sourcing area for inputs required by analytical applications and engines. It consists of over 400 tables and nearly 9000 columns organized into distinct subjects.

The staging area is a physical data model, which is deployed using the Analytical Application Infrastructure, which manages it. The design of the staging area data model is to allow efficient data loading for analytics. It thus has crucial differences from a general-purpose repository of operational/transactional data across a bank.

The staging area acts as the single source of data and contains unified data requirements for various banking areas such as Loans and Losses, Off-balance Sheet products, Securities, Derivatives, Capital Data, Management Ledger and General Ledger. A common example of this category includes various monetary amounts, dates, and so on.

4.1.11 Data Flow from Staging to Processing Area

The staging area of the FSDF serves as a container for analytical processing from sourcing to consumption. Such processing is usually delivered in the form of discrete units called analytical applications, spanning different analytical use cases ranging from Finance to Risk to Compliance.

These applications consist of custom-built computational engines and numerical libraries and can execute processes on the data that range from simple aggregations to complex, multi-step stochastic processes such as Monte-Carlo simulation.

Analytical applications place varying demands on the data infrastructure in terms of volumes and speed, and therefore, place different demands on the data architecture. In practice, the normalized (3NF) design favored for Enterprise Data warehouses often fails to be efficient or performant when it comes to analytical processing across a wide range of use cases.

Therefore, the OFSDF recognizes the need for distinct application-specific working stores, separate from the staging and reporting area. For example, the OFSAA Asset and Liability Management (ALM) Application has a distinct set of ALM-specific tables, as does the Market Risk solution.

> **NOTE** The structure of these processing area stores is decided by the actual analytical application and engine used. The OFSAA suite of applications is organized this way, with each application managing a specific set of tables/schemas within the processing area.

The processing area tables/schemas are not part of the OFSDF. This is because OFSDF is intended to be an open platform. Other analytical applications and engines can equally provision data out of OFSDF by mapping their input requirements appropriately to the OFSDF staging area model.

4.1.12 Data Flow from Processing to Results Area

This step is similar to *Data Flow from Staging to Results Area*. It involves either pass through data from processing to results or loading directly to results (refer *Section 4.1.13*). This is mostly due to processing measures such as Fair Value, Risk-Weighted Assets, and so on.

4.1.13 Guidelines for Data Loading to Result Area Tables in Data Foundation for Regulatory Reporting Implementations

Regulatory reports make use of data available across several fact tables in the OFSAA Data Foundation Model and these result tables are either loaded from the raw data sourced from source systems via out-of-box T2T's or processed data output from various OFSAA applications.

For example, Fact LRM Account Summary (FCT_LRM_ACCOUNT_SUMMARY) which stores the liquidity risk related attributes and metrics computed by OFSAA LRM application, Fact Loan Loss Forecasting and Provision Account Summary (FCT_LLFP_ACCOUNT_SUMMARY) which stores the attributes and measures computed by OFSAA LLFP application.

However, there can be several implementation use cases in the regulatory reporting space where the customer may not have licensed any of the OFSAA application and therefore must put additional custom effort to design an ETL process to load the required data elements into the respective fact tables referenced by the report. The following section highlights some of the guidelines that the customer can consider when designing a data flow for such a use case:

- Consistent Usage of Run Identifier

  Most of the fact tables used in regulatory reporting are Run enabled and have a composite primary key inclusive of Run Identifier that enables the same snapshot of data to be loaded multiple times into the target fact table for any given execution date. All the out of the box processes that impact data used in regulatory reports are executed as part of an integrated Run to ensure that Run Identifier is consistent across fact tables. Since the reporting is done on an integrated schema, the customs data flow design must keep this integrity intact. This essentially means that the custom ETL processes designed to load the data directly into the fact tables must be able to leverage the Run Identifier generated by the Run Engine during execution. Run Identifier information is available in the DIM_RUN table.

- Correct Dimensional Lookup Configuration

  Dimensional Identifiers are typically part of referential integrity constraints with the fact table so the custom ETL processes must ensure that lookups retrieve valid surrogate keys for a given value of the business key. The intermediate staging structure must ensure all the business keys are persisted correctly and the lookup condition is designed on the correct dimension table.

  For example, `FCT_LRM_ACCOUNT_SUMMARY.n_asset_level_skey` → `DIM_ASSET_LEVEL.n_asset_level_skey`. The business key (v_asset_level_code) must be sourced and persisted to ensure correct values are populated in the target column, that is, `FCT_LRM_ACCOUNT_SUMMARY.n_asset_level_skey`.

- Data Loading Guidelines for handling Negative or Credit Balances

  To handle Negative Balances in Regulatory Reporting, there are two primary sources of the negative balances:

  a. Natural asset negative balances from the system of records

  b. Adjustment entries or Plug entries.

  The reporting requirement is to show the genuine asset negative balances as liabilities where adjustment entries should be aggregated to the same heading assets or liabilities as they are loaded. RBI uses General Ledger type from the General Ledger Account dimension. Primarily following two General Ledger Type codes are used for this purpose.

  a. ASSET

  b. LIABILITY

  General Ledger is available in every contract or product processor table as General Ledger code. Following products are considered for the treatment of negative balances:

  a. Loans and Cards

  i. Loans are reported under the Assets category in the Balance Sheet. There are cases when the customer makes an excess payment towards the loan account which makes the end of the period account balance becoming credit balance or negative balance.

ii. When excess payment is made, then the account will no longer fall under the Asset category, but it becomes a liability for the financial institution and must be reported as non-interest-bearing demand deposits in respective line items.

iii. To avoid reporting of the excess payment as assets, you must assign a General Ledger code to the given account with V_GL_TYPE_CODE = 'LIAB'.

iv. When for any loan regulatory reclassification assigned with GL code having V_GL_TYPE_CODE = 'LIAB', it excludes the reporting for all asset line items and it is added to Liability in respective line items.

v. Accounts created for Adjustment or Plug entries must have General Ledger code having V_GL_TYPE_CODE = 'AST'. This adds up to the same asset line item resulting also or reduction of overall reporting amount for a given line item based on the sign of the end of period (EOP) balance.

vi. Accounts created for Adjustment or Plug entries for excess payments must have General Ledger code having V_GL_TYPE_CODE = 'LIAB'. This adds up to the same Liability line item resulting also or reduction of overall reporting amount for a given line item based on the sign of the End of Period (EOP) balance.

Topics:

- Data Mapping (T2T)
- Data File Mapping (Flat File to RDBMS Target - F2T)

4.1.13.1 Data Mapping (T2T)

Data Mapping refers to the process of retrieving unstructured data from data sources for further data processing, storage, or migration. This feature is commonly known as RDBMS source to RDBMS target (T2T) framework in the OFSAA world and can be leveraged when source data is available in the Oracle database. Dimensional lookups must be handled via the T2T's join condition and expressions. Refer to *OFS AAI User Guide* for more details on configuring a T2T.

4.1.13.2 Data File Mapping (Flat File to RDBMS Target - F2T)

If the source data is available in file structures, the OFSAA F2T component can be used to bring the data in the OFSAA ecosystem. As lookups cannot be configured in an F2T, this component must be used in conjunction with the T2T component, that is, data is first loaded from the file to an interim staging structure using the F2T component followed by data load to the target result area table using the T2T component. This is the least recommended approach as there is a need for interim table structure in the data model and involves multiple data hops that add to the overhead.

See the *Oracle Financial Services Analytical Applications Infrastructure User Guide* for more details on OHC configuring an F2T.

4.1.14 FSDF Entity Information

The FSDF entity information is given in the Dimension Tables and Data Elements documents available on the MOS page.

OFS Regulatory Reporting for Reserve Bank of India - Dimension Tables <release version>

4.1.15 Fact Tables or Entities

For all tables with data flow type tagged as a Processing, it is recommended that you map data directly to the result area if processing application is not part of the OFSAA product suite. For example, Basel computations, RWA Numbers, and Capital Ratio are taken from the processing area which is populated by OFSAA or other Basel applications.

For processed tables, you can look for the following options:

- OFSAA Data Integration Hub (DIH) product
- Flat File
- Table-to-Table Transformation with the source being processing application

4.2 Overview of OFS REG REP RBI User Interface

This section provides details to log in to the OFSAA application, view report summary, view schedule summary, view cells, and map data schedules. It includes:

- Logging in to OFS REG REP RBI UI

4.2.1 Logging in to OFS REG REP RBI UI

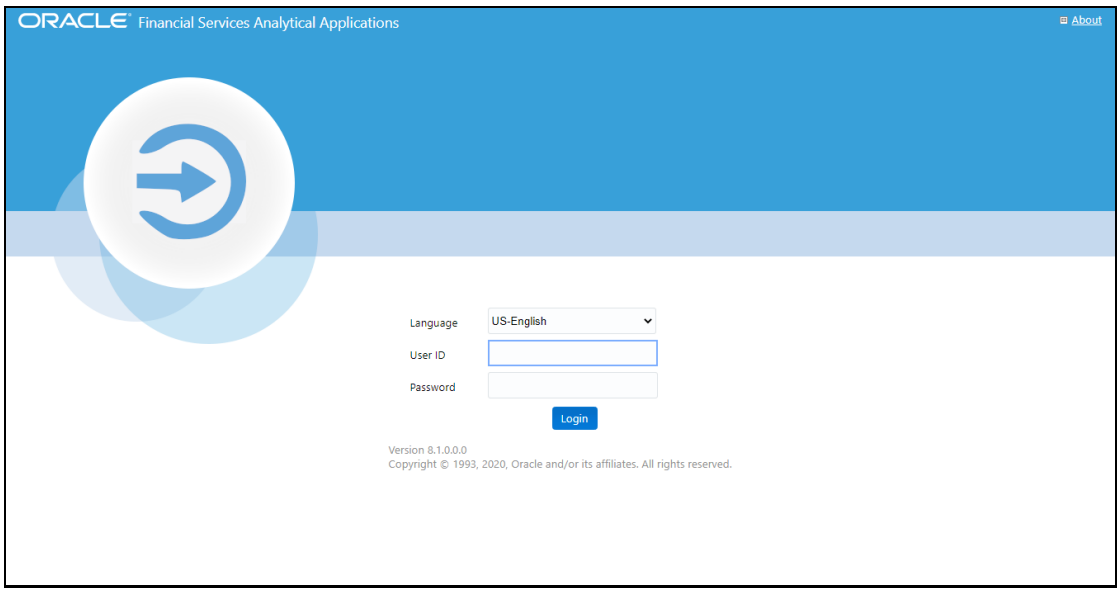
After the applications are installed and configured, to access the OFS REG REP RBI UI you must log in to the OFSAAI environment using the OFSAAI login page.

> **NOTE** The built-in security system ensures that you are permitted to access the window and actions based on the authorization only.

To access the OFS REG REP RBI UI, follow these steps:

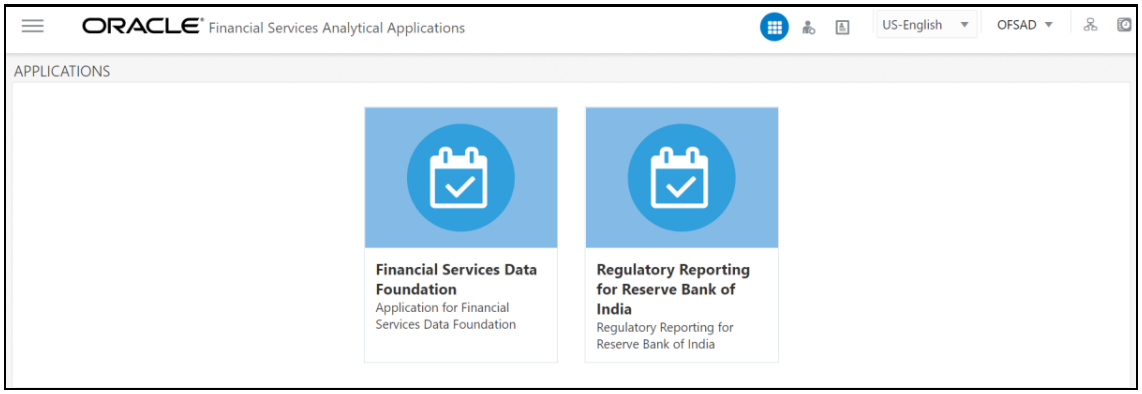
1. Enter the OFSAAI URL in your browser. The OFSAAI login page is displayed.

Figure 45: OFSAAI Log In



2. Select the desired language from the **Language** drop-down list.
3. Enter your **User ID** and **Password**. When you log into OFSAAI, the **OFSAA Applications** page is displayed.

Figure 46: OFSAA Applications Screen

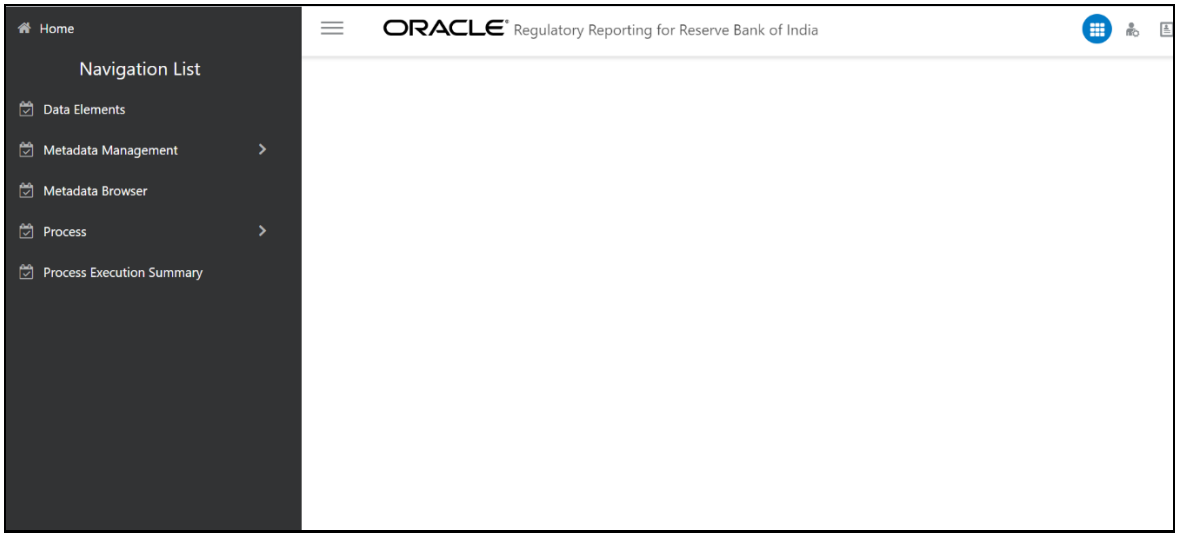


4. Select the **Financial Services Data Foundation.** The FSDF landing page is displayed.

Figure 47: Financial Services Data Foundation Landing Page

Or select the **Oracle Financial Services Regulatory Reporting for Reserve Bank of India**. The Oracle Financial Services Regulatory Reporting for Reserve Bank of India landing page is displayed.

