Oracle Financial Services Regulatory Reporting For Bank of England

User Guide

Release 8.1.2.0.0

September 2023

ORACLE
Financial Services

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01	September 06, 2023	Created: Draft published
02	September 11, 2023	Final version published

Table of Contents

1.1 About the Guide

Welcome to Release 8.1.2.0.0 of the Oracle Financial Services Regulatory Reporting For Bank of England (OFS REG REP BOE) 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. The topics in this section are organized as follows:

1.2 Scope of the Guide

The objective of this user guide is to provide a comprehensive working knowledge on Oracle Financial Services Regulatory Reporting For Bank of England, Release 8.1.2.0.0. This user guide is intended to help you understand the key features and functionalities of Oracle Financial Services Regulatory Reporting For Bank of England (Oracle Financial Services Data Foundation (OFSDF) Interface with Vermeg for BOE) release 8.1.2.0.0 and details the process flow and methodologies used.

1.3 Intended Audience

This guide is intended for:

Regulatory Reporting Analyst who bears the responsibility to verify and submit the results. He/She is also entrusted to maintain the dimensional values across multiple reporting requirements, maintain results area structure of Oracle Financial Services Data Foundation.

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.

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1.6 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 Bank of England Installation Manual Release 8.1.2.0.0
- Oracle Financial Services Data Foundation User Guide Release 8.1.2.0.0
- Oracle Financial Services Data Foundation Installation Manual Release 8.1.2.0.0
- Oracle Financial Services Analytical Applications Infrastructure User Guide Release 8.1.2.0.0 (present in the OHC documentation libaray)

1.7 How this Guide is Organized?

The Oracle Financial Services Regulatory Reporting For Bank of England User Guide includes the following topics:

- Chapter 1: Introduction
- Chapter 2: Getting Started
- Chapter 3: Regulatory Reporting (REG REP) Solution Data Flow
- Chapter 4: OFSAA Features
- Chapter 5: Executing Run through Run Management
- Chapter 6: Metadata Export Utility
- Chapter 7: Report Submission
- Chapter 8: Maintenance
- Chapter 9: Validation / Edit Checks for Data Schedules
- Chapter 10: Troubleshooting Guidelines

1.8 Conventions Used

Table 1 lists the conventions used in this guide.

Table 1: Conventions Used in this Guide

Convention	Meaning
Italics	Names of books, chapters, and sections as references

Bold	Object of an action (menu names, field names, options, button names) in a step-by-step procedure Commands typed at a prompt User input
`Monospace`	Directories and subdirectories File names and extensions Process names Code sample, including keywords and variables within text

2 Introduction

This chapter provides an understanding of the Oracle Financial Services Regulatory Reporting For Bank of England application and its scope. It includes:

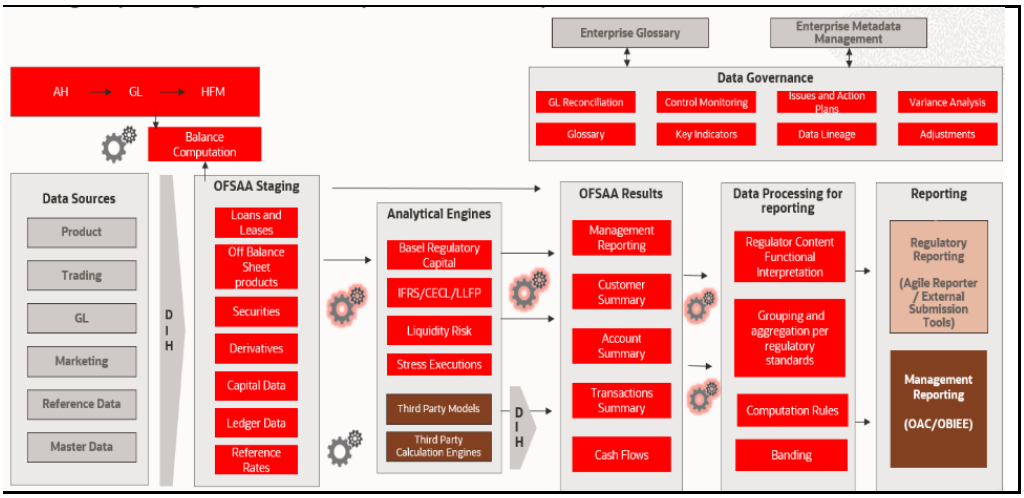
2.1 Overview

Regulatory reporting is the submission of the financial institutions data to regulators. Typically, this data originates from diverse internal systems, while the ultimate submissions are structured and need to be aligned to strict and detailed regulatory requirements. With the increasing complexity of reporting requirements from regulators around the globe, financial institutions are struggling to keep up with the constant pace of change. All Jurisdictions are constantly evolving and strengthening the regulatory reporting requirement and gradually moving to a more detailed and complex reporting for all financial institutions.

The Oracle Financial Services Regulatory Reporting For Bank of England delivers an integrated regulatory reporting solution to solve the biggest challenges banks are facing: quality, quantity and granularity of the data and transparency of the reporting ecosystem. It brings together the industry's best-in-class data foundation, complete transparency and data lineage throughout the application. The 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 solution provides mechanism to integrate the generated results to a third party end mile reporting template solution, thus helping with final submission to the respective regulator. The solution comes with pre-built integration to Vermeg Agile Reporter for end mile reporting, however it does not restrict the customer here. 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

Figure 1: Regulatory Reporting (REG REP) Solution Architecture



This OFSDF provides a landing area for the stage data which then flows to the various analytical engines and then to the results area, thereafter further processing and enrichment is done to make the data eligible for specific regulatory reporting needs, which then can be integrated with any end mile reporting vendor solution for final submission.

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:

- Enterprise Risk Management
- Enterprise Performance Management
- Customer Insight
- Financial Crime and Compliance Management

OFSDF 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.

2.3 Scope

Oracle Financial Services Regulatory Reporting For Bank of England covers the following regulatory reports for specified release as mentioned in the table:

Table 2: Scope

Report	Report Name	Jurisdiction	Released Version
BT	Monthly / quarterly balance sheet information	MFSD	8.1.2.0.0

3 Getting Started

This chapter provides an understanding of the prerequsites, general and data preparation assumptions and logging into the application. It includes:

- Prerequisites
- Assumptions
- Logging in to the OFS REG REP BOE Application
- Organization of the Interface for User Roles
- Metadata Browser

The OFS REG REP BOE application 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 purpose. 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 prerequisites and detailed instructions on installing this Interim Release, see Oracle Financial Services Regulatory Reporting For Bank of England (OFS REG REP BOE) Installation Guide Release 8.1.2.0.0.

3.2 Assumptions

OFS REG REP BOE is a reporting application and it does not perform any risk/stress calculations. Following listed are the assumptions for the application:

Textual and other related portions of reports like person details, contact details, Yes / No choices must be updated on Report Portal directly and FSDF does not have 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.

Validity checks such as edit checks, cross-validation checks and so on prescribed by 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. There are few exceptions like Excess payments scenarios in Loans/cards where Balance loaded can be in Negative Signage. Rules are constructed assuming the negative sign of valuation amounts wherever applicable.

The application populates 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 impact on the overall functioning.

All percentage data are expected in decimal format meaning 9% must be provided as 9 and not 0.09.

For a data provided as of date, such as last day of the quarter of the reporting year: Quarterly and Year to Date (YTD) report for the given date displays same value for those measures which are of as of date in nature. For example, Annual and Quarterly Balance Sheet and BASEL reports generated as of 31-MAR show same values for all measures such as Account Balance.

3.2.1 Assumptions Related to Scoped Reports

Generic assumptions related to the Scoped Reports are as follows:

Domestic Books Consolidation: RRS product expects this be be be handled at the data set level, so the data set with appropriate entity filters gets associated with the reports for required entities' reporting.

Account level data for consolidated entities: At a dataset level, customer expected to provide account level data for only those entities that are consolidated for Reg Reporting. For such entities Dim_Org_Structure.f_regulatory_entity_ind should be Y, although dim_org_structure will hold details of all entities related to reporting entity falling under the same org structure.

Intra Group Party Vs Related Party: Intra Group Party and Related Party are considered same, as only domestic book accounts and these two terms are used inter-changeably in the reporting instructions.

DQ checks: DQ checks for customer country and so on.

Balance Sheet Category: All products available in table dim_product.v_balance_sheet_category must be classified as one of the following categories. Reason behind this is that many reports use Asset/Liability as Hierarchy to report overall Assets/Liabilities.

Table 3: v_balance_sheet_category Classification

v_balance_sheet_category	v_balance_sheet_category_desc
ASSET	Asset
LIABILITY	Liability
OFFBSL	Off Balance Sheet (Contingent) Liability
OFFBSA	Off Balance Sheet (Contingent) Asset
DERV	Derivatives

Foreign Currency Conversion: GBP is the reporting currency used across all reports. All exposures in Foreign currency are converted to GBP based on Spot rate on 'as of date' when data is provided.