Figure 48: Oracle Financial Services Regulatory Reporting for Reserve Bank of India Page



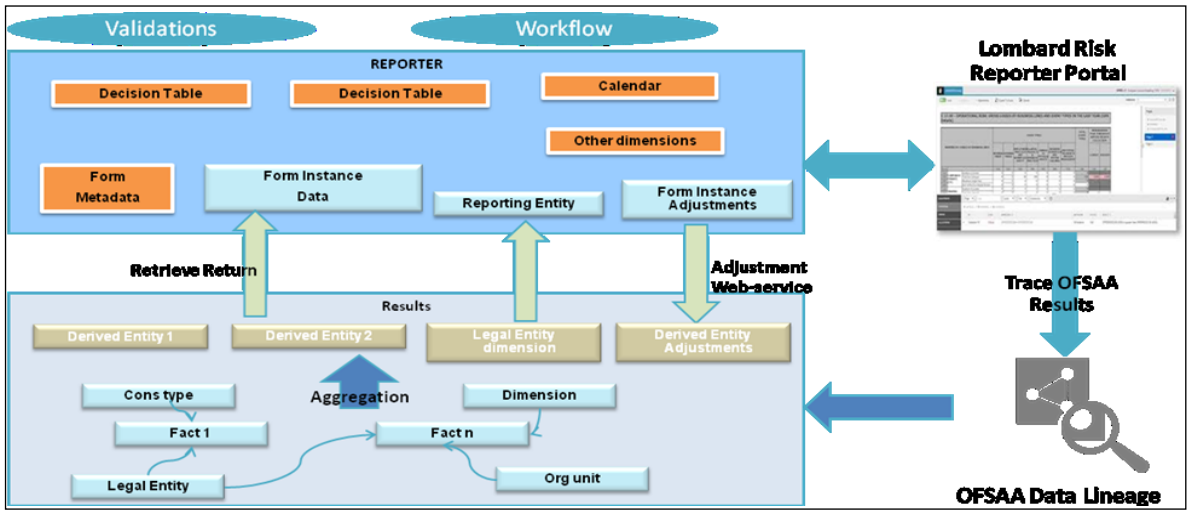
5. Select the Navigation Menu in the OFS REG REP RBI UI to access the following windows:
   a. Home
   b. Data Elements

c. Metadata Management
   i. Dataset
   ii. Build Hierarchy
   iii. Measure
   iv. Business Processor
   v. Derived Entity
   vi. Reports
d. Metadata Browser
e. Process
   i. Process Modeller
   ii. Process Monitor
f. Process Execution Summary

4.3 Mapping of Line Items to Reporting Requirements of Lombard Risk

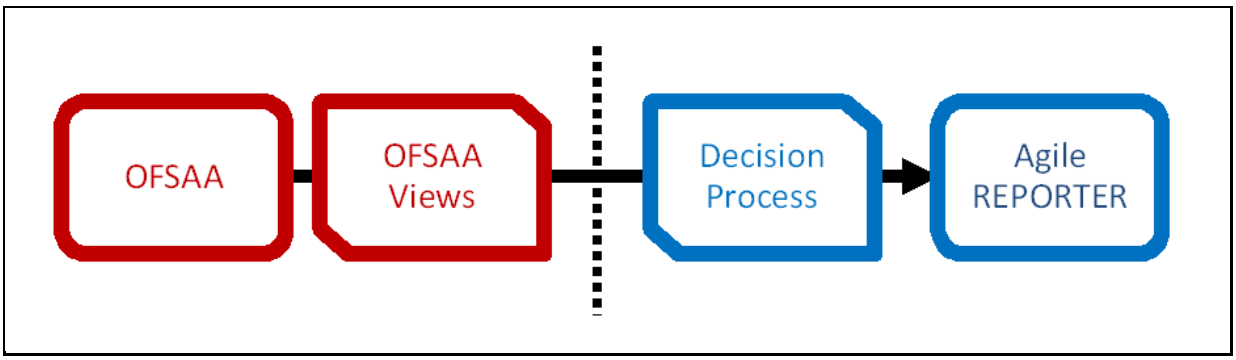
Figure 49 explains the flow of data between OFSAA and AgileREPORTER.

Figure 49: Data Flow between OFSAA and AgileREPORTER



OFSAA provides the data to AgileREPORTER in the form of derived entities. The derived entity is an existing OFSAA higher-order metadata object and can be physicalized as a materialized view in the database. Derived entities store aggregated data from base fact entities specified in the dataset and have the necessary dimensions and measures. Dimensional and measure combination stored within the derived entity is mapped to cells within the report. This mapping is maintained within the 'Dimensional mapping' template. 'Decision Process' within AgileREPORTER reads the derived entities and dimension mapping information to derive the data for reporting. Derived entities are created based on measures, hierarchies, and datasets.

Figure 50: Decision Process in AgileREPORTER



Each regulatory report contains numerous schedules. Each schedule contains various cells that need to be reported. Each cell or box is uniquely identified by a cell reference (or box identifier). OFSAA and Lombard Risk provide a unique cell reference to the cell.

Each cell is mapped to a set of dimensions and measures within the OFSAA. A group of cells within the schedule have similar mappings (such as the same dimensions but different member codes). Such groups are identified to create logical sections within the schedule. A derived entity is created for each of these logical sections within the schedule.

The dataset associated with the derived entity provides data for the specific derived entity. Data such as measures, in a derived entity are aggregated based on dimensions that are included in the derived entity, even though the fact entities in the dataset contain complete details of the data.

Some of the cells in the schedule can be derived as per the logic provided by the regulator. Derivation could be an expression built using values from other cells. Examples of derivation are ratio, node-level rollup, a direct reference to cells in other schedules within the report. These derivations are performed within the Lombard Risk Reporter portal. OFSAA provides data only for the cells that are not derived.

The “Decision Process” within Lombard Risk Reporter Portal uses the dimension mapping template to interpret data present in the derived entity. The decision process creates form data by reading the information from the derived entity and derives the necessary data that will be used by the Lombard Risk Reporter Portal to display report data.

Refer to the excel sheet for the list of *Reporting Lines* used across all the RBI returns.

> **NOTE** Metadata for data transformation is available as part of the data warehouse configuration pack provided Out-of-Box / pre-configured from OFSAA. You need not perform any mapping for the reports. However, this information can be useful for maintenance or extensions when Out-of-Box pack is not available.

4.4 Mapping Metadata

The list of reports with the corresponding Mapping Metadata Information is present in the *Hierarchy Measure Linkages* document present in *My Oracle Support* page.

4.5 AgileREPORTER: Submission

The AgileREPORTER is a web-based regulatory reporting tool provided by Lombard Risk. It provides necessary features to address e-filing workflow, validation and submission process and supports reports (called as forms/returns) for various jurisdictions. AgileREPORTER provides a reliable and efficient infrastructure to compile, generate, and submit regulatory reports.

Lombard Risk Reporter portal stores data related to forms/returns in its schema. Lombard Risk application supports the loading of data into its schema in the following ways:

- **Cell References File hand-off**: It is used when data providers compute all the information required for reports and pass the data that is required for each cell in the report.
- **Base Data hand-off**: It is used when data providers pass base data to the Lombard Risk application and expect computations that are required for each cell to be performed within the Lombard Risk application.

However, the Lombard Risk Reporter portal supports dimensional mapping-based approaches for OFSAA. In this approach, data hand-off is based on dimensions and measures similar to the pattern of information storage in OFSAA. Decision table mapping process within the Lombard Risk Reporter portal maps dimensions and measures to cell references.

5 OFSAA Features

Regulatory Reporting (REG REP) Solution configures the data hand-off structure to Lombard using metadata. The following sections provide details on datasets, measures, hierarchies, and Derived Entities. Multiple derived entities are linked to a specific regulatory schedule. You can modify the configuration using the OFSAA infrastructure. Additionally, the metadata route provides traceability from reporting elements to the data elements used.

This chapter provides an understanding of the AAI components used in the solution and dimensional mapping.

Topics:

- OFSAA Infrastructure
- Business Metadata
- Derived Entity
- Rules Framework Features
- Dimension Mapping

5.1 OFSAA Infrastructure

OFSAA Infrastructure includes the facilities for creating and maintaining dimensional reference data, interest rate, and currency exchange rate data, and process tuning data. Additionally, OFSAA Infrastructure includes functionality for building and maintaining rules that can be used by any Oracle Financial Services Analytical Application. These common rule objects include:

1. Expressions
2. Hierarchies
3. Filters

The analytical applications that you see on the Left-Hand Side (LHS) of the Financial Services Applications home page depending on your logon privileges and on the OFSAA modules that are installed for your environment.

Figure 51: Metadata Management Landing Page

5.2 Business Metadata

In addition to Derived Entity, REG REP uses the following OFSAA features to create the business metadata. For more information about the features, see the OFS Analytical Applications Infrastructure User Guide.

- **Hierarchies**: Some OFSAA dimensions support hierarchies. Hierarchies can be used to provide sophisticated stratification for either processing or reporting purposes. For example, an organizational hierarchy can start with a Division level containing Western Region, Eastern Region, and Southern Region; the next level down within the hierarchy can be state or county. A product hierarchy can begin with branches for Asset vs. Liability vs. Service products; under the Asset branch, you can define additional branches for Mortgage Lending, Commercial Lending, Consumer Lending, and so on.
- **Measures:** Business Measure refers to a uniquely named data element of relevance that can be used to define views within the data warehouse. It typically implies aggregated information as opposed to information at a detailed granular level that is available before adequate transformations.
- **Business Processor:** It refers to a uniquely named data element of relevance that can be used to define views within the data warehouse. It typically implies aggregated information as opposed to information at a detailed granular level that is available before adequate transformations.
- **Datasets**: It refers to a group of tables whose inter-relationship is defined by specifying a join condition between the various tables. It is a basic building block to create a query and execute a data warehouse for a large number of functions and to generate reports.

5.3 Derived Entity

It is the primary component of OFSAA used for OFSDF Interface with Lombard Risk for RBI Regulatory Reporting Solution uses Derived Entity to create a physical materialized view which is then queried by Lombard using pre-set data hand-off templates. An Entity refers to a table in which data is stored. Derived Entity within the infrastructure system facilitates you to define entities that are populated through a series

of data transformation processes resulting from an existing Data Set or a Source Application. An Entity can be used to define other Business Metadata such as measures, hierarchies, dimensions, data sets, and cubes.

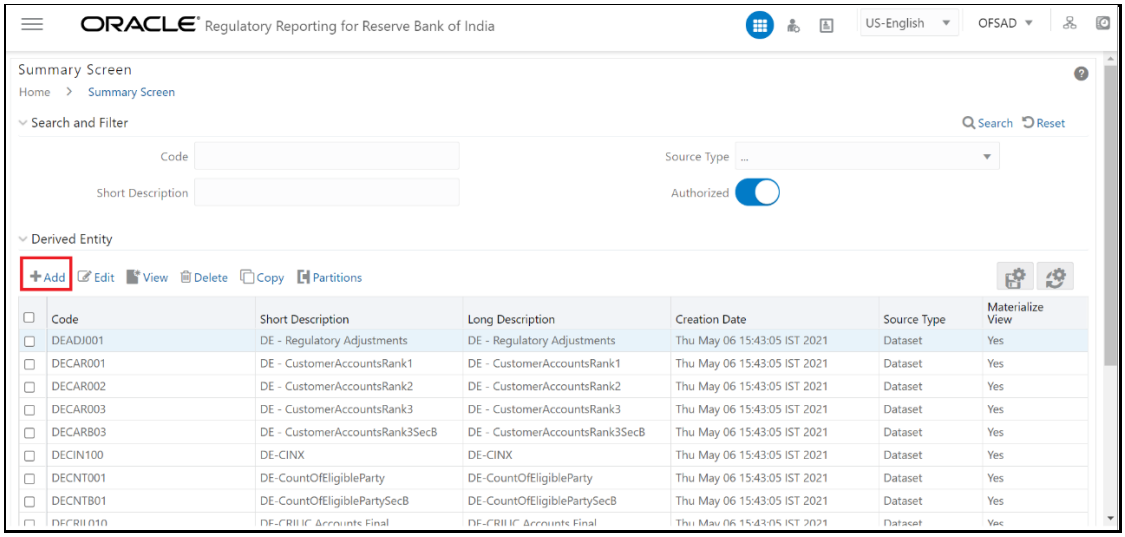
Derived Entities comprise the following:

- Measures
- Hierarchies
- Datasets

Ensure to define the above components within OFSAA before configuring the derived entity, and select Materialized View property in Derived Entity. This property creates the derived entity as materialized views.

1. Navigate to path **Oracle Financial Services Regulatory Reporting for Reserve Bank of India,** select **Metadata Management,** and then select **Derived Entity**. The existing derived entities summary screen is displayed. You can add a new derived entity and Edit, View, Delete, or Copy an existing derived entity.

Figure 52: Derived Entity Summary Page



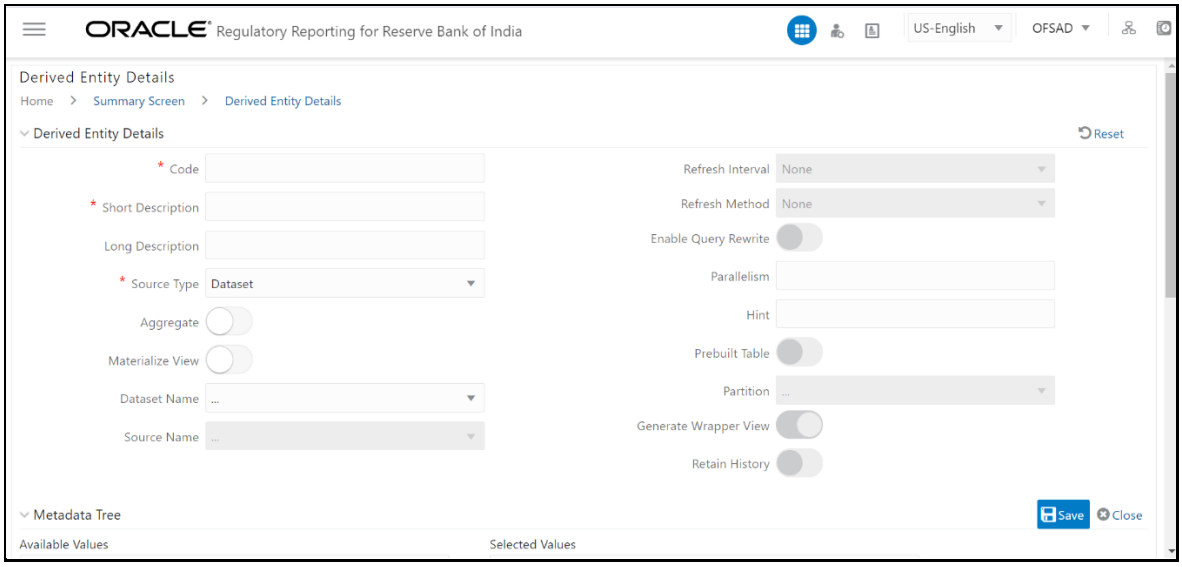
Derived Entities must have AS_OF_DATE and LEGAL_ENTITY as the mandatory dimensions. The rest of the structure of the derived entity can vary depending on the dimensions present. A metadata configuration table is present in AgileREPORTER to link the name of the column in the derived entity and dimension that is referred to in the dimension mapping process.

Derived entities have data for the 'Final Reporting Run' only, which is reported to the Regulatory, and are refreshed for the latest hand-off date.

A metadata configuration table is maintained within AgileREPORTER to capture the derived entities that supply data for each schedule.

2. Click the **Add** button to create a new Derived Entity.

Figure 53: Derived Entity User Interface



Topics:

- Creating Derived Entity
- Saving Derived Entities
- Refreshing Derived Entities
- Adding a Hint to a Derived Entity

5.3.1 Creating Derived Entity

Derived Entities must have Code, Short Description, and Source Type mandatory dimensions as shown in **Error! Reference source not found.**. The rest of the structure of the derived entity can vary depending on the dimensions present. A metadata configuration table is present in AgileREPORTER to link the name of the column in the derived entity and dimension that is referred to in the dimension mapping process.

Derived entities have data for the 'Final Reporting Run' only, which is reported to the Regulatory, and are refreshed for the latest hand-off date.

A metadata configuration table is maintained within AgileREPORTER to capture the derived entities that supply data for each schedule.

Refer to *OFS Analytical Applications Infrastructure User Guide* in (*OHC*) documentation library for detailed steps on creating a derived entity.

5.3.2 Saving Derived Entities

After the server restart is complete, save all the derived entities manually using the OFSAAI User Interface (**Oracle Financial Services Regulatory Reporting for Reserve Bank of India,** select **Metadata Management,** and then select **Derived Entity**).

Topics:

5.3.2.1 Adjustments DE

The adjustments feature enables to adjust the differing values of the report systems. The Adjustments Derived Entity derives its values from the Adjustments Fact table (FCT_REG_REPORT_ADJUSTMENTS) that specifies the adjustment value and the seeded table (DIM_REG_REPORT_CELL) that specifies the cell ID / MDRM Code and the Report Code to which the MDRM belongs to. This ensures that there can be direct adjustments made to MDRM(s) such that the values from both the derived entities are traceable and efficiently reported.

Table 11: Adjustment Derived Entity

Task No.	Derived Entity Code	Derived Entity Description
Task1	DEADJ001	DE - Regulatory Adjustments

5.3.3 Refreshing Derived Entities

The complete Derived Entities can be refreshed as a whole or incrementally for selected periods. See the *OFS_DE_INCREMENTAL_MV_REFRESH* in (*OHC*) documentation library for detailed steps to incrementally refresh derived entities.

5.3.3.1 Implementing the Adjustment Feature

Perform the following steps to implement the Adjustment feature:

1. Identify the Cell ID for the report and line item where an adjustment has to be implemented.

   For example:

   Report: DSBIALE

   Line Item: I.1 Cash on hand

   Cell ID: RBIDSBIALEP001R0020C0020

   The report currently displays a Total value = 69,337,000.00 for the identified cell as shown in the following figure. Now, the requirement is to adjust this amount to 69,338,000.00

   Figure 54: Before Adjustment Details Window

Section 1: Assets and Liabilities

Part-A: ASSETS (Amount Outstanding at end of Month)	Domestic Operations		Overseas Operations		Global Operations	
	Total	Of Which Held in Forex	Total	Of Which Held in Forex	Total	Of Which Held in Forex
I.Cash Funds	109,497,000.00	54,179,000.00	109,497,000.00	54,179,000.00	109,497,000.00	54,179,000.00
I.1 Cash on Hand	69,337,000.00	24,462,000.00	69,337,000.00	24,462,000.00	69,337,000.00	24,462,000.00
I.2 Balances/Deposits with RBI/central Banks	40,160,000.00	29,717,000.00	40,160,000.00	29,717,000.00	40,160,000.00	29,717,000.00

2. FCT_REG_REPORT_ADJUSTMENTS: This table must be populated with the requisite 'Adjustment Amount' and other related columns.

   For example:

   N_ADJUSTED_AMT - 1000

   The corresponding N_CELL_SKEY value must be picked from DIM_REG_REPORT_CELL for the respective CELL_ID.

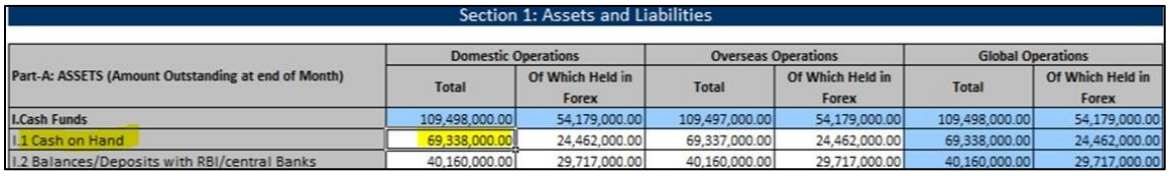
   Also, the following columns must be updated accordingly:

```
N_ENTITY_SKEY,
N_RUN_SKEY,
N_MIS_DATE_SKEY
```

3. Execute the resave batch for Adjustments (<<INFODOM>>_RBI_ADJUSTMENT_RESAVE), to save the Adjustment derived entity - DEADJ001.
4. The retrieved report should reflect the amount after adjustments, as shown in the following figure. (69,337,000.00 +10000) = 69,338,000.00

> **NOTE** The Adjustment amount can be negative and to achieve a subtracted amount.

Figure 55: Adjusted Amount Details Window



Section 1: Assets and Liabilities

Part-A: ASSETS (Amount Outstanding at end of Month)	Domestic Operations		Overseas Operations		Global Operations	
	Total	Of Which Held in Forex	Total	Of Which Held in Forex	Total	Of Which Held in Forex
I.Cash Funds	109,498,000.00	54,179,000.00	109,497,000.00	54,179,000.00	109,498,000.00	54,179,000.00
I.1 Cash on Hand	69,338,000.00	24,462,000.00	69,337,000.00	24,462,000.00	69,338,000.00	24,462,000.00
I.2 Balances/Deposits with RBI/central Banks	40,160,000.00	29,717,000.00	40,160,000.00	29,717,000.00	40,160,000.00	29,717,000.00

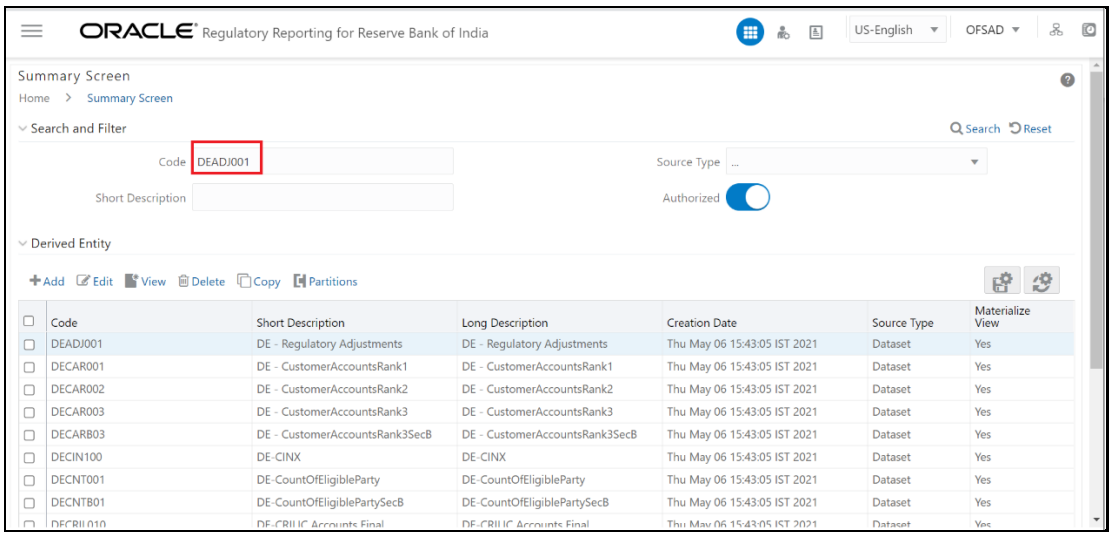
> **NOTE** The Adjustment feature works only for fixed grid cells (Open Y cells are not supported).

5.3.4 Adding a Hint to a Derived Entity

Perform the following steps to add a Hint to a Derived Entity:

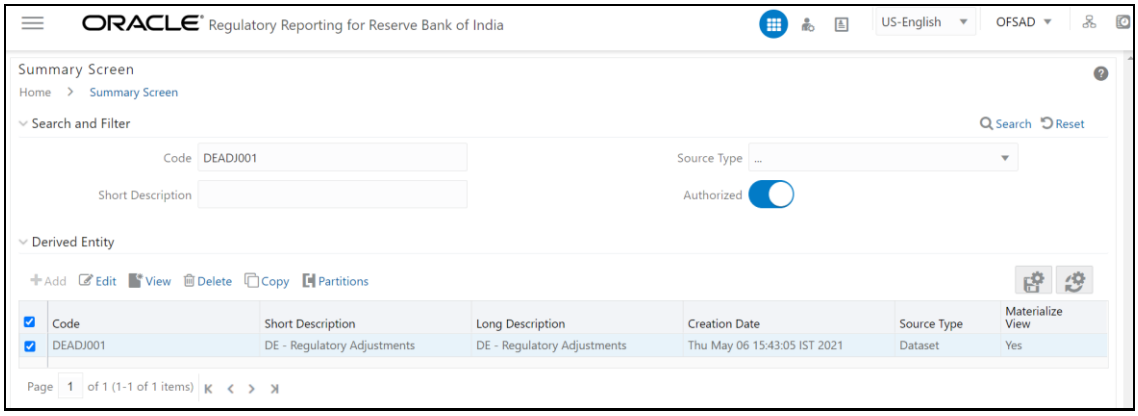
1. To add a Hint in a DE, perform the following steps:
   a. Log in to OFSAA application GUI.
   b. Navigate to **Oracle Financial Services Regulatory Reporting for Reserve Bank of India,** select **Metadata Management,** and then select **Derived Entity**. The Summary Screen is displayed as follows.

Figure 56: Derived Entity Summary Page



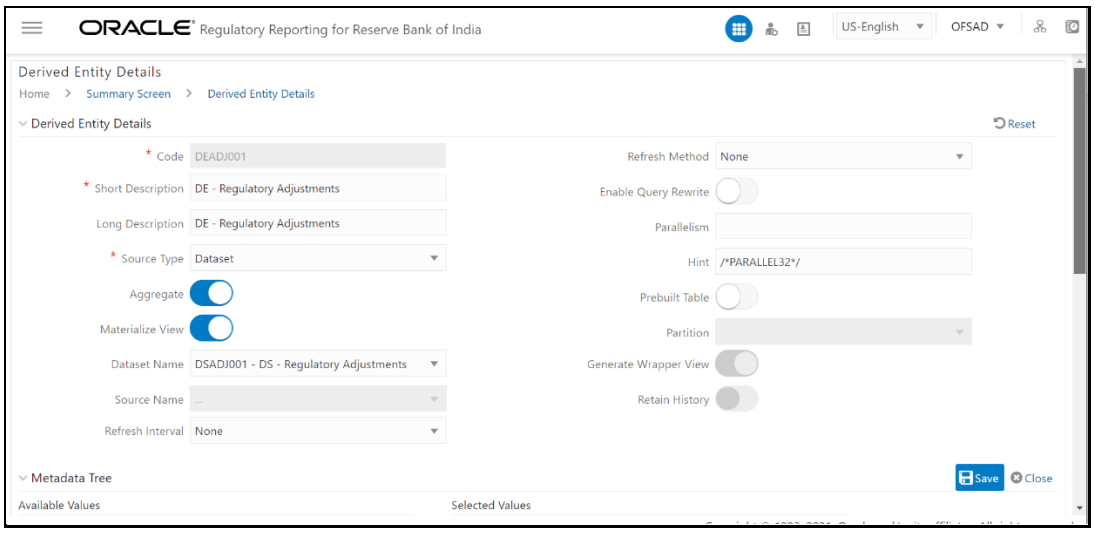
c. Enter the **DE Code** and click **Search**. The corresponding DE Code and details are displayed.