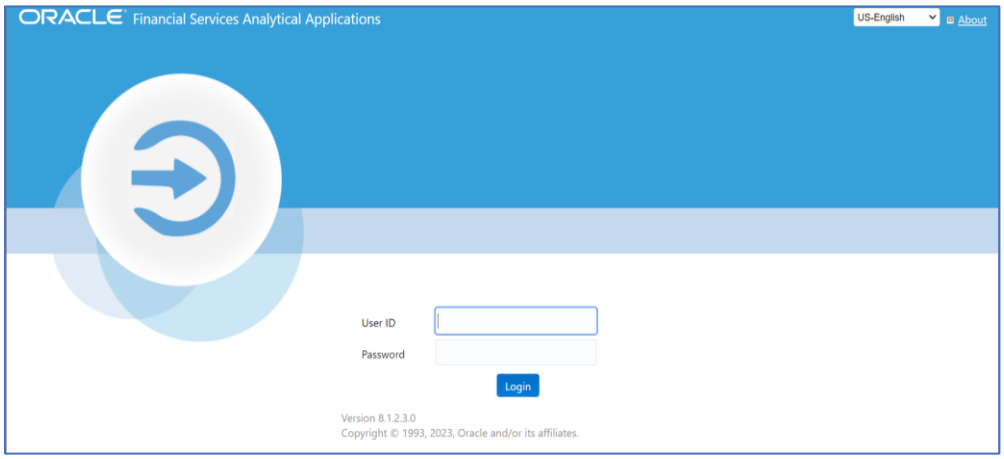
3.3 Logging in to the OFS REG REP BOE Application

After the application is installed and configured, to access the OFS REG REP BOE application you must log into OFSAAI environment using the OFSAAI login page.

To access the OFSAAI application:

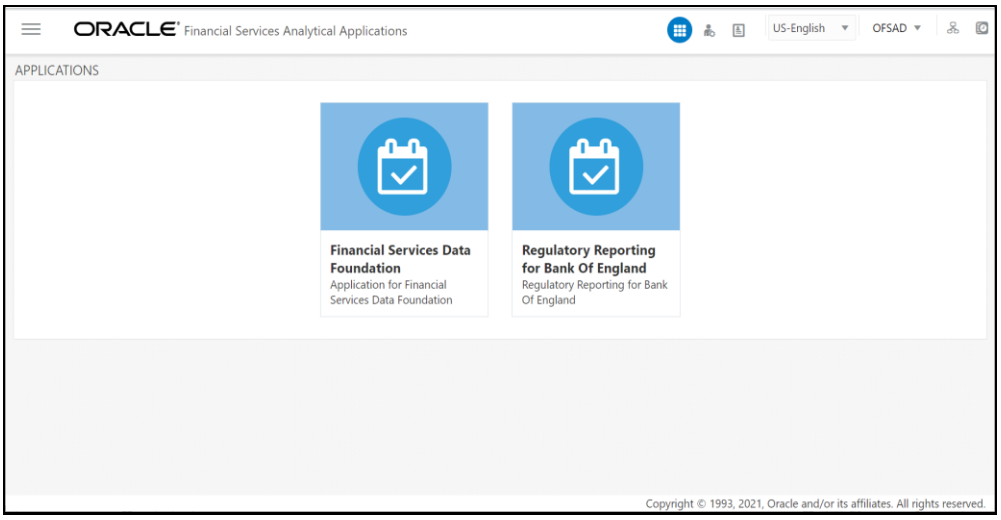
1. Enter the OFSAAI URL in your browser. The OFSAAI login page is displayed.

Figure 2: OFSAAI Log In



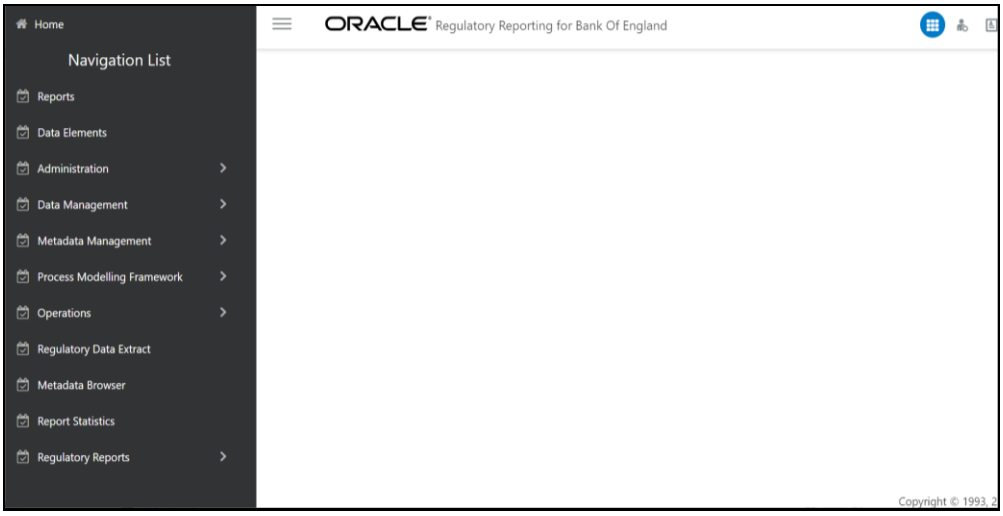
2. Select the desired language from the Language drop-down list.
3. Enter your User ID and Password. When you log into OFSAAI, the first screen is dsplayed. Select Financial Services Data Foundation.

Figure 3: Applications Page



4. The landing page is displayed as follows.

Figure 4: Landing Page



3.4 Organization of Interface for User Roles

This section explains the various features used by a 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.

Data Analysts are expected to perform the following activities:

1. Marking Run as Final
2. Executing Batch to Refresh Derived Entities
3. Drill Down from AgileREPORTER to OFSDF

Reporting 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

3.4.1 Marking Run as Final

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

3.4.2 Executing Batch to Resave Derived Entities

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

1. Navigate to Financial Services Data Foundation > Operations > Batch Execution

2. Select the batch <<INFODOM>>_BOE_<<REPORT NAME>>_RESAVEDE to resave all the DEs used in that <<REPORT NAME>>.
3. Monitor status of the batch using Batch Monitor link.
4. The batches available for this release are:

- <<INFODOM>>_BOE_BT_RESAVEDE

  This batch saves the Derived Entities of ARF7200A report.

- <<INFODOM>>_BOE_ADJUSTMENT_REFRESH

  This batch refreshes the adjustment entries of the BOE reports.

3.5 Metadata Browser

This section helps you to navigate through 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 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 work flow of the application and understand the usage of objects within the application.

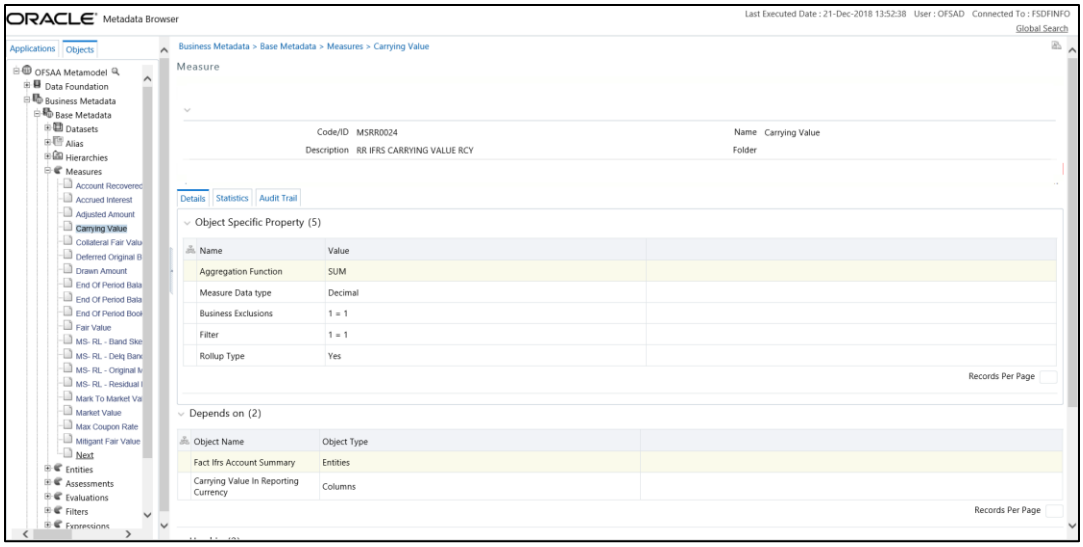
The new visualization of Metadata Browser (MDB) supports Application view and Object view. In Application view, you can browse through the metadata created using the applications hosted in OFSAAI. In object view, you can view the metadata created in OFSAAI.

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 may require looking for metadata used in given schedule or it can be schedules 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.

1. Starting from a common metadata used across applicaiton, you may want to know the list of reports/ derived entities this metadata has used. Let us take an example of measure. To use MDB for metadata wise schedule, for each metadata, identify the schedules in which it is used. Follow these steps to identify the schedules:
   a. To view the measures, navigate to path **Objects** > **OFSAA Metamodel** > **Business Metadata** > **Base Metadata** > **Measures**. The LHS displays the list of measures. For example, Figure 5 refers to Carrying Value.

Figure 5: MDB - Business Metadata - Measure View



You can view the below information in this page:

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

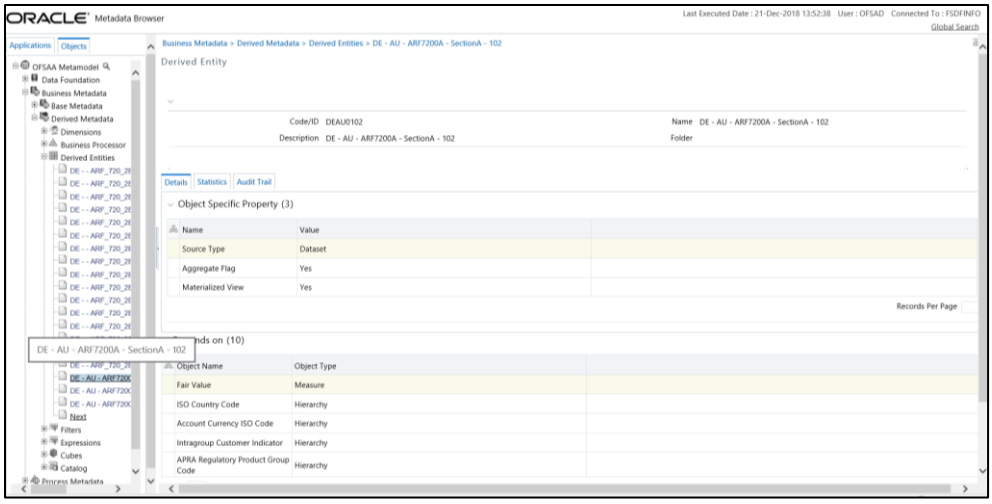
Follow these steps to view the derived entities used in a given schedule:

> **NOTE** The similar steps as follows are applicable for other metadata such as Business Metadata (Hierarchies, Measures, Variables, and so on) and Derived Metadata (Dimensions, Filters, and so on).

b. To view the schedule wise derived entities, navigate to path Objects > OFSAA Data Model > Business Metadata > Derived Metadata > Derived Entities. The LHS displays list of Schedules. For example,

c. displays the derived entities used in AF7200A – Section A - 102.