Figure 57: Derived Entity Selection Page



d. Select the **DE Code** and click **Edit**. The DE details are displayed.

Figure 58: Derived Entity Edit Page

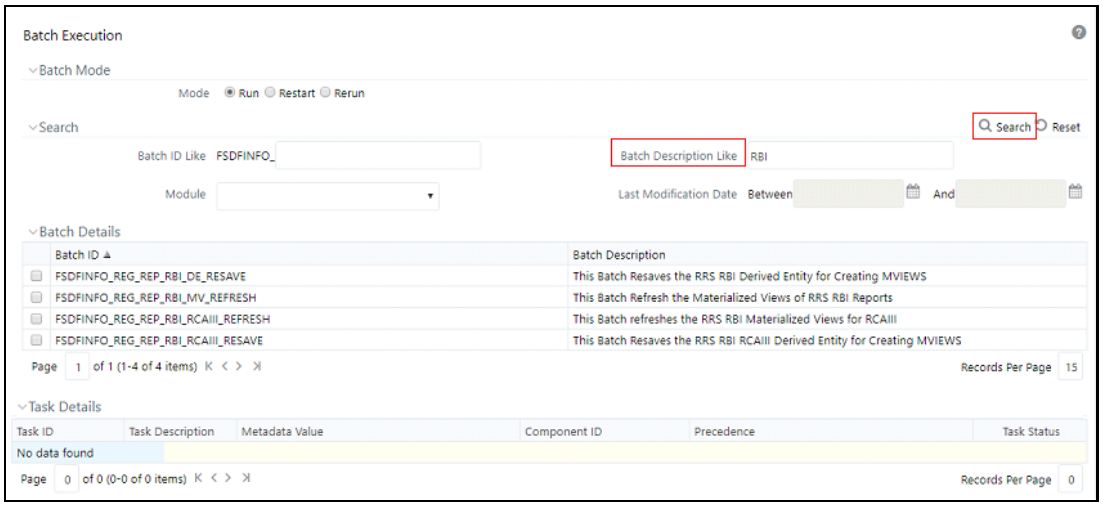


e. Enter the **Hint** for the DE and click **Save**.

2. To execute the Hint added in the DE, perform the following steps:

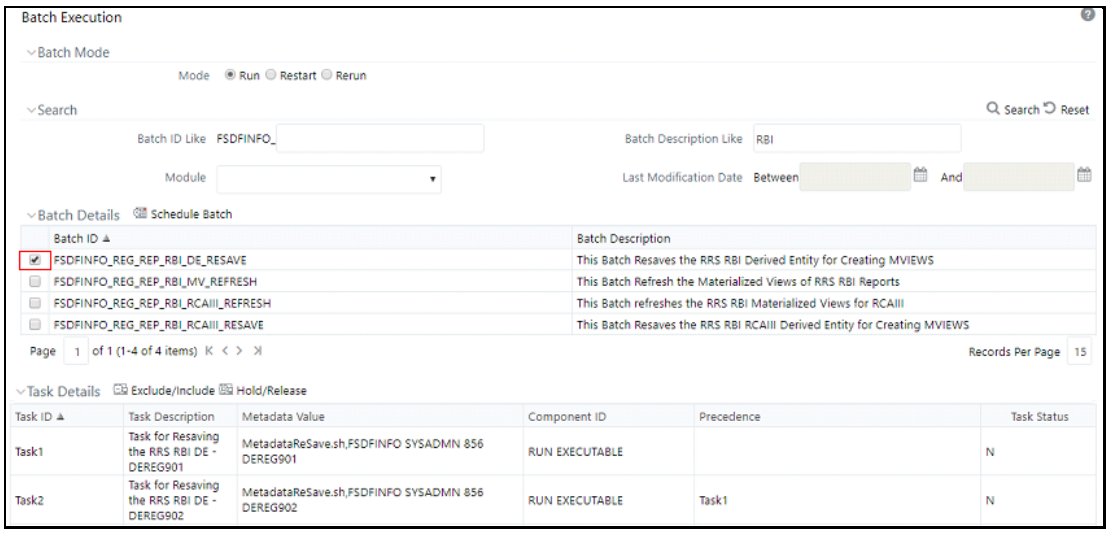
a. Navigate to **Financial Services Data Foundation,** then select **Operations,** and then select **Batch Execution**. The Batch Execution screen is displayed.

Figure 59: Batch Execution Summary Page



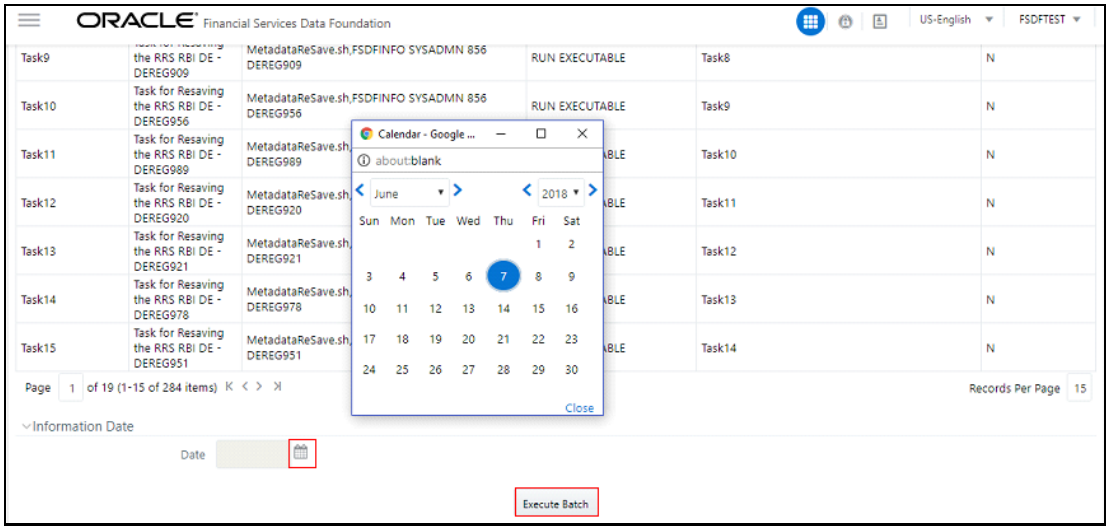
b. Enter the **Batch Description Like** and click **Search**.

Figure 60: Batch Execution Selection Page



c. Select the modified or required DE for Batch Execution under the Batch Details.

Figure 61: Batch Execution Edit Details Page



d. Select the **Date** and click **Execute Batch**. After execution, the DDL reflects the Hint added to the DE.

5.4 Rules Framework Features

OFSDF Interface with Lombard Risk for RBI uses the following Rules Run Framework of OFSAA. For more information about the features, see the OFS Analytical Applications Infrastructure User Guide.

- **Rules:** Financial institutions require constant monitoring and measurement of risk to conform to prevalent regulatory and supervisory standards. Such measurement often entails significant computations and validations with an organization's data. Data must be transformed to support such measurements and calculations. The data transformation is achieved through a set of defined rules.
  REG REP uses Rules for reclassification of dimensions.

5.5 Dimension Mapping

Each cell reference is mapped to a set of dimensions and measures. This mapping is documented in excel and then converted to a Decision table through an offline utility provided by AgileREPORTER. A decision table is a metadata object within AgileREPORTER that stores the criteria for deriving value for each cell reference. The metadata is packaged for regulatory reports as part of the OFS Risk Regulatory Solution. The decision table process within AgileREPORTER reads the metadata and derived entity published by OFSAA to populate data required for returns for the specified date and legal entity.

The following table is an example of dimension mapping. Each cell reference is mapped to a set of dimension members and measures. If a dimension is left empty for a cell reference, it indicates that it is not participating in the mapping process. If there are multiple mappings for a cell reference, then the value of this cell can come from any of these criteria.

The decision mapping table is processed against the contents of the derived entity to reporting data. Each record of the derived entity is matched against the criteria specified in the decision table to identify the cell reference and derive return data (such as cell reference and cell value).

Table 12: Dimension Mapping Example 1

Cell References	Is Derived?	Standard Product Type Code	Bucket Category	Bucket Type	Measure
RBIIRSP022R0020C0020	No	Perpetual Cumulative Preference Shares	1 to 28 days	IR	Agg Outflow Amount
RBIIRSP022R0020C0030	No	Perpetual Cumulative Preference Shares	29 days to 3 months	IR	Agg Outflow Amount
RBIIRSP022R0020C0040	Yes				
RBIIRSP022R0020C0050	No	Perpetual Cumulative Preference Shares	Over 6 months and up to 1 year	IR	Agg Outflow Amount
RBIIRSP022R0020C0060	No	Perpetual Cumulative Preference Shares	Over 1 year and up to 3 years	IR	Agg Outflow Amount
RBIIRSP022R0020C0070	No	Perpetual Cumulative Preference Shares	Over 3 years and up to 5 years	IR	Agg Outflow Amount

The following table is derived after converting the dimension member and measure names into corresponding dimension member codes (not surrogate keys) and measure codes. This decision table mapping is provided for each decision table in excel format as per the template. AgileREPORTER converts the decision table mapping present in excel into configuration entries within their schema.

Table 13: Dimension Mapping Example 2

Cell References	Is Derived?	Standard Product Type Code	Bucket Category	Bucket Type	Measure
RBIIRSP022R0020C0020	No	Perpetual Cumulative Preference Shares	1 to 28 days	IR	MSREG976
RBIIRSP022R0020C0030	No	Perpetual Cumulative Preference Shares	29 days to 3 months	IR	MSREG976
RBIIRSP022R0020C0040	Yes				
RBIIRSP022R0020C0050	No	Perpetual Cumulative Preference Shares	Over 6 months and up to 1 year	IR	MSREG976
RBIIRSP022R0020C0060	No	Perpetual Cumulative Preference Shares	Over 1 year and up to 3 years	IR	MSREG976
RBIIRSP022R0020C0070	No	Perpetual Cumulative Preference Shares	Over 3 years and up to 5 years	IR	MSREG976

NOTE All the dimension member codes that are used in the decision table are pre-seeded by OFSAA and cannot be modified. Therefore, if you have other member codes in the dimension, then you must re-classify them by using re-classification rule post load, or value-code mapping during load.

Decision tables must be prepared closer to the report submission period. In some cases, reclassification of multiple dimensions that result in a single unified reporting dimension must be performed to address the complexity of the decision table. Reclassification rule is defined in OFSAA and packaged as part of the OFSAA Risk Regulatory Reporting Solution.

In some cases, certain sections of the schedule or the entire schedule can be a list of data rows without any mapping to a fixed set of dimension members. For example, Top 20 counterparties, List of Available for Sale (AFS) - securities. In such cases, since there are no cell references, decision table mapping specifies the names of dimensions and measures of derived entities in the 'sheet' column or 'row' column of the template.

NOTE As a part of the solution, metadata exists as ready-to-use or pre-configured with the installer.

6 Executing Run through Process Modelling Framework in OFS REG REP RBI

Process Modeling Framework (PMF) is a design and execution framework that enables the Process Pipeline developers to implement various Pipelines modeled by the Business Analysts. The Process Pipeline developers use the framework to orchestrate the Business Pipelines and the Run Pipelines within OFSAA and to design the artifacts that participate in the Pipelines to complete their implementation.

This chapter provides information about the usage of the Process Modeling Framework (PMF) feature in the Oracle Financial Services Regulatory Reporting for Reserve Bank of India- Lombard Risk Integration Pack (OFS REG REP RBI) application.

> **NOTE** For detailed information about the Process Modeling Framework (PMF) feature in OFSAA, see the Process Modelling Framework Orchestration Guide.

This chapter includes the following topics:

- Overview
- Designing a Pipeline in OFS REG REP RBI
- Verifying the Execution Logs

6.1 Overview

In OFS REG REP RBI, Process Modelling Framework (PMF) is used to create a Run definition in a Run process. The visual representation of the Run is enabled through PMF by the construction of a Run Pipeline. PMF is a feature in parallel to the Run Management feature. Through the PMF, you can execute the following Ready-to-use Runs for data loading:

- Financial Services Regulatory Reporting for Reserve Bank of India- Lombard Risk Integration Pack (OFS REG REP RBI) Sourced Run
- Financial Services Regulatory Reporting for Reserve Bank of India- Lombard Risk Integration Pack (OFS REG REP RBI) Execution Run

6.2 Designing a Pipeline in OFS REG REP RBI

You can design the process flow diagrams for both the processes (Business Process Pipeline and Run Pipeline). This is an example of a process flow diagram for a Run Pipeline (for OFS REG REP RBI Sourced Run).

After you create, design, and define the process in the process flow diagram, you must assign values to the Run parameters, and execute the Run. You can execute a Run Pipeline from the UI or using a command-line utility called `wfExecExternal.sh`.

This section includes the following topics that describe the Run Pipeline execution from the UI:

- Selecting the Run Parameters and Executing the Run
- Verifying the Run Execution
- Verifying the Execution Logs

> **NOTE** For information about executing the Run Pipeline using a command-line utility, see the section *Using Command Line Utility* in the Process Modelling Framework Orchestration Guide.

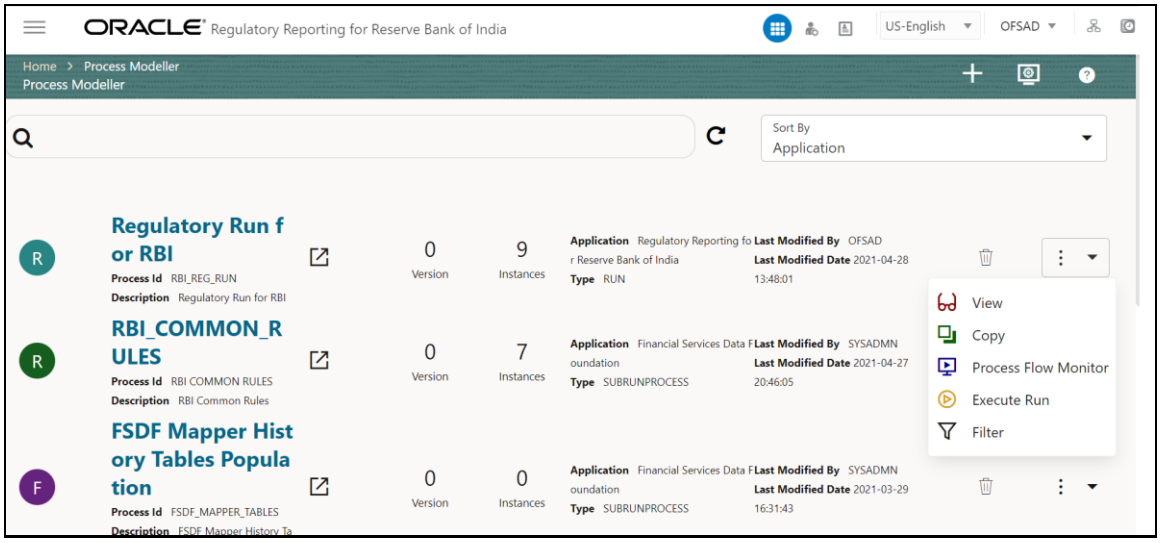
6.2.1 Selecting the Run Parameters and Executing the Run

After designing and saving the process flow diagram, the Process is listed in the *Process Modeller* page.

To select the Run parameters and execute the Run, follow this procedure:

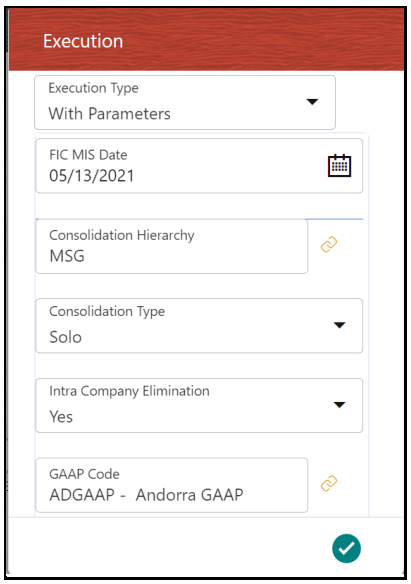
1. After logging into OFSAAI applications page, navigate to **Oracle Financial Services Regulatory Reporting for Reserve Bank of India**, select **Process** and then select **Process Modeller**.
2. In the **Process Modeler** page, click **More** ⋮ corresponding to the Run Pipeline that must be executed.

Figure 62: Process Modeler Page



3. When you click **Execute Run**, the **Select Run Params** window is displayed.

Figure 63: Select Run Parameter Screen



4. Select the **Execution Type** as **With Parameters** from the dropdown list.
5. Select or enter the required values for each field as follows.

Table 14: Run Parameter Fields and Descriptions

Field Name	Description or Instruction
TEMPLATE_NAME	Enter the template name of the run.
Reporting Currency	Enter the Reporting Currency Code used to calculate the amount during the data population in the target table.
Legal Entity	Select the Legal Entity Code to identify the legal entity used for the Run.
Consolidation Type	Select the Consolidation Type of legal entities on a solo or consolidation basis. In a Solo Run, only the selected legal entity is used. In a Consolidated Run, along with the selected legal entity, all its child legal entities are also used.
Intra Company Elimination	Select the Intra Company Elimination type to eliminate (YES) or skip the elimination (NO) of Intra Company Accounts during a Consolidated Run.
Consolidation Hierarchy	Enter the Legal Entity Hierarchy used for the consolidated run. This parameter is not required for the Solo Run.
GAAP Code	Enter the required accounting standard.
FIC MIS Date	Select the extraction date.
Run Execution Description	Enter a longer description of the Run.

6. When you click **OK** button, the Run execution begins. The **Select Run Params** window closes.

NOTE The execution of the Run Pipeline is triggered using the selected FIC MIS DATE. The Run SKey is generated and inserted into the DIM_RUN table. For the Run SKey generated, the corresponding user-selected Run parameters are inserted into the RUN_EXE_PARAMETERS table.

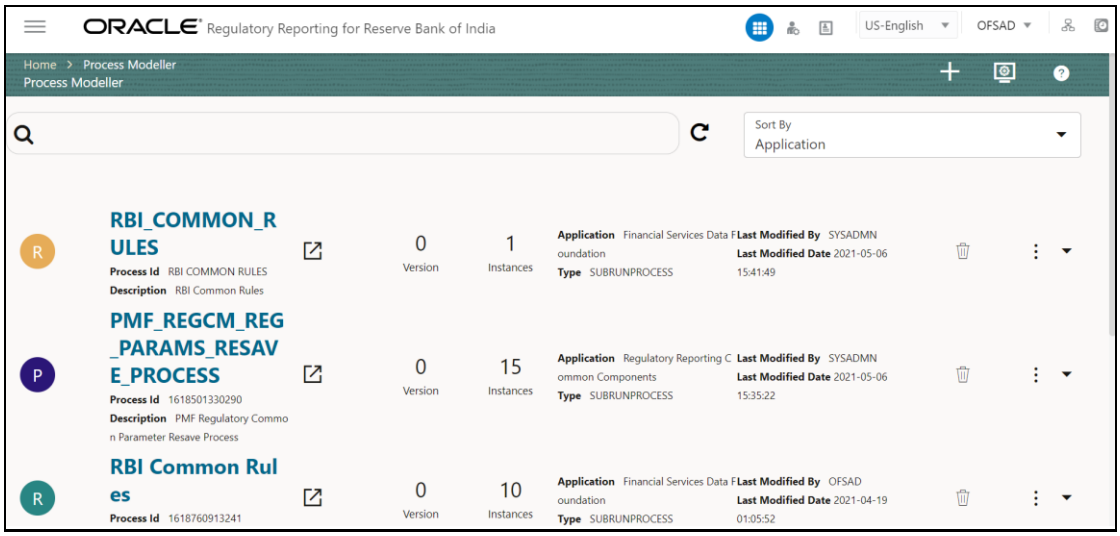
6.2.2 Verifying the Run Execution

After selecting the Run parameters and beginning the Run execution, verify the progress of the Run.

To verify the Run execution progress, follow this procedure:

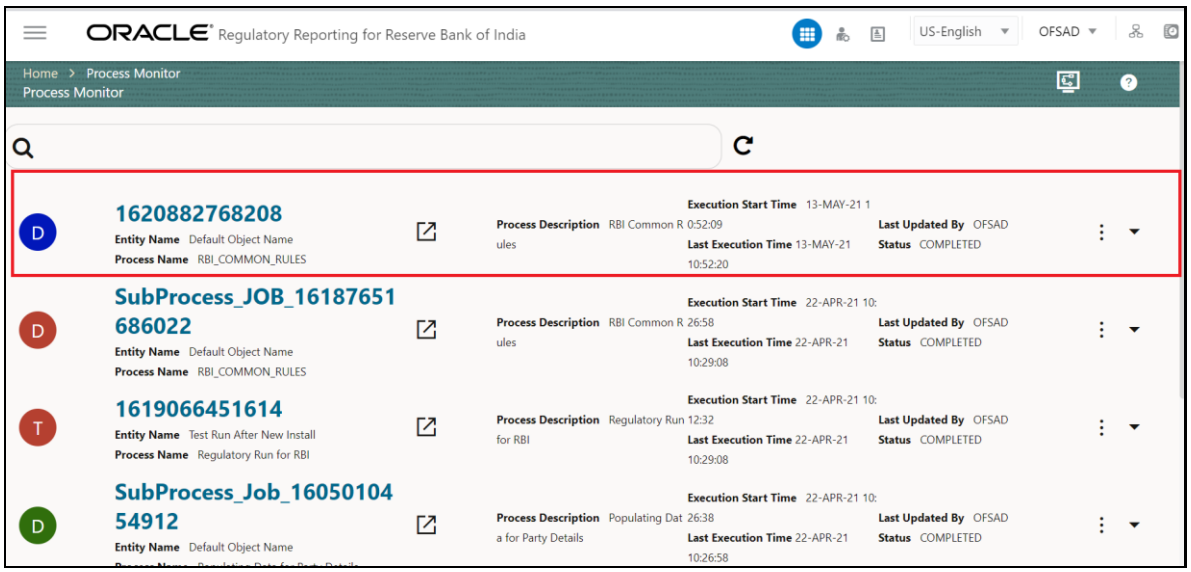
1. In the **Process Modeler** page, click **More** corresponding to the Run Pipeline that must be verified. Click **Process Flow Monitor**.

Figure 64: Process Modeler Run Execution Screen



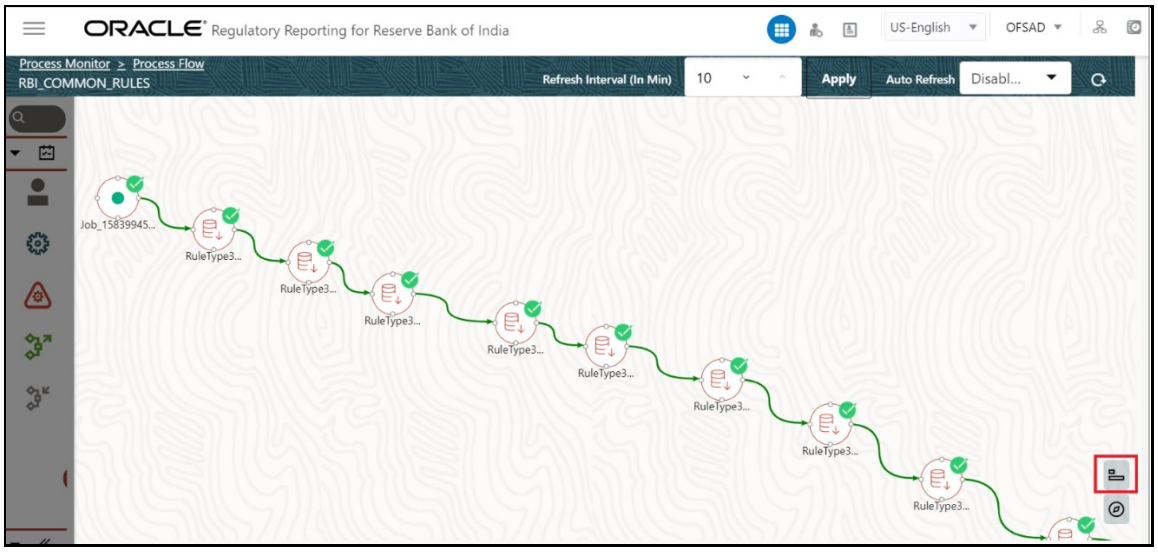
2. Select the **Process Flow Monitor** option from the drop-down list. The **Process Monitor** window is displayed. You can see the generated process flow ID, the Run execution timestamp, and the status of the Run execution. To verify the Run execution status at the Pipeline level, click the corresponding process flow ID.

Figure 65: Process Monitor Screen



The process flow diagram window is displayed. The icon at each Sub Pipeline indicates that the Run execution is successful.

Figure 66: Run Pipeline Process Flow Diagram



NOTE The icon shows the entire label of the nodes in the Process Flow Diagram and the icon shows the nodes navigation in the diagram.

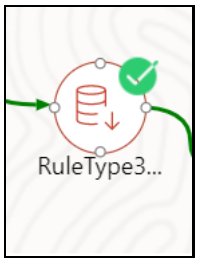
6.2.3 Verifying the Execution Logs

You can access the execution logs to verify the details of the Run.

To verify the execution log, follow these steps:

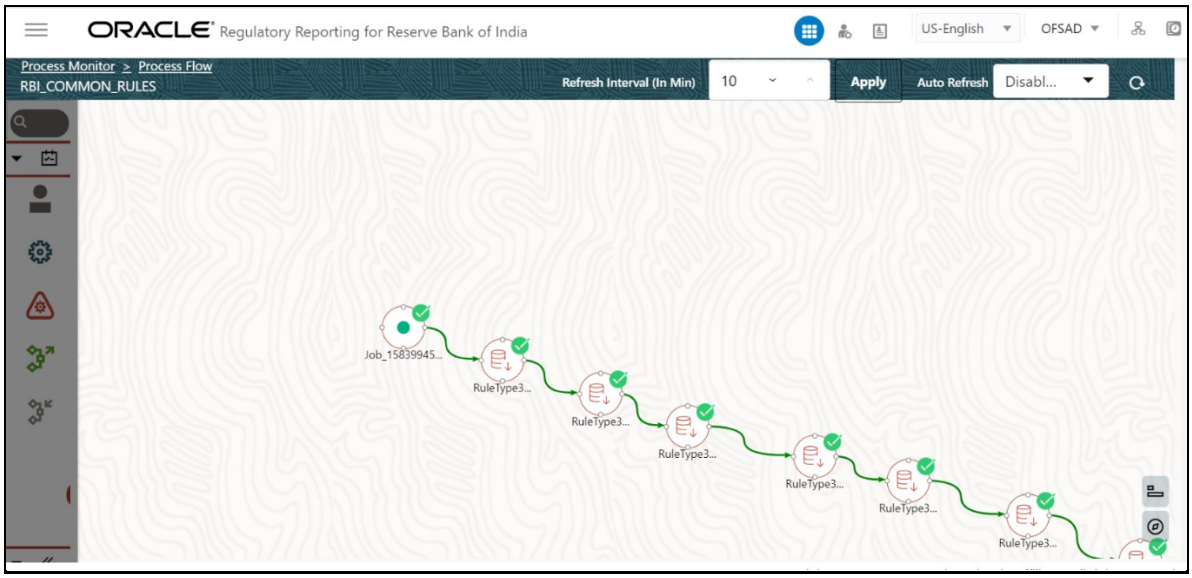
1. After logging into OFSAAI applications page, navigate to **Oracle Financial Services Regulatory Reporting for Reserve Bank of India**, select **Process** and then select **Process Monitor**.
2. In the **Process Monitor** window, click the required process flow ID.
   The process flow diagram is displayed in a new window.