Figure 6: MDB - Business Metadata - Derived Entity



You can view the following information in this page:

- Object Specific Property: It provides information on properties of derived entities, such as Source Type, Aggregate Flag, and Materialized View.
- Depends on: This section displays all the object names and their types, such as Measure, 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.

4 Regulatory Reporting (REG REP) 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.

It includes:

4.1 Data Preparation

This section explains the input data preparation from OFSAA. It includes:

4.1.1 Assumptions for Data Preparation

1. REG REP is a reporting solution, which uses data from underlying fact tables directly for reporting. You are expected to prepare the load for the required data in 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 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 may can 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, Budged, Forecast, and so on), all historical data is expected to be tagged as actual for the purpose of reporting 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.

4.1.2 BOE RUN CHART

Oracle Financial Services Regulatory Reporting For Bank of England Pack provides the BOE Run Chart listing the tasks required for population of data for BOE 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
- BOE Specific Data Population and Transformation
- Derived Entity Refresh
- Download the OFS_REG_REP_BOE_8.1.2.0.0 Run Chart from the MOS.

4.1.3 Reclassification of Regulatory Dimensions

This section provides information about Regulatory Dimension Tables in the Regulatory Reporting for BANK OF ENGLAND (OFS REG REP BOE) application and step-by-step instructions to use this section.

This section includes the following topics:

- Overview of Reclassification of Regulatory Dimensions
- Overview of Reclassification of Regulatory Dimensions Population
- Dimension Data Expectations through SCD
- Overview of Mappers for Reclassification of Regulatory Dimensions
- Maintenance of Mapper for Reclassification of Regulatory Dimensions
- Loading Mapper Maintenance through Backend
- Usage of Mapper Tables in Data Flow and Reports
- Regulatory data classification after transformation

4.1.3.1 Overview of Reclassification of Regulatory Dimensions

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

4.1.3.2 Dimension Data Expectations through SCD

By default, all regulatory 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.

4.1.3.3 Overview of Mappers for Reclassification of Regulatory Dimensions

These are out of the box mappers that are available in Oracle Financial Services Data Foundation (OFSDF) for the regulatory dimension reclassifications:

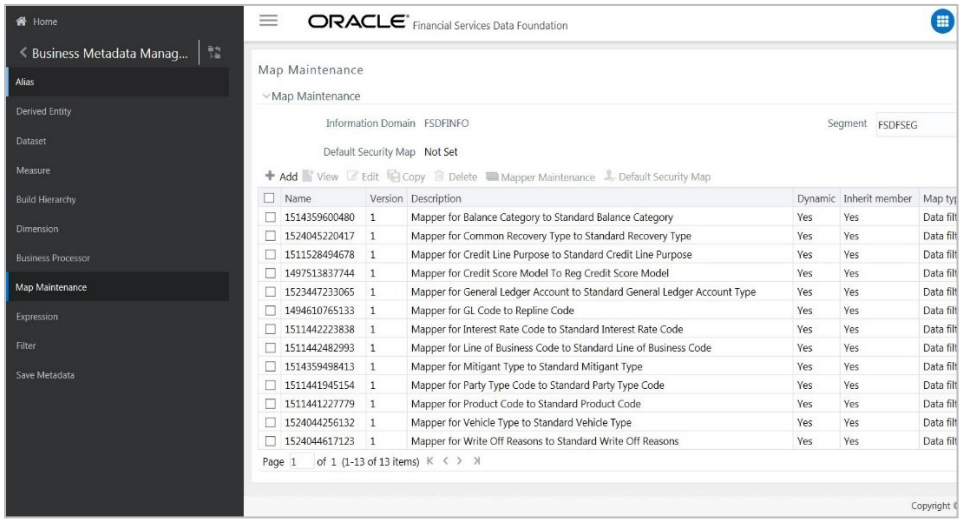
- MAP_GL_CODE_REP_LINE: Mapper for GL Code to Repline Code

4.1.3.4 Maintenance of Mapper for Reclassification of Regulatory Dimensions

Mapper can be maintained under OFSAAI.

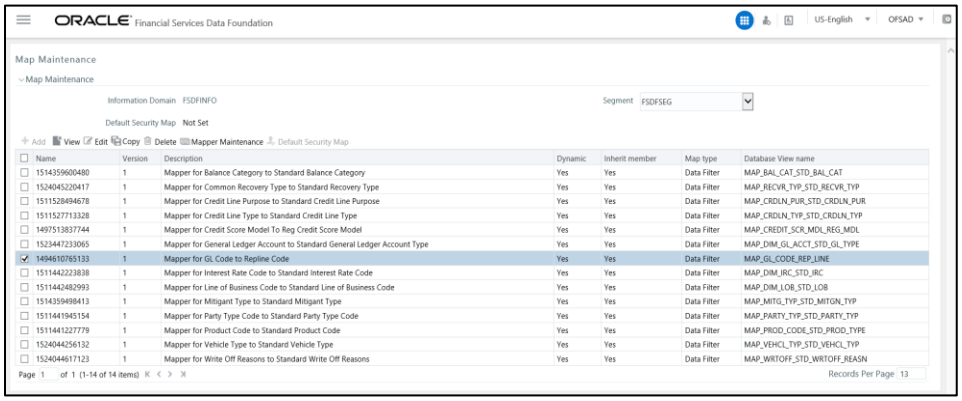
1. Navigate to OFSAAI > Financial Services Data Foundation > Unified Analytical Metadata > Business Metadata Management > Map Maintenance.

Figure 7: Map Maintenance Page



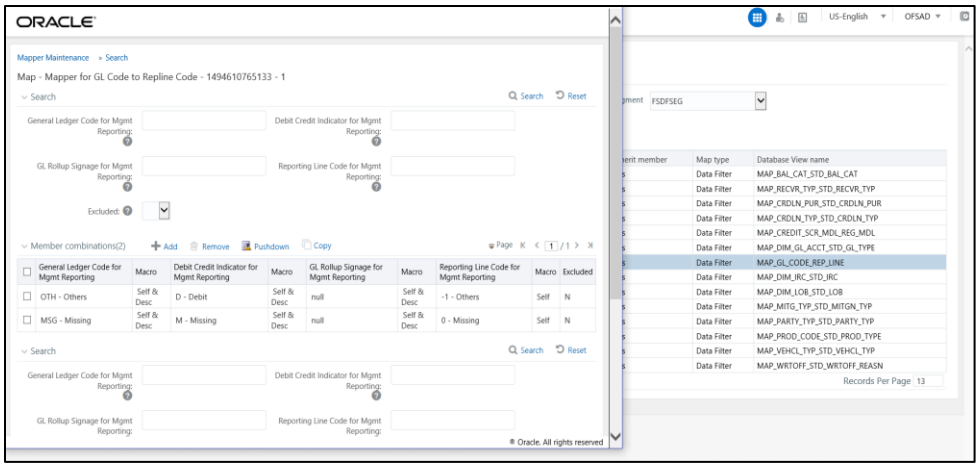
2. For illustration, select Mapper for GL Code to Repline Code. Select **Mapper Maintenance**.

Figure 8: Mapper Maintenance



3. OFS REG REP BOE maps OTH and MSG out-of-the-box for this mapper. The remaining mappings can be maintained by the user according to user specific values.

Figure 9: Mapping Values



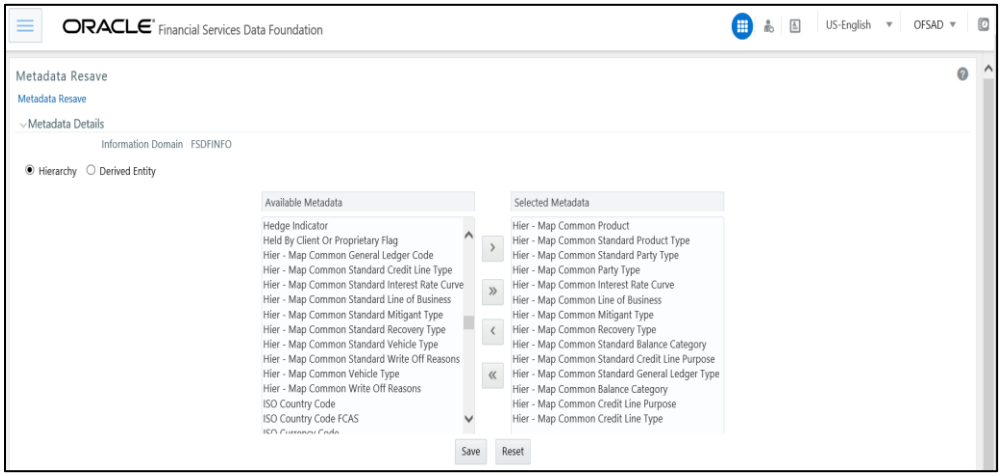
Prerequisites for Mapper Maintenance

1. Navigate to OFSAAI > Financial Services Data Foundation > Unified Analytical Metadata > Business Metadata Management > Save Metadata. Load all the required user specific dimensions using SCD.
2. 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 10: Metadata Resave