Figure 67: Sub Pipeline



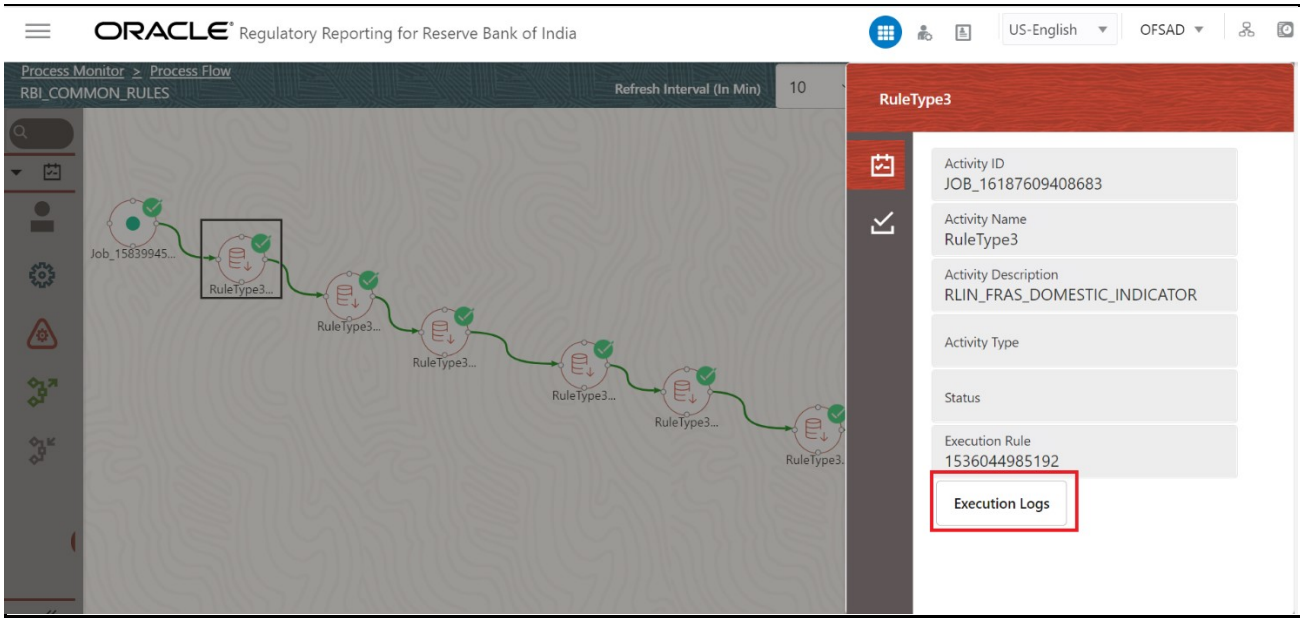
3. Click the required metadata to verify the execution log.

Figure 68: Execution Logs

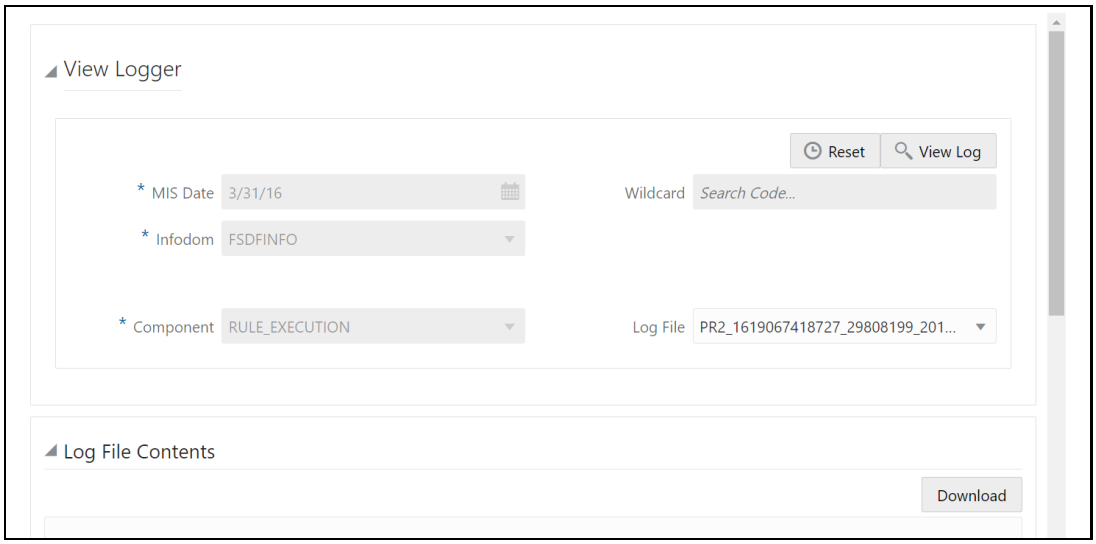


4. Click the required node and the Activity window is displayed.

Figure 69: Activity Logs

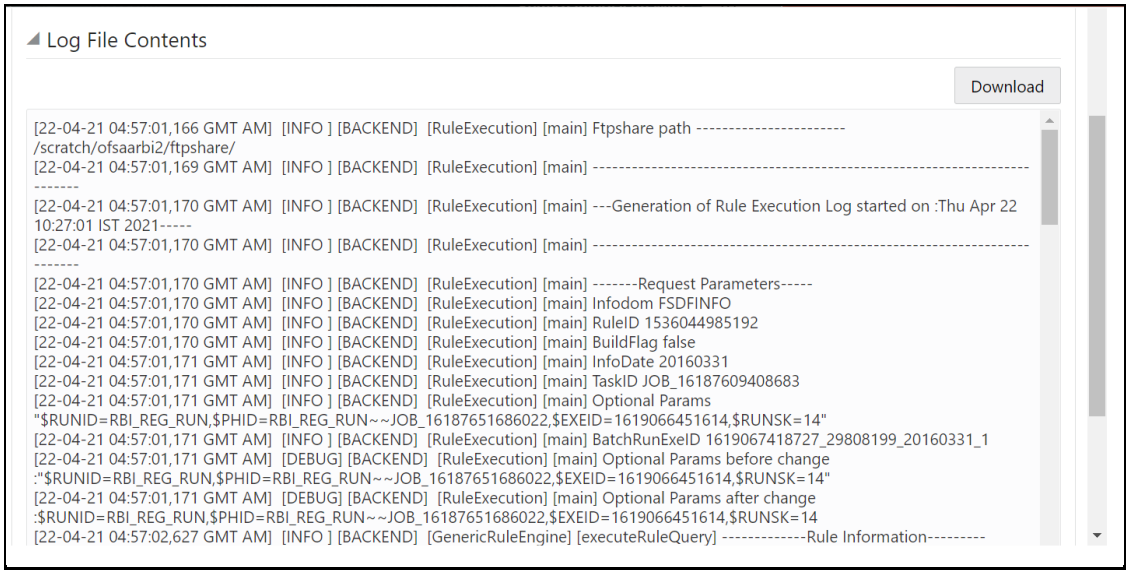


5. Click **Execution Logs**. The Log File details page is displayed.



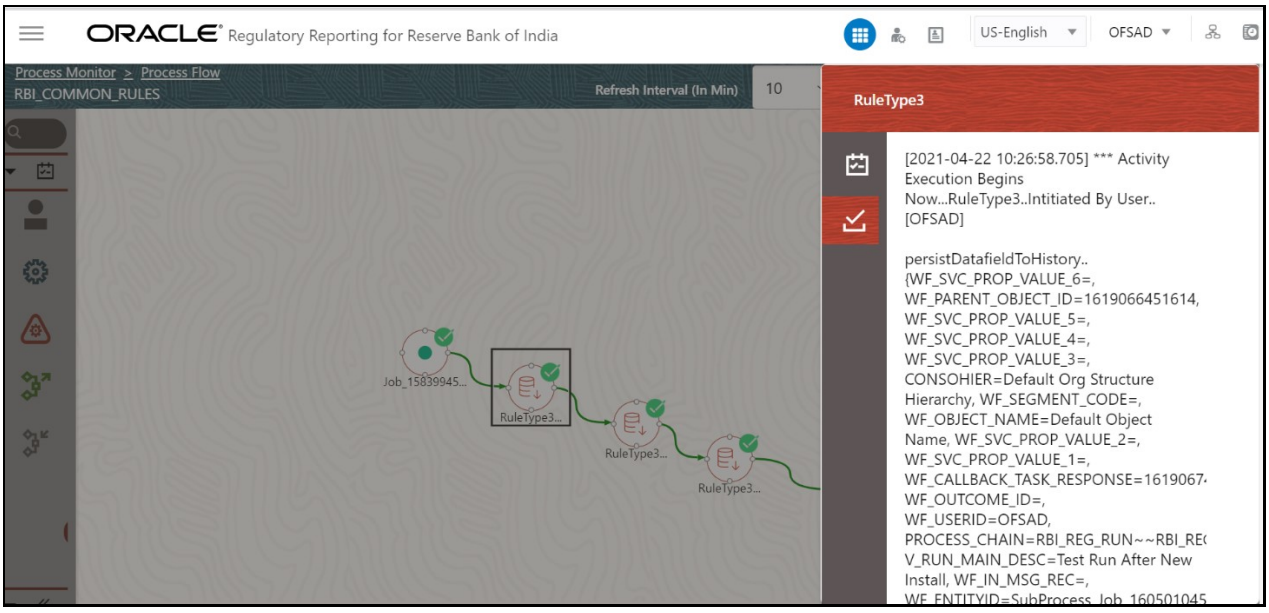
6. Select the **Log File** that you wish to view from the drop-down list and click **View Log**. The Run execution log details are displayed.

Figure 70: View Run Execution Log window



Alternatively, to verify the execution logs, click the icon in the Process flow diagram window. The log details of the Run execution are displayed in a new window.

Figure 71: Run Execution Logs



For detailed information about the complete functioning of the PMF, see the Process Modelling Framework Orchestration Guide.

7 Report Submission

This chapter provides an understanding of the report submission process.

Topics:

- Report Submission: AgileREPORTER to Regulator
- Edit Checks or Validity Check or Quality Checks
- Report Templates to be used in AgileREPORTER
- Supported Report Template Version and Activation Date

7.1 Report Submission: AgileREPORTER to Regulator

After OFSAA has prepared and hands off the data as required to Lombard Risk, the subsequent activities are performed within the AgileREPORTER.

Lombard takes care of the report format as per the regulatory requirement which may be eXtensible Business Reporting Language (XBRL)/ XML/ Excel / Data/ XML and so on.

7.2 Edit Checks or Validity Check or Quality Checks

The AgileREPORTER carries out the report level or submission check comprising Edit Checks or Validity Checks or Quality Checks as provided by the regulator.

Refer to the AgileREPORTER user documentation provided by Lombard Risk, for details of activities within the AgileREPORTER.

7.3 Report Templates to be used in AgileREPORTER

The report templates to be used in AgileREPORTER are listed as follows:

Table 15: Report and their Versions

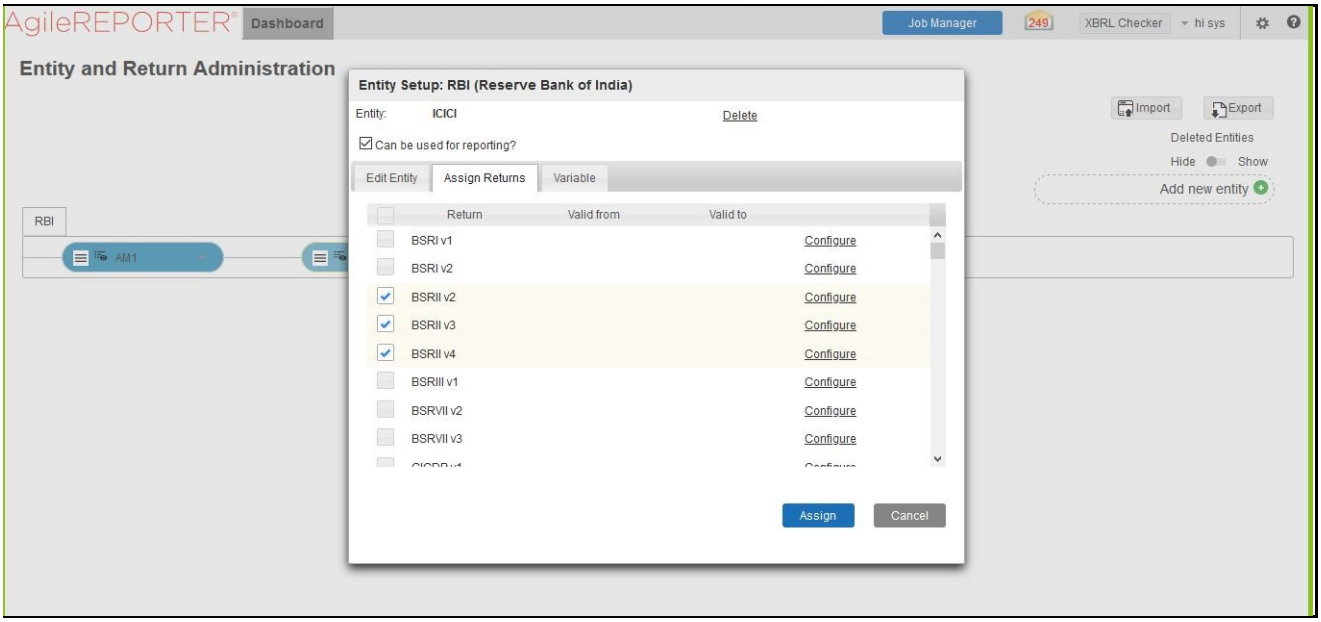
Reports	Versions
SLR	v3
DSBIALE	v8
RBSIXBRL	v6
SAQLO2	v2
RBSTR3	v6
PCSTAT	v2
IRS	v4
FORMAS42	v4

Reports	Versions
LR	v7
CRILC	v9
SLIPPAGE	v2
FORMVIII	v5
LCRBLR	v6
RBSTR1	v3
CUSTAT	v2
LEVRATIO	v4
FORMX	v3
DSB3ROR	v5
RAQ	v7
RCAIII	v8
BSRII	v4
RLC	v4
BSRVII	v2

7.4 Supported Report Template Version and Activation Date

The AgileREPORTER contains the details of the Report template version and the activation date of the same. This can be accessed by selecting the Entity setup option in the Settings menu which enables the user to Add, Modify, and Delete Entities. Click on a created Entity to access report templates according to version and the activation date, and assign the necessary privileges as required.