Possible Mapping Combinations

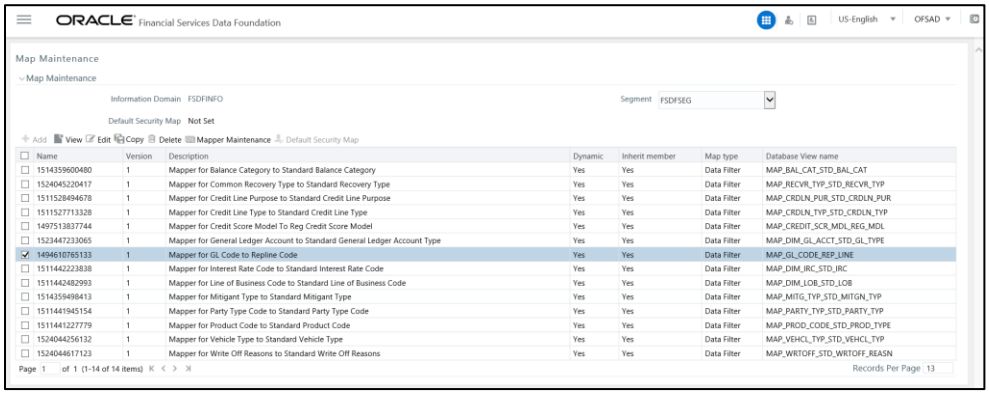
One Standard Dimension table in source can be mapped only to one Standard Dimension table. One to Many or Many to Many mapping leads to error in T2T as the records are duplicated. From the illustration, the possible combinations for GL Code to Repline Code mapping are One to One and Many to One mappings.

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

To conduct One to One or Many to One mapping:

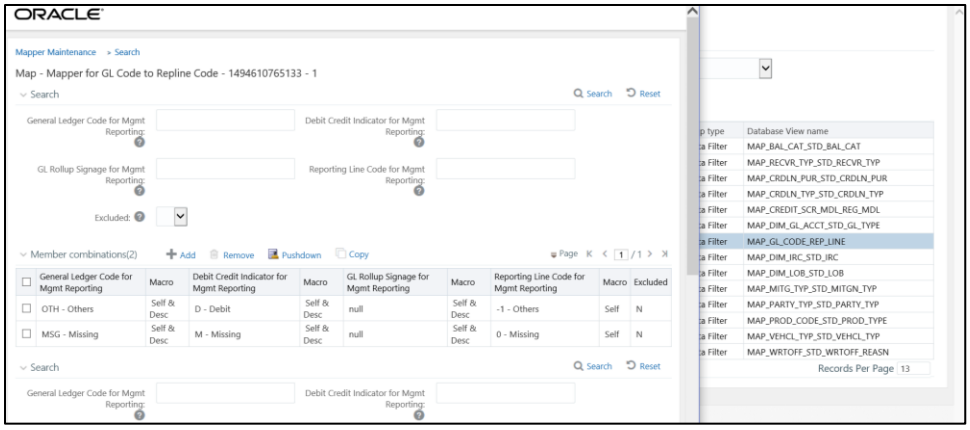
1. Navigate to OFSAAI > Financial Services Data Foundation > Unified Analytical Metadata > Business Metadata Management > Map Maintenance.

Figure 11: Map Maintenance



2. Select an existing map. For illustration, Mapper for GL Code to Repline Code value is selected. Select the **Mapper Maintenance** icon.
3. The **Mapper Maintenance** window opens (in this illustration, the Map - Mapper for GL Code to Repline Code window opens). To conduct One to One or Many to One mapping, in the **Member Combinations** section, click **Add**.

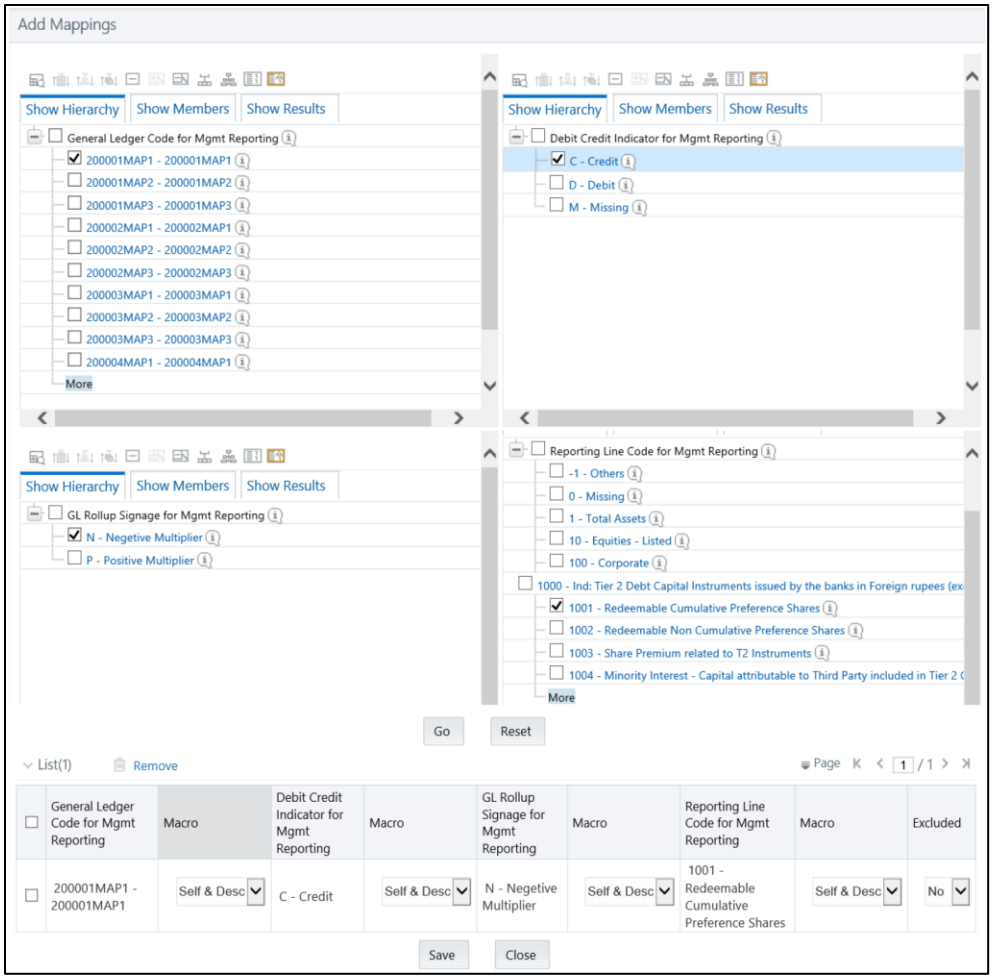
Figure 12: Mapper Combinations



4. The **Add Mappings** pop-up window opens. In this illustration:
5. To map One to One: select one value each in General Ledger Code for Mgmt Reporting data model, Debit Credit Indicator for Mgmt Reporting data model, GL Rollup Signage for Mgmt Reporting data model, and one value in Reporting Line Code for Mgmt Reporting data model, and click **Go**. Repeat this step for each One to One data model mapping, and then click **Save**.

   In this illustration, 200001MAP1 - 200001MAP1 is mapped to C – Credit, N – Negative Multiplier, and 1001 - Redeemable Cumulative Preference Shares.

Figure 13: General Ledger Code



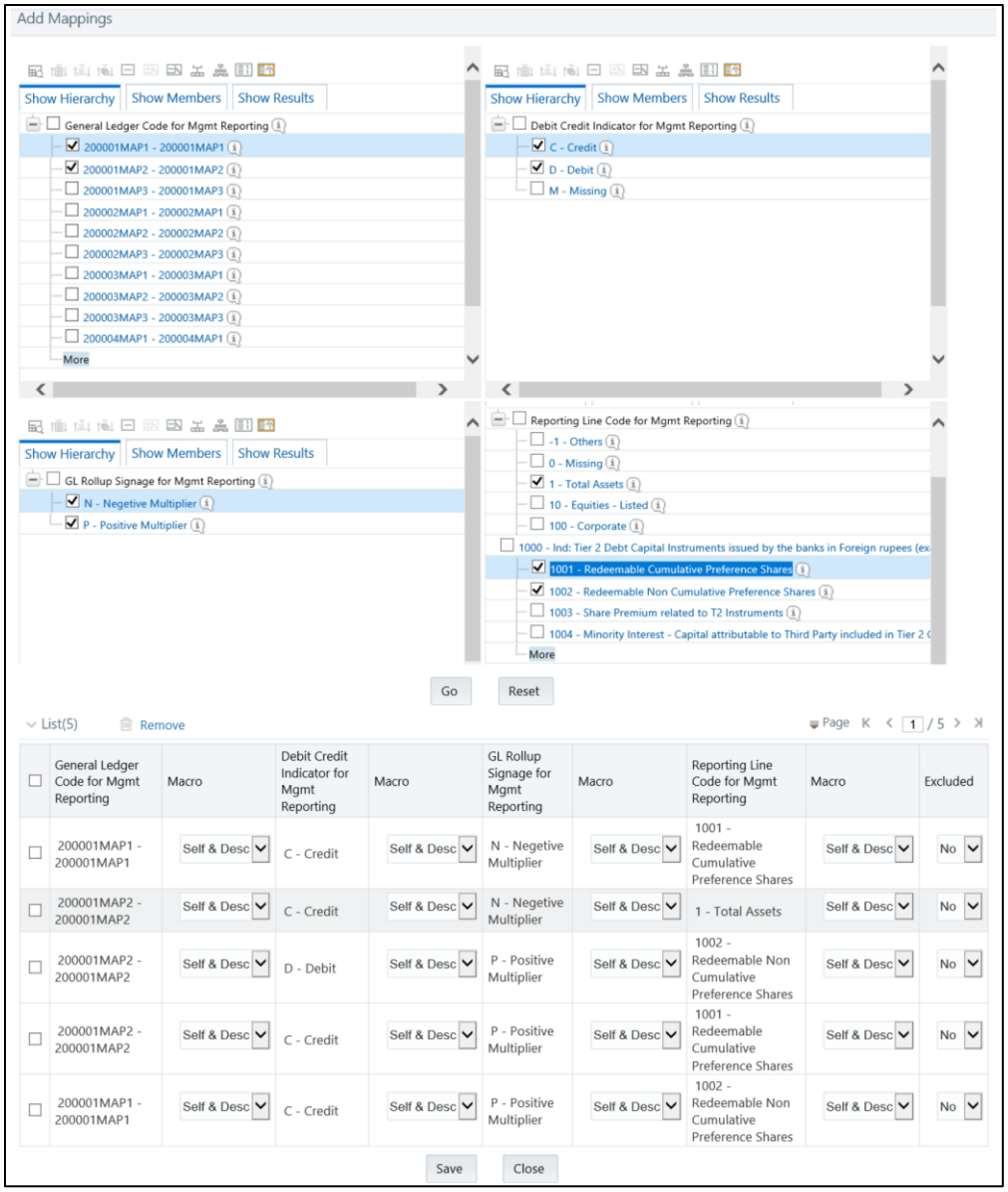
- To map Many to One: select more than one value each in General Ledger Code for Mgmt Reporting data model, one or more value in Debit Credit Indicator for Mgmt Reporting data model, GL Rollup Signage for Mgmt Reporting data model, Reporting Line Code for Mgmt Reporting data model, and click **Go**. Repeat this step for each Many to One data model mapping, and then click **Save**.