Figure 72: AgileREPORTER Entity Setup



8 Maintenance

This chapter provides an understanding of the maintenance process for the regulatory templates.

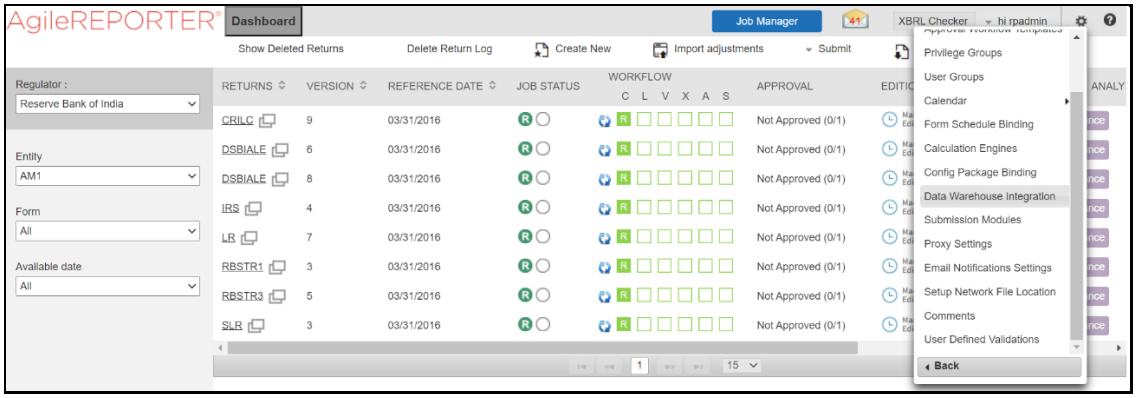
Changes to the regulatory template are one of the most common and continuous activity. The following steps help to assess the impact (You can replace the measure, dimension for existing Dataware housing configuration pack using the below process):

1. Choosing different execution as a final. After report verification, if the requirement is to change the execution, then you must visit Process Execution Summary. This section provides information on the Runs that apply to RBI. The Process Execution Summary is launched once the Runs are executed from the Processing Modelling Framework.
2. Process Execution Summary

This section provides information on the Runs that are applicable for RBI. The Process Execution Summary is launched once the Runs are executed from the Processing Modelling Framework. The following figure displays the Process Execution Summary with the data that is retrieved from the Process Modeler.

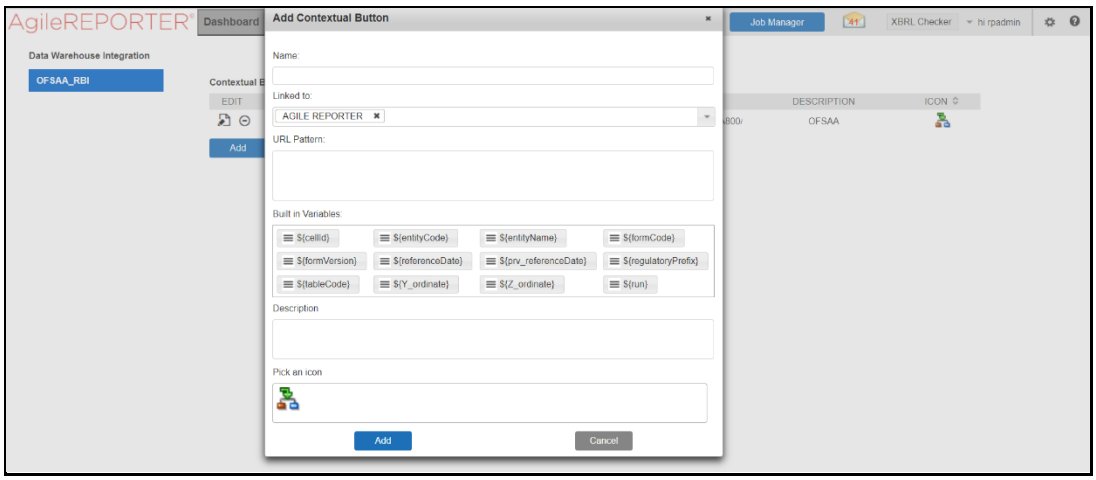
3. Marking Run as Final section. After making these changes you must refresh Derived Entities (**Error! Reference source not found.**). Then AgileREPORTER also must retrieve returns so that revised data is reflected on AgileREPORTER.
4. If Executing Batch to Resave Derived Entities is not working, you can look for Batch Operation Log files. For file path, OFS Analytical Applications Infrastructure Installation and Configuration Guide and search for **ficdb/log**.
5. To update the revised data warehouse configuration pack, perform the following instructions.
   a. Navigate to **Settings,** select **Administration,** and then select **Data Warehouse Integration**.

Figure 73: Data Warehouse Integration



   b. Click **Add** to add a contextual button.

Figure 74: Adding Contextual Button window



c. Enter details of the contextual button.

Name: It is the text that needs to be displayed in the contextual button.

URL Pattern: Replace `<<OFSAA_HOST>>`, `<<OFSAA_PORT>>` and `<<OFSAA_CONTEXT>>` with host, port and web context of the environment where OFSAA is installed. Replace `<<OFSAA_HOST>>` with the name of information domain.

http://<<OFSAA_HOST>>:<<OFSAA_PORT>>/<<OFSAA_CONTEXT>>/OFSAADrilldown/drilldownreport.jsp?cellid=${cellId}&infodom=<<INFODOM>>&legalentity=${entityCode}&run=${run}&date=${referenceDate}

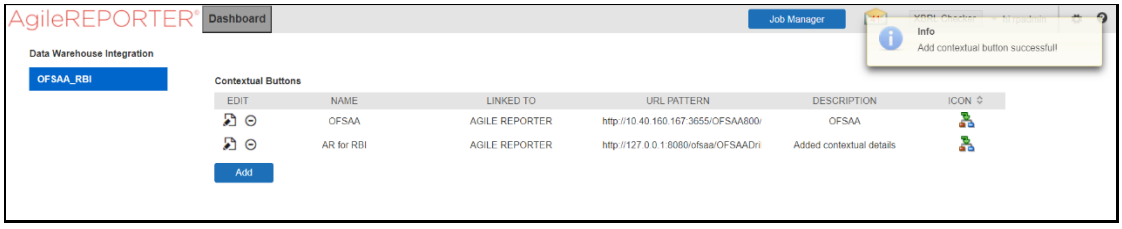
Example:
http://127.0.0.1:8080/ofsaa/OFSAADrilldown/drilldown.jsp?cellid=${cellId}&infodom=OFSFSDFINFO&legalentity=${entityCode}&run=${run}&date=${referenceDate}

i. Use http or https depending on the protocol configured for OFSAA.

ii. Pick an icon.

d. Click **Add** to save the details.

Figure 75: Contextual Button Added page



6. After the data ware configuration pack is updated, the Lombard Configuration pack must reflect this.

> **NOTE** See the AgileREPORTER user documentation for details.

9 Troubleshooting Guidelines

This section covers troubleshooting guidelines for the use of Oracle Financial Services Regulatory Reporting Integration with AgileREPORTER, hereafter called Integration.

Integration users provide the data inputs through the OFSDF where data is loaded, processed and results are made available for reporting purposes. The integration package then makes this data available in required formats to AgileREPORTER. In AgileREPORTER, this data is then aggregated according to the reporting requirements, and end-users view this from AgileREPORTER User Interfaces designed for the Viewing / Editing of this aggregated data.

This section provides detailed guidelines on how to troubleshoot the data issues tracing back the data flow from AgileREPORTER.

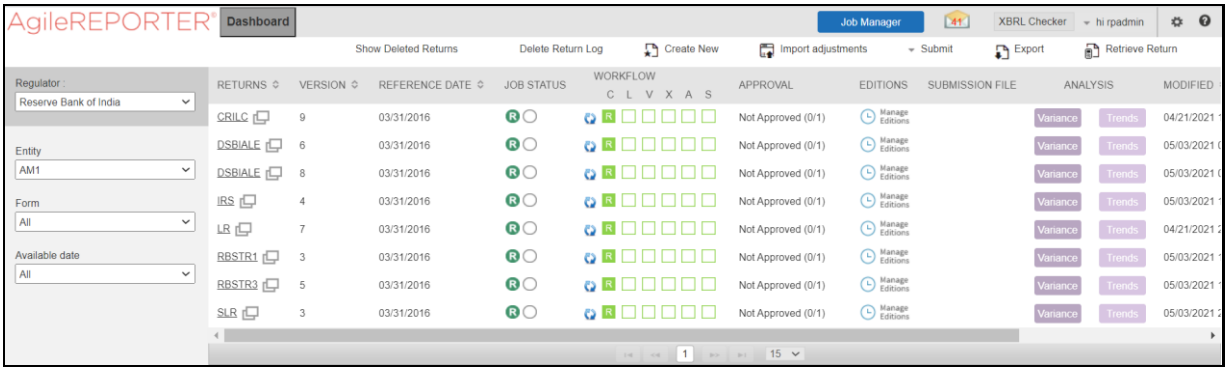
Topics:

- Prerequisites
- Troubleshooting Use Cases

9.1 Prerequisites

It is assumed that you can log in and see the following menus and respective reports in AgileREPORTER.

Figure 76: AgileREPORTER



This means configurations activities for the AgileREPORTER and OFSAA are completed. Set up activities for Entity is done and reports templates, as shown above, are available for viewing. Report Names shown in the figure are for illustration purpose and the actual name depends on the integration pack licensed.

9.2 Troubleshooting Use Cases

Topics:

- Unable to Generate Report
- Data Unavailable in AgileREPORTER
- Data Available in AgileREPORTER but Not as Expected

9.2.1 Unable to Generate Report

If you are unable to generate reports, meaning none of the derived entities referred to in the report has rows for the LE/date combination, then you must refer to Installation Manuals of AgileREPORTER or OFSAA Integration pack for further instructions and steps to be followed.

If the process mentioned in Installation Manual is correctly followed and still report list is not available, then you are requested to log in the bug/service request with Lombard Risk.

9.2.2 Data Unavailable in AgileREPORTER

This is a use case where you are logged in to AgileREPORTER and selected particular regulatory reports for the appropriate entity and As of Date, but unable to generate the report.

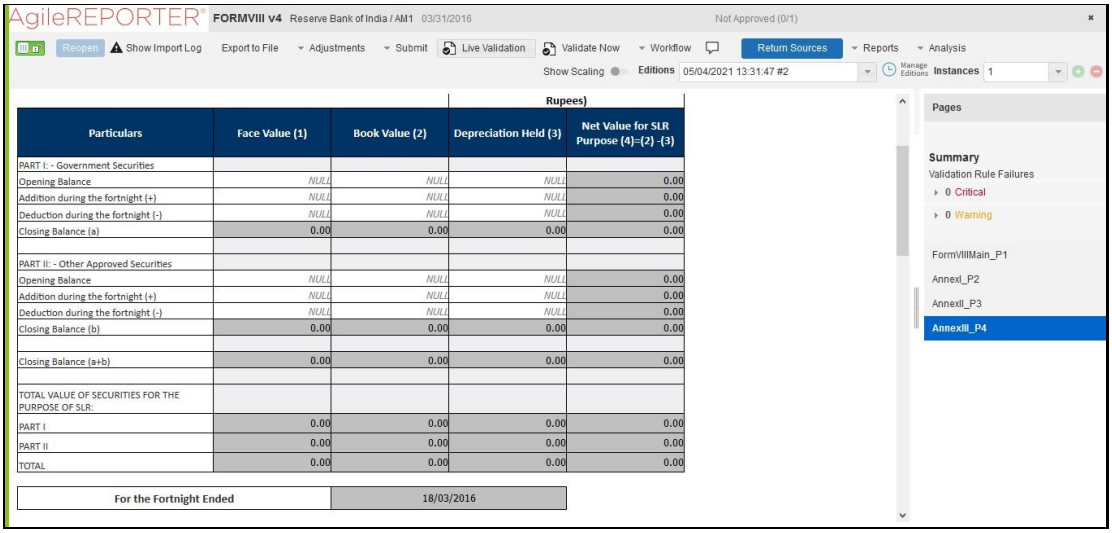
Topics:

- Fetching Null or Zero Values

9.2.2.1 Fetching Null or Zero Values

AgileREPORTER is showing either Zero or Null values. It indicates that Derived Entities has data (however, all required filer conditions are not matching and resulting in zero value output) or Derived Entity does not have data at all.