In this illustration:

200001MAP1 - 200001MAP1 is mapped to C – Credit and D – Debit, N – Negetive Multiplier and P – Positive Multiplier, 1 – Total Assets, and 1001 - Redeemable Cumulative Preference Shares and 1002 - Redeemable Non Cumulative Preference Shares.

200001MAP2 - 200001MAP2 is mapped to C – Credit and D – Debit, N – Negetive Multiplier and P – Positive Multiplier, 1 – Total Assets, and 1001 - Redeemable Cumulative Preference Shares and 1002 - Redeemable Non Cumulative Preference Shares.

Figure 14: Reporting Line Code



6. An acknowledgement is displayed: Confirm Save? To confirm saving data, click **Yes**. In the **Mapper Maintenance** window, under the **Mapped combinations** and the **Mapped members** sections, you can see the newly selected mapping.

4.1.3.5 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.

The following mapper physical table is required.

Table 4: Mapper Physical Table

PHYSICAL TABLE	V_MAP_ID
MAP_GL_CODE_REP_LINE	1494610765133

4.1.3.6 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 BOE Data Flows (T2Ts) make use of this information to populate the Standard Dimension Surrogate Keys of Results area tables.

4.1.3.7 Reclassified to Regulatory Classifications

After transformation, the regulatory data is reclassified as follows.

Table 5: Data Reclassification Example 1

Source	Attribute	Interim Target	Target
DIM PRODUCT	Withdrawable Reserve	DIM STANDARD PRODUCT	DIM REG PRODUCT
Checking Accounts	= N	CASA	Current Accounts

Table 6: Data Reclassification Example 2

FCT REG ACCOUNT SUMMARY			
Account Number	REG PROD Classification	Remaining Maturity Band	Delinquency Band
1	OTHER TERM LOAN	1	3

The sample reclassifications performed to transform the existing hierarchies to regulatory specific hierarchies are as follows:

- Regulatory Product Classification
- Regulatory Instrument Classification
- Trading Account Book Type Classification
    - The additional transformations that are performed are:
- Remaining Time to Maturity Band
- Regulatory Delinquency Band
    - Within reclassification rules, few rules where the source is customer-specific values. In such cases, these rules must be validated and updated as required by you

because the ready-to-use rule can differ from what you have. Such rules are very few and restricted to the following:

7. Standard Product Type Reclassification
8. Standard Party Type Reclassification
9. Standard Mitigant Type Reclassification
10. Regulatory Industry Reclassification
11. Regulatory Credit Status Reclassification
12. Regulatory Loan Purpose Reclassification

Table 7: FINEREP and COREP Reclassification Rules

Sl. No.	Rule Name	Rule Type	Source Table	Source Column	Target Table	Target Column
1	Standard Product Type Reclass – DIM_PRODUCT_TYPE to DIM_STANDARD_PRODUCT_TYPE	CUSTOM	FCT_REG_ACCOUNT_SUMMARY	N_PROD_TYPE_SKEY	FCT_REG_ACCOUNT_SUMMARY	N_STANDARD_PRODUCT_TYPE_SKEY
2	Standard Party type Reclass DIM_PARTY_TYPE to DIM_STANDARD_PARTY_TYPE	CUSTOM	FCT_REG_ACCOUNT_SUMMARY	N_PARTY_TYPE_SKEY	FCT_REG_ACCOUNT_SUMMARY	N_STANDARD_PARTY_TYPE_SKEY
3	Standard Mitigant Reclass – DIM_MITIGANT_TYPE to DIM_STD_MITIGANT_TYPE	CUSTOM	FCT_MITIGANTS	N_MITIGANT_TYPE_SKEY	FCT_MITIGANTS	N_STD_MITIGANT_ TYPE_SKEY
4	Encumbrance Source – DIM_REG_ENCUMB_SOURCES – DIM_ENCUMBRANCE_SOURCES	CUSTOM	FCT_COMMON_ACCOUNT_SUMMARY	N_ENCUMBRANCE_SOURCE_SKEY	FCT_REG_ACCOUNT_SUMMARY	N_REG_ENCUMB_SRC_SKEY

5	Issuer Type – DIM_ISSUER_TYPE to DIM_STANDARD_PARTY_TYPE	CUSTOM	FCT_COMMON_ACCOUNT_SUMMARY	N_ISSUER_TYPE_SKEY	FCT_COMMON_ACCOUNT_SUMMARY	N_STANDARD_ISSUER_TYPE_SKEY
6	Valuation Method - DIM_VALUATION_METHOD to DIM_REG_VALUATION_METHOD	CUSTOM	FCT_FIXED_ASSETS	N_VALUATION_METHOD_SKEY	FCT_REG_FIXED_ASSETS	N_REG_VALUATION_METHOD_SKEY
7	Fixed Asset Code - DIM_FIXED_ASSETS to DIM_REG_FIXED_ASSETS	CUSTOM	FCT_FIXED_ASSETS	N_FIXED_ASSET_SKEY	FCT_REG_FIXED_ASSETS	N_REG_FIXED_ASSET_SKEY
8	Hedge Type – DIM_HEDGE_TYPE to DIM_REG_HEDGE_TYPE	CUSTOM	FCT_COMMON_ACCOUNT_SUMMARY	N_HEDGE_TYPE_SKEY	FCT_REG_HEDGE_SUMMARY	N_REG_HEDGE_TYPE_SKEY
9	Industry Type – DIM_REG_INDUSTRY - DIM_INDUSTRY	CUSTOM	FCT_COMMON_ACCOUNT_SUMMARY	N_D_CUST_INDUSTRY_SKEY	FCT_REG_ACCOUNT_SUMMARY	N_CUST_REG_INDUSTRY_SKEY
10	Party Relationship Type – DIM_PARTY_RELATIONSHIP_TYPE to DIM_REG_PARTY_RELATIONSHIP_TYPE	CUSTOM	FCT_ENTITY_PARENT_INFO	N_RELATIONSHIP_TYPE_SKEY	FCT_ PARTY _ PARTY_RELATIONSHIP	N_REG_RELATIONSHIP_TYPE_SKEY
11	Consolidation Approach – DIM_CONSOLIDATION_APPROACH to	CUSTOM	FCT_LEGAL_ENTITY_CNSLDTN_MAP	N_CONSL_APPROACH_SKEY	FCT_LEGAL_ENTITY_CNSLDTN_MAP	N_REG_CONSL_APPROACH_SKEY

	DIM__REG_CONSOLIDATION_APPROACH					
12	Accounting Classification – DIM_REG_ACCT_CLASSIFICATION - DIM_HOLDING_TYPE	OUT-OF-BOX	—	—	—	—
13	Default Status – DIM_REG_DEFAULT_STATUS - FCT_PARTY_DETAILS and FCT_COMMON_ACCOUNT_SUMMARY	OUT-OF-BOX	—	—	—	—
14	Regulatory Product type – FCT_REG_ACCOUNT_SUMMARY – DIM_STANDARD_PRODUCT_TYPE	OUT-OF-BOX	—	—	—	—
15	Credit Status – DIM_REG_CREDIT_STATUS - DIM_CREDIT_STATUS	OUT-OF-BOX	—	—	—	—
16	Mitigant Type – DIM_REG_MITIGANT_TYPE - DIM_STD_MITIGANT_TYPE	OUT-OF-BOX	—	—	—	—

17	GL Account to Reporting Line Mapper Maintenance	OUT-OF-BOX	—	—	—	—
18	Instrument Standard Party Type DIM_PARTY_TYPE to DIM_STANDARD_PARTY_TYPE	Custom	DIM_INSTRUMENT_CONTRACT	v_issuer_code	Fct_Reg_Issued_Instr_Positions	n_standard_party_type_skey
19	Immediate Obligor FCT_REG_ACCOUNT_SIMMARY.N_IMMEDIATE_OBLIGOR_SKEY	OUT-OF-BOX	—	—	—	—
20	Immediate Obligor Country FCT_REG_CAP_ACCT_ASSET_CLASS.N_CP_COUNTRY_SKEY	OUT-OF-BOX	—	—	—	—
21	Ultimate Obligor Country FCT_REG_CAP_ACCT_ASSET_CLASS.N_ULTIMAT_PARENT_COUNTRY_SKEY	OUT-OF-BOX	—	—	—	—
22	Securities Guarantor Reclass – DIM_REG_PARTY_TYPE.V_REG_PARTY_CD	CUSTOM	FCT_COMMON_ACCOUNT_SUMMARY	N_SECURITIES_GUARANTOR_SKEY	FCT_REG_ACCOUNT_SUMMARY	N_REG_SEC_GUARANTOR_TYPE_SKEY

23	Constituted Form Reclass – DIM_REG_CONSTITUTED_FORM.V_REG_CONSTITUTED_FORM_CODE	CUSTOM	FCT_LEGAL_ENTITY_DETAILS	N_CONSTITUED_FORM_SKEY	FCT_LEGAL_ENTITY_DETAILS	N_REG_CONSTITUTED_FORM_SKEY
24	Entity Type Reclass – DIM_REG_ENTITY_TYPE.V_REG_ENTITY_TYPE_CODE	CUSTOM	FCT_LEGAL_ENTITY_DETAILS	N_ENTITY_TYPE_SKEY	FCT_LEGAL_ENTITY_DETAILS	N_REG_ENTITY_TYPE_SKEY
25	Standard Issuer Type Reclass – DIM_STANDARD_PARTY_TYPE.V_STANDARD_PARTY_TYPE_CODE	CUSTOM	DIM_INSTRUMENT_CONTRACT	V_ISSUER_CODE	FCT_REG_ISSUED_INSTR_POSITIONS	N_STANDARD_PARTY_TYPE_SKEY
26	Reg Portfolio Classification DIM_REG_FIN_PORTFOLIO_TYPE.v_reg_fin_portfolio_type_cd	OUT-OF-BOX	—	—	—	—

Table 8: BOE Reclassification Rules

Sl.No	Rule Name	Rule Type	Source Table	Source Column	Target Table	Target Column
1	Standard Product Type Reclass – DIM_PRODUCT_TYPE to DIM_STANDARD_PRODUCT_TYPE	CUSTOM	FCT_REG_ACCOUNT_SUMMARY	N_PROD_TYPE_SKEY	FCT_REG_ACCOUNT_SUMMARY	N_STANDARD_PRODUCT_TYPE_SKEY

2	Regulatory Product Category Classification Rule - EU - DIM_STANDARD_PRODUCT_TYPE to DIM_REG_PRODUCT_CATEGORY	OUT-OF-BOX	FCT_REG_ACCOUNT_SUMMARY	N_STANDARD_PRODUCT_TYPE_SKEY	FCT_REG_ACCOUNT_SUMMARY	N_REG_PROD_CAT_SKEY
3	Standard Party Reclass – DIM_PARTY_TYPE to DIM_STANDARD_PARTY_TYPE	CUSTOM	FCT_REG_ACCOUNT_SUMMARY	N_PARTY_TYPE_SKEY	FCT_REG_ACCOUNT_SUMMARY	N_STANDARD_PARTY_TYPE_SKEY
4	Standard Party Reclass for Mitigant Issuer– DIM_PARTY_TYPE to DIM_STANDARD_PARTY_TYPE	CUSTOM	FCT_MITIGANTS	N_ISSUER_TYPE_SKEY	FCT_MITIGANTS	N_STANDARD_ISSUER_TYPE_SKEY
5	Standard Party Reclass for Mitigant Provider– DIM_PARTY_TYPE to DIM_STANDARD_PARTY_TYPE	CUSTOM	FCT_MITIGANTS	N_MITIGANT_PROVIDER_SKEY	FCT_MITIGANTS	N_STD_MITI_PROVIDER_TYPE_SKEY
5	Standard Mitigant Reclass – DIM_MITIGANT_TYPE to DIM_STD_MITIGANT_TYPE	CUSTOM	FCT_MITIGANTS	N_MITIGANT_TYPE_SKEY	FCT_MITIGANTS	N_STD_MITIGANT_TYPE_SKEY

See Business Metadata for details on these reclassifications.

4.1.4 Configuring Setup Tables for Standard Set of Values

The following are the setup configurations which are required to be done before executing the BOE Regulatory Reporting Run.

4.1.4.1 SETUP_MASTER Table

The SETUP_MASTER table in atomic schema must be modified with the required values for BOE.

Table 9: SETUP_MASTER table values

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.
BOE_DEFAULT_PD_MODEL	PD Model for BOE 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.

4.1.5 Run/Execution Expectations

Run refers to execution. It is assumed that at different time periods, different combination 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 / Execution
    d. Reporting month end data
    e. Projection Data
2. Historical (trend/vintage) Data
    a. Yearly
    b. Quarterly
3. Stressed Data

4.1.6 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 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 10: 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 is period specific.
- 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 is period specific.
- 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 11: 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	
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 projection of net sales for quarter 2 next year is to be performed, no derivation is required. Projections data for said quarter can be directly downloaded in the respective Fact table(s) for reporting.

4.1.7 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. See 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.

4.1.8 Data Flow from Staging to Results Area

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

4.1.8.1 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. Common example of this category includes various monetary amounts, dates and so on.

4.1.8.2 Reclassified to Regulatory Classifications

After transformation, the regulatory data is reclassified as follows:

Table 12: Data Reclassification Example 1

Source	Target
DIM PARTY TYPE	DIM REG PARTY CATEGORY
High Net Worth Individual	Individual
Individual	Individual
Retail	Individual
Household	Household

The sample reclassifications performed to transform the existing hierarchies to regulatory specific hierarchies are:

- Party Category Classification
- Product Category Classification
- Interest Type Classification
- Intra Group Indicator
- Regulatory Loan Purpose

The additional transformations that are performed are:

- Original Maturity Band
- Residual Maturity Band
- Delinquency Band

Refer Business Metadata for details of these reclassifications.

4.1.9 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.

Hence, analytical applications place varying demands on the data infrastructure in terms of volumes and speed, and hence 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.

4.1.10 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 3.1.11).

This is mostly due to processing measures such as Fair Value, Risk Weighted Assets, and so on.

4.1.11 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 the 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 customer may not have licensed any of OFSAA application and hence 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 highlight 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 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, it is imperative for the custom data flow design to 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 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 a valid surrogate keys for a given value of 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:

1. Natural asset negative balances from system of records
2. Adjustment entries or Plug entries.

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. This application uses General Ledger type from General Ledger Account dimension. Primarily following two General Ledger Type codes are used for this purpose.

1. ASSET
2. 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:

1. Loans and Cards
   a. Loans are reported under Assets category in Balance Sheet. There are cases when customer makes excess payment towards the loan account which makes the end of period account balance becoming credit balance or negative balance.
   b. When excess payment is made, then account will no longer fall under 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.
   c. To avoid reporting of excess payment as assets, you must assign a General Ledger code to given account with V_GL_TYPE_CODE = 'LIAB'.
   d. 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.
   e. 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 in addition or reduction of overall reporting amount for a given line item based on sign of end of period balance.
   f. 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 in addition or reduction of overall reporting amount for a given line item based on sign of end of period balance.

Table 13: Illustrative Table showing handling of Negative Balances for Assets other than Derivatives

					FR Y-9C		
Use Case	**Product**	**Account**	**GL TYPE**	**Balance**	**HC-C 6.a**	**HC-E 1.a**	**HC-H 1**

Genuine Debit Balance	Credit Card	AC 001	ASSET	400	400		400
Excess Payments: Genuine Negative Balance	Credit Card	AC 002	Liability	-600		600	
Adjustment Positive Entry	Credit Card	AC 003	ASSET	100	100		100
Adjustment Negative Entry	Credit Card	AC 004	ASSET	-250	-250		-250
Excess Payments: Adjustment Positive Entry	Credit Card	AC 005	LIABILITY	200		-200	
Excess Payments: Adjustment Negative Entry	Credit Card	AC 006	LIABILITY	-300		+300	
Total					250	700	250

HC-C Line Item 6.a: Credit Cards

HC-E Line Item 1.a: Non-Interest Bearing Balances

HC-H Line Item 1: Earning Assets

Impact of Negative Balances on Derivative GL Reconciliation Scenarios

Derivatives (Trading Assets / Trading Liabilities / All Other Assets / All Other Liabilities)

1. Derivatives are not expected to have genuine negative notional amounts or end of period balances as in case of loans or cards. Fair value of a derivative can be loaded as a Positive or Negative value as available.
2. Application runs a rule called as Trading Account Type dimension which checks for GL code having V_GL_TYPE_CODE. If GL type is ASSET, it is shown under Trading Assets / All Other Assets. If GL type is 'LIAB', it is shown under Trading Liabilities or All Other Liabilities.