Figure 77: Fetching Null or Zero Values



You must validate as:

7. Derived Entity has data:
   a. Execute the Derived Entity / Materialized views to check if Derived Entity has data or not.
   b. If Derived Entity / materialized view has data but not showing in AgileREPORTER, you must log a Bug / Service Request with Lombard Risk.
8. Derived Entity does not have data:
   a. Execute the Derived Entity / Materialized views to check if Derived Entity has data or not.

b. If Derived Entity does not have data, then check the Business Metadata excel for a given schedule.

c. Check Worksheet titled 'Derived Entity' in Business Metadata excel. Get all the derived entities for a given schedule.

d. Get dataset for each derived entity.

e. Execute datasets in OFSAA FSDF Atomic Schema to check if data is available for a given dataset joins.

f. If data is available in dataset queries, you must log a Bug / Service Request with AgileREPORTER.

g. If data is not available in the dataset, then check if a selection of Entity, Available Date (as of date) is appropriate and required executions are available. If Entity, As of Date and Run executions are correct and still data is not available, then you must log a Bug / Service Request with *Oracle Support*.

9.2.3 Data Available in AgileREPORTER but Not as Expected

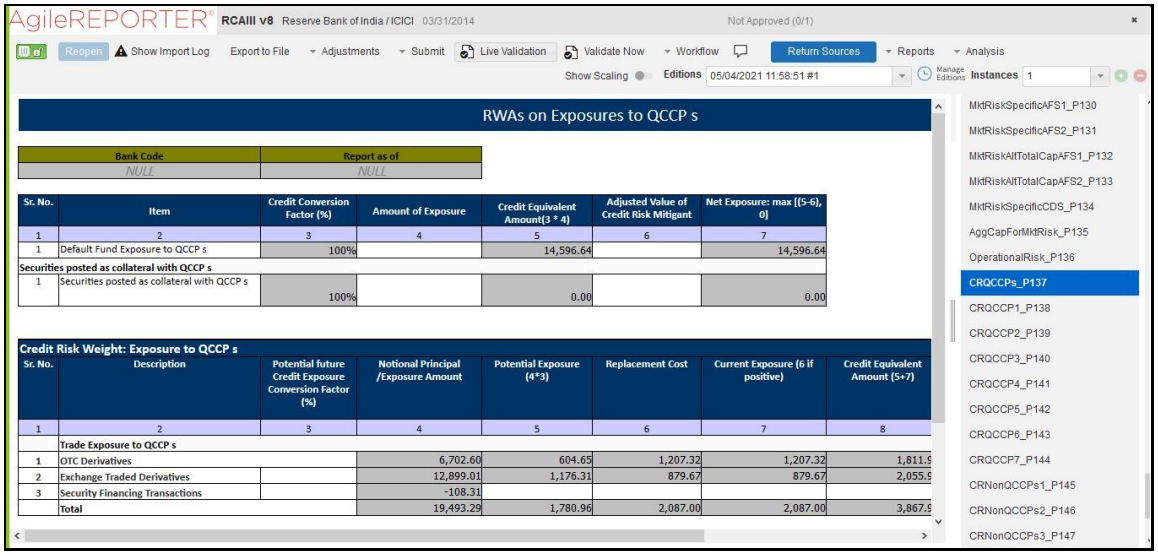
This use case where you can reference data for a required cell of a schedule in AgileREPORTER; however, the value shown differs from the expected value.

Let us take the following example to illustrate the steps to be followed. This refers to RegCapitalBaselIIIC_P2 from the RCAIII v1 reports from RBI. Particular cell referred here is RBIRCA3P002R0110C0030 –

Common Equity Tier 1 capital (CET1): instruments and reserves:

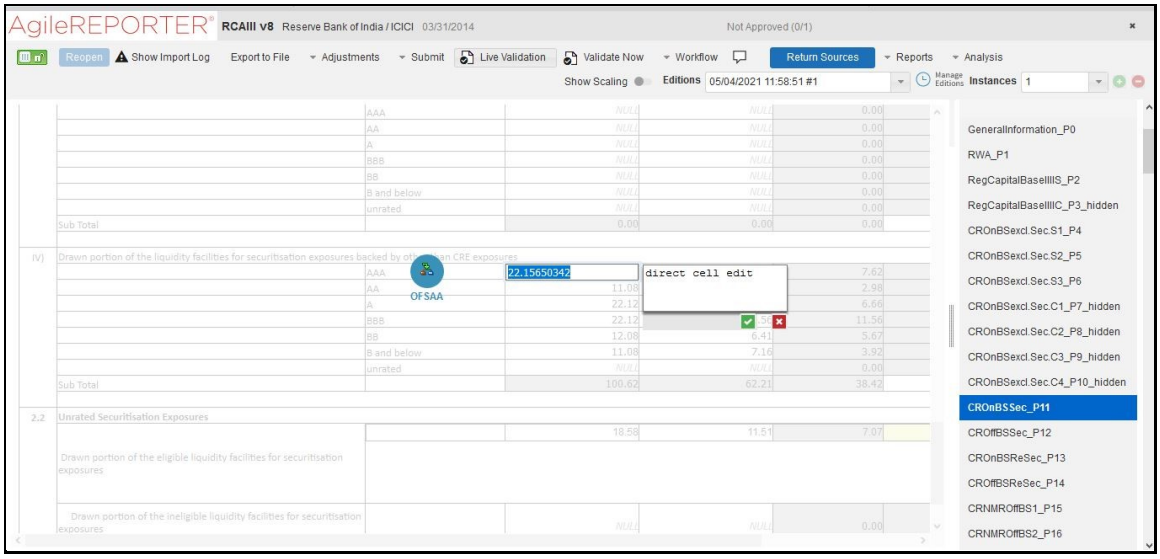
1. **Interest:** free funds from H.O. (for Foreign banks):

Figure 78: RWA_P1 from RCAIII v1 Report



You can drill down for each cell to check the details of data as to what is included in the aggregation. To drill down, click the value of a particular cell and it is shown highlighted. It shows the OFSAA data lineage icon on clicking as shown in ***Error! Reference source not found.***.

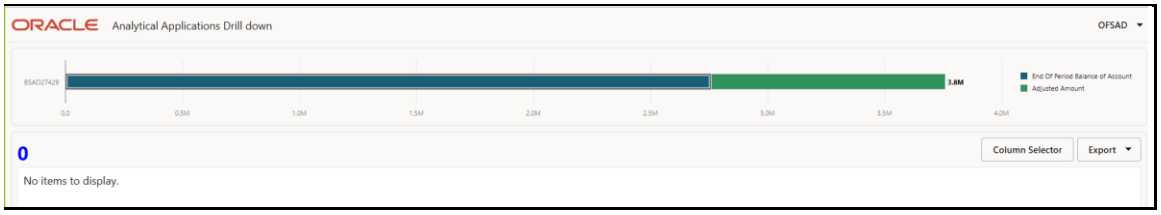
Figure 79: Drill down OFSAA Icon



Make sure that you are logged into to OFSAA infrastructure before clicking the Data Lineage icon.

- If you are not already logged in, clicking here opens the OFSAA infrastructure login window. Log in using appropriate credentials and come back to Report Portal and click the same Data Lineage icon again.
- If you are already logged in to OFSAA Infrastructure, the Data Lineage first page opens as shown in ***Error! Reference source not found.***.

Figure 80: AgileREPORTER Drill-down Page



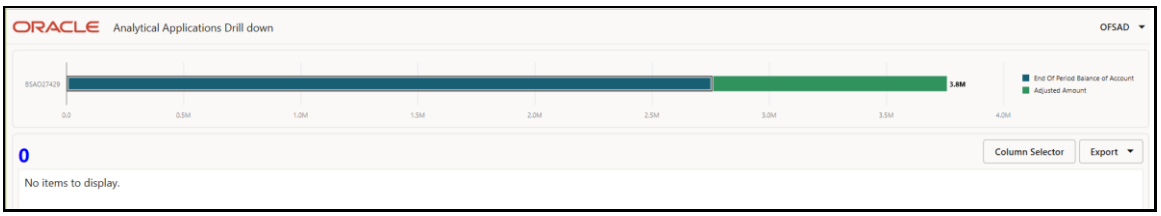
The top block of this screen shows the following information which helps to connect the AgileREPORTER aggregated data to OFSAA references.

2. **Run Execution ID:** This refers to the OFSAA Execution ID chosen for a given report.
3. **Date:** This refers to AS OF DATE selected for a given report.
4. **Legal Entity:** This refers to the OFSAA Legal Entity for whom the report is generated.
5. **Reference Identifier:** This is the cell reference for which data drill down / lineage is being checked.

The second block displays all hierarchies with values used in a given Derived Entity and measures aggregated for a given combination of hierarchy values.

To refer the measure values, scroll rightwards using the horizontal scroll bar at bottom of the second block. On the extreme right, measures are displayed as shown in ***Error! Reference source not found.***:

Figure 81: Measure Values



Only measure values are hyperlinked indicating that they can be drilled down further. On clicking the amount, second-level drill-down shows the lowest granularity data available for a given cell reference.

Topics:

- Using Drill Down with Data Lineage View
- Drill down View is not available

9.2.3.1 Using Drill Down with Data Lineage View

Data Analysts/You can then compare these accounts and their respective monetary amounts with expected values. One can check the following:

1. All required accounts are shown in aggregation
2. Unwanted accounts are not included in the aggregation
3. Measures / Monetary amounts at account granularity are as expected.

Any deviation from expectations can be then checked back for:

1. If the measure is stage pass through, then validate using T2T to verify if stage data is as expected or must be corrected.
2. If the measure is processed, then validate using T2T to verify processing measure is correctly moved to the result area.
3. If reclassified hierarchies are showing unexpected values, check Rules and source hierarchies of rules. This use case needs close verification to ensure that all source hierarchies have required values or Rule sequence which can lead to overwriting the values.
4. If all the source data is as expected and the result area is now showing unexpected output, then log a Bug / Service Request with My Oracle Support.

9.2.3.2 Drill down View is not available

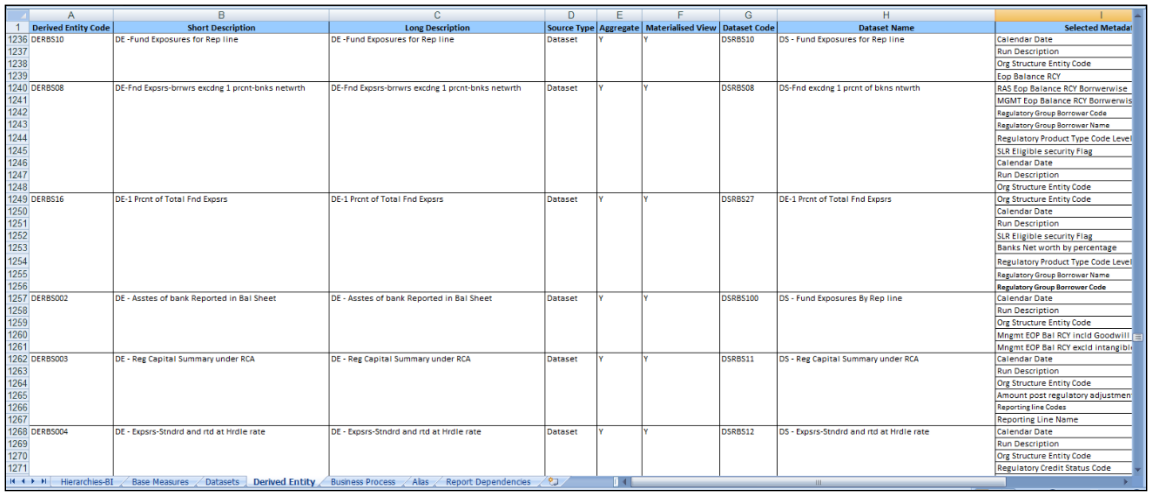
If the second block does not show any data, then data analysts/you are advised to refer to the data set worksheet of Business Metadata.

Figure 82: Drill down Unavailable

There can be a few reasons why the second block does not show the data:

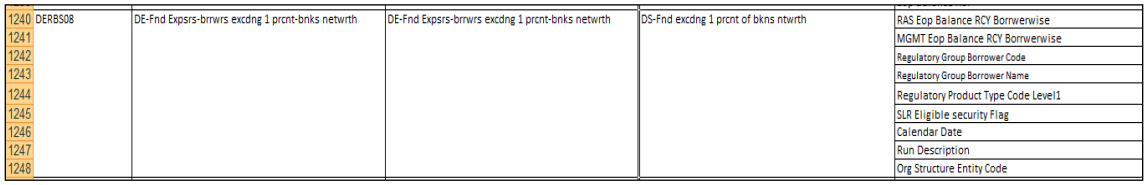
1. Internet connection is timed out or broken down - in this case clicking Data Lineage on AgileREPORTER results in a black second block. To rectify this, re-login to OFSAA infrastructure and AgileREPORTER.
2. Data Lineage view works after Metadata is published using OFSAA Infrastructure. To validate if Metadata is properly published or not.
3. If Metadata is properly published and the second block still does not show the data, then start with Derived Entity code shown at the beginning of the second block. This Derived Entity code is available even if data is not available.
4. Using this Derived Entity code data analysts are advised to refer to OFSAA Business metadata with worksheet name as 'Derived Entity'. Sample Business Metadata excel is shown in ***Error! Reference source not found.***:

Figure 83: Business Metadata - 1



5. By referring to Business Metadata, you can get complete information on Derived Entity such as dataset, Fact tables, measures, hierarchies defined under particular Derived Entity.

Figure 84: Business Metadata - 2



The Dataset ANSI Joins provides valuable information on how various entities are joined/linked together. By executing these Joins, you can confirm if data is available for given filters and conditions. If data is fetched using Dataset Joins and Data Lineage does not show data, you must log a Bug or Service Request with My Oracle Support.

OFSAA Support

Raise a Service Request (SR) in My Oracle Support (MOS) for queries related to the OFSAA applications.

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