Table 14: Impact of Negative Balances on Derivative GL Reconciliation Scenarios

							FR Y- 11 / FR 2314 / FR Y-9C			
Use Case	**Natural or Adjustment**	**ACC**	**GL Type**	**GL Bal**	**SL BAL**	**Fair Value / Unrealized Gain**	**Other Assets BS 7 / HC-F 6**	**Other Liabilities BS 14 / HC-G 3**	**Revaluation Gains BS M 4.e or 6.e HC-D 11**	**Revaluation Loss HC-D 14**
GL and SL match	Natural	AC 01	Asset	800	800	800	800		800	
GL and SL match	Natural	AC 02	LIAB	-1500	-1500	-1500		1500		1500
GL has Assets higher than SL data	Natural	AC 03	Asset	1100	1000	1000	1000		1000	
GL has Assets higher than SL data	Adjustment	AC 04	Asset		100	100	100		100	
GL has lower assets than the SL data	Natural	AC 05	Asset	1200	1500	1500	1500		1500	
GL has lower assets than the SL data	Adjustment	AC 06	Asset		-300	-300	-300		-300	
GL has higher liabilities than the SL data	Natural	AC 07	LIAB	-2000	-1750	-1750		1750		1750
GL has higher liabilities than the SL data	Adjustment	AC 08	LIAB		-250	-250		250		250
GL has lower liabilities than the SL data	Natural	AC 09	LIAB	-1250	-1750	-1750		1750		1750
GL has lower liabilities than the SL data	Adjustment	AC 10	LIAB		500	500		-500		-500

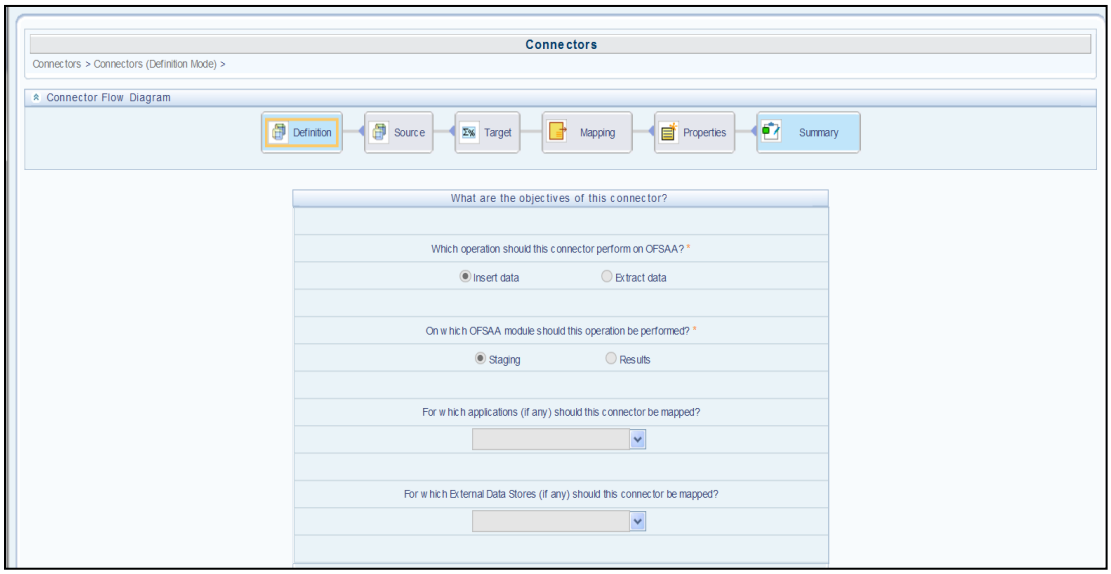
From OFSAA technical infrastructure standpoint, the mentioned options are available to the customer to design and implement the custom ETL process explained above. OFSAA strongly recommends the below options to maintain consistency in terms of data lineage in Metadata browser as the configured metadata can be made available in meta model via MDB publish:

1. Data Integration Hub (DIH) Connectors
2. Data Mapping (T2T) option in Application Infrastructure
3. Data File Mapping (F2T) option in Application Infrastructure

4.1.11.1 DIH Connectors

For customer's that have licensed DIH to source data from external systems into OFSAA , this probably is the easiest approach to load data into the result area table. Source data could either reside in relational structure or in a file structure. Mappings maintained in DIH are logical in nature while physical implementation is managed internally. Dimensional lookups work seamlessly without the need for any additional configuration in the connector mapping as this too is managed internally by DIH. See DIH User Guide for details on how to load data into a result area table.

Figure 15: DIH Connectors



4.1.11.2 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 Oracle database. Dimensional lookups must be handled via the T2T's join condition and expressions. Refer to Oracle Financial Services Advanced Analytical Applications Infrastructure Application Pack User Guide for more details on configuring a T2T.

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

If the source data is available in file structures, OFSAA F2T component can be used to bring the data in the OFSAA eco system. As lookups cannot be configured in a F2T, this component must be used in conjunction with 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 least recommended approach as there is need for interim table structure in data model and involves multiple data hops which add to the overhead.

Refer to the Oracle Financial Services Advanced Analytical Applications Infrastructure Application Pack User Guide on OHC for more details on configuring a F2T.

4.1.12 FSDF Entity Information

The FSDF entity information is given in the Dimension and Fact tables.

4.1.12.1 Dimension Tables/Entities

Table 15: Dimension Tables/Entities

Sl. No.	List of Dimension Tables	Table/Entity Logical Names	Table/Entity Descriptions	Table/ Entity Type
1	DIM_ACCOUNT_PURPOSE	Account Purpose Dimension	This table stores the purpose for which the bank has initiated the account.	SCD
2	DIM_BANDS	Bands Dimension	This table stores the list of band dimensions. Information on the table name, columns containing the band codes, upper and lower bound values are stored in the setup table and a generic code is executed to populate the band codes in the respective fact tables.	Seeded
3	DIM_BOOLEAN_FLAGS	Boolean Flag Dimension	This table stores the list of the Boolean Flags.	Seeded
4	DIM_CONSOLIDATION	Consolidation Dimension	This entity stores the details of various values to be analyzed like actual or budget.	Seeded
5	DIM_COUNTRY	Country Dimension	This table stores the master list of countries.	Seeded
6	DIM_CREDIT_PARTCPTION_TYPE	Credit Participation Contract Type Dimension	This table stores the type of the contract identifiers for the main participation or syndication contract.	Seeded
7	DIM_CURRENCY	Currency Dimension	The table stores the currency information. ISO currency codes is a standard published by the International Organization for Standardization 4217, which delineates currency designators and country codes (alpha and numeric).	Seeded

Sl. No.	List of Dimension Tables	Table/Entity Logical Names	Table/Entity Descriptions	Table/ Entity Type
8	DIM_CUSTOMER	Customer Dimension	This entity stores the list of the organization's customers and counterparties and their attributes.	SCD
9	DIM_DATES	Date Dimension	This table stores the list of dates generated between any two dates typically covering extraction dates and cash flow dates.	Seeded
10	DIM_INDICATOR_VALUES	Indicator Values Dimension	This table stores the indicator values used in various columns for identifying the Boolean or indicator values. This is a seeded dimension table from OFSAA products.	Seeded
11	DIM_INSTRUMENT_CONTRACT	Instruments Contracts Dimension	This entity stores the contracts and instruments in the Market and their details like Effective Date, Maturity Date, Face Value, Day Convention, Strike, and so on.	Seeded
12	DIM_INTEREST_TYPE	Interest Type Dimension	This table stores the interest type.	Seeded
13	DIM_LOCATION	Location Dimension	This table stores the location dimension.	SCD
14	DIM_ORG_STRUCTURE	Organization Structure Dimension	This entity stores the Organization Structure of the Financial Institution.	SCD
15	DIM_PARTY	Party Dimension	This table stores the history of the party. Party here can be customer, issuer, guarantor, and so on.	SCD
16	DIM_PARTY_TYPE	Party Type Dimension	This table stores the party type. Party here could be Individual, Banks, Corporate - Small, Corporate - Medium, State Government, Sovereign, and so on.	SCD
17	DIM_PRODUCT	Product Dimension	This table stores the details of all the products (existing/stopped) offered by the Financial Institution.	SCD
18	DIM_PRODUCT_TYPE	Product Type Dimension	This table stores the loan product type information.	SCD
19	DIM_REG_INTEREST_TYPE	Regulatory Interest Type Dimenison	This table stores the list of indices which are designed to store the regulatory based interest type	Seeded

Sl. No.	List of Dimension Tables	Table/Entity Logical Names	Table/Entity Descriptions	Table/ Entity Type
			code as designated by the regulator for an account at account level or group of accounts at a credit line level. For example: FIXED, FLOATING, MIXED, and so on.	
20	DIM_REG_LOAN_PURPOSE	Regulatory Loan Purpose Dimension	This table stores the description for the regulatory loan purpose / utilization of loan amount. Values expected are: 1 = Purchase 4 = Rate / Term Refinance 5 = Cash-Out Refinance 6 = Other Refinance 7 = Home Improvement 8 = Debt Consolidation 9 = Education A = Medical Y = Other U = Unknown"	Seeded
21	DIM_REG_PARTY_CATEGORY	Regulatory Party Category Dimension	This entity stores the reclassified regulatory party categories.	Seeded
22	DIM_REG_PRODUCT_CATEGORY	Regulatory Product Category Dimension	This entity stores the reclassified regulatory product categories.	Seeded
23	DIM_REG_REPORT_CELL	Regulatory Reporting Cell Dimension	This table stores the cell IDs / MDRM codes as provided by the AgileREPORTER templates.	Seeded
24	DIM_REP_LINE	Reporting Line Dimension	This table stores the list of all computed reporting line items.	Seeded
25	DIM_RUN	Run Dimension	The entity stores the baseline and simulation runs.	
26	DIM_STD_MITIGANT_TYPE	Standard Mitigant Type Dimension	This entity stores the standard mitigant type.	SCD

4.1.13 Fact Tables/Entities

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

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

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

Table 16: Fact Tables/Entities

Sl. No.	List of Fact Tables	Table/Entity Logical Names	Table/Entity Descriptions	Table / Entity Type
1	FCT_ACCOUNT_MITIGANT_MAP	Fact Account Mitigant Map	This entity stores the account to mitigant mapping. It supports more than one mitigant to be mapped to an account.	FACT
2	FCT_ACCT_PLACED_COLL_MAP	Fact Account Placed Collateral Map	This table stores the account to placed collateral mapping. It is an intersection table to denote that a placed collateral can be used in multiple accounts and an account contains multiple collateral.	FACT
3	FCT_COMMON_ACCOUNT_SUMMARY	Fact Common Account Summary	This table stores the common account level information that usually comes as an input through staging.	FACT
4	FCT_IFRS_ACCOUNT_SUMMARY	Fact IFRS Account Summary	This table stores the measures related to account that are computed by IFRS application.	FACT
5	FCT_MGMT_REPORTING	Fact Management Reporting	This table stores the management reporting data related to organization and product profitability/income statement/balance sheet.	FACT
6	FCT_MITIGANTS	Fact Mitigants	This entity stores the mitigants and their details.	FACT
7	FCT_PLACED_COLLATERAL	Fact Placed Collateral	This table stores the details of collateral which are placed against an account.	FACT
8	FCT_REG_ACCOUNT_SUMMARY	Regulatory Account Summary	This table stores the regulatory reclassifications and other information as required for regulatory reporting.	FACT
9	FCT_REG_REPORT_ADJUSTMENTS	Fact Regulatory Report Adjustments	This table stores the adjusted amount against a particular cell ID / MDRM code for a regulatory report.	FACT

Sl. No.	List of Fact Tables	Table/Entity Logical Names	Table/Entity Descriptions	Table / Entity Type
10	FCT_REG_RUN_LEGAL_ENTITY_MAP	Fact Regulatory Legal Entity Run Map	This table stores reporting entity identifier for every regulatory reporting run.	FACT
11	FCT_REG_CAP_ACCOUNT_SUMMARY	Fact Regulatory capital account Summary	This table stores the processed data for capital adequacy reporting.	FACT
12	FCT_MARKET_RISK_REPORTING	Fact Market Risk Capital	This table stores the capital available for market risk	FACT
13	FCT_REG_LE_CAPITAL_SUMMARY	Fact Regulatory Legal Entity Capital Summary	This table stores the regulatory capital related information for the legal entity. This table stores all information from the GL related to the capital structure processing as well as the various levels of capital computations processed and computed by the application.	FACT
14	FCT_REG_CAP_PLCD_COLL_SUMMARY	Fact Regulatory Capital Placed Collateral Summary	This table stores the information of all exposures to a bank which are placed collateral. The placed collateral are collateral placed by the bank for either default fund contribution or for other OTC transactions, with a central counterparty. It is generally used for Cleared transactions and Default fund contributions	FACT
15	FCT_MR_CAPITAL_SUMMARY	Fact Market Risk Capital Summary	This table stores the information of the market risk capital calculations at a portfolio level.	FACT
16	FCT_REG_CP_CAPITAL_SUMMARY	Fact Market Risk Capital Summary	This table stores the information of the market risk capital calculations at a portfolio level.	FACT
17	FCT_REG_MARKET_RISK_EXPOSURES	Fact Regulatory Market Risk Exposures	This table stores Basel Processing output for Market Risk Exposures for Regulatory Reporting	FACT

4.1.14 Inclusion of GL Recon Reconciled Accounts in Reporting

By default, the Regulatory Reporting expects reconciliation data in staging area for all the reports. For OFS Data Management (OFSDM) pack (OFS General Ledger Reconciliation Application (GL Recon)) installed in the same Infodom as Regulatory Reporting is installed, the results area tables will have accounts with account numbers (having prefixes defined in REVELEUS_PARAMETER_MASTER.V_PARAM_VALUE column for the REVELEUS_PARAMETER_MASTER.V_PARAM_CODE = 'ADJUSTMENT_EXP_PREFIX' used in GL Recon application).

Report-specific treatment for such accounts are handled in Regulatory Reporting application for cases like number of accounts that must be reported.

5 OFSAA Features

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

Regulatory Reporting (REG REP) Solution configures the data hand off structure to Vermeg 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 OFSAA infrastructure. Additionally, metadata route provides traceability from reporting elements to the data elements used.

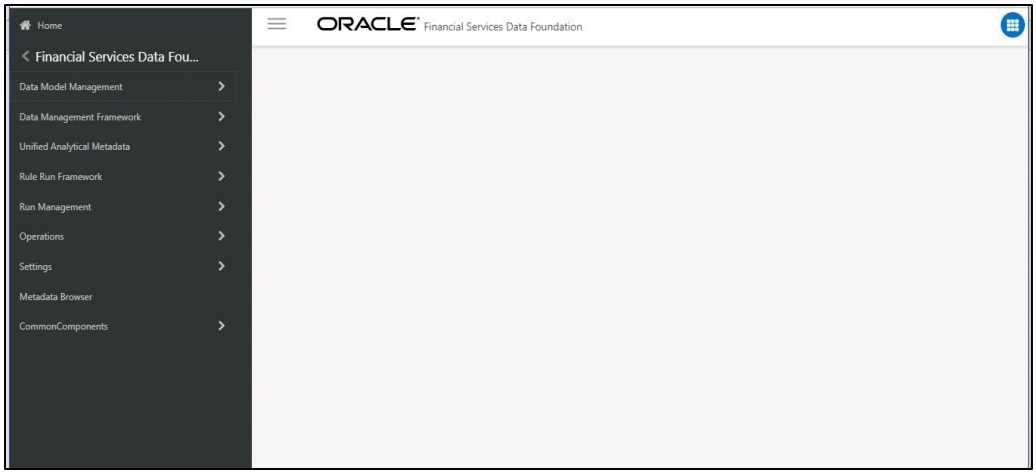
5.1 OFSAA Infrastructure

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:

- Expressions
- Hierarchies
- Filters

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

Figure 16: Landing Page



5.2 Business Metadata

In addition to Derived Entity, REG REP uses the following OFSAA features to create the business metadata. For details on the features, refer to OFS Analytical Applications Infrastructure User Guide in OHC documentation library.

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 which 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 which 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 on 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 Vermeg for BOE. Regulatory Reporting (REG REP) Solution uses Derived Entity to create physical materialized view which is then queried by Vermeg using pre-set data hand-off templates.

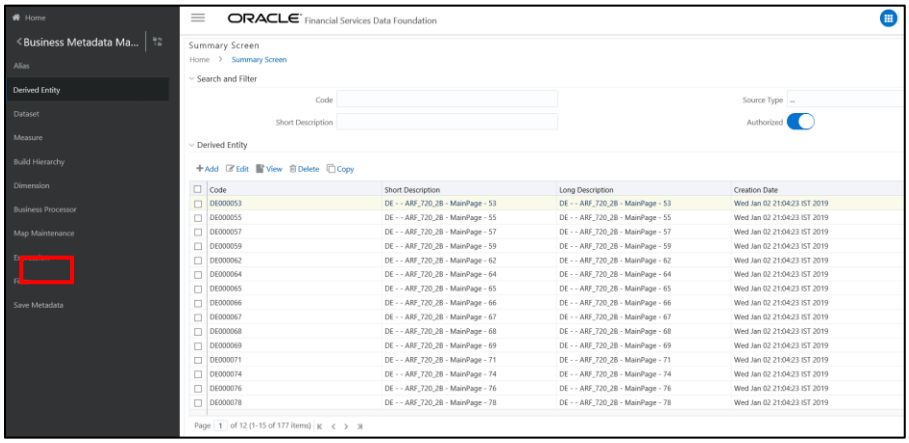
An Entity refers to a table in which data is stored. Derived Entity within the infrastructure system facilitates you to define entities which are populated through a series of data transformation processes resulting from an existing Data Set or a Source Application. An Entity can be used to define other 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.

Figure 17: Derived Entity User Interface



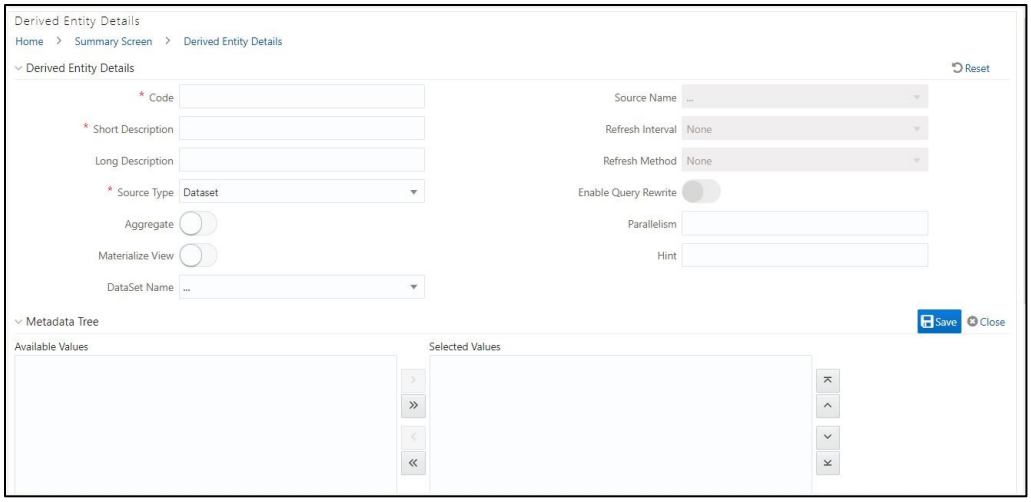
Derived Entities must have AS_OF_DATE and LEGAL_ENTITY as the mandatory dimensions. Rest of the structure of the derived entity can vary depending on the dimensions present. A metadata configuration table is present in AgileREPORTER to link the name of the column in the derived entity and dimension that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

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

Figure 18: Derived Entity User Interface



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.**. Rest of the structure of the d erived 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 in 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 Refreshing Derived Entities

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

5.3.3 User Roles

Following are the user roles for derived entity:

- **Reporting Analyst**: To create, modify, and delete a derived entity.
- **Data Analyst**: To view the derived entities.

5.4 Rules Run Framework Features

OFSDF Interface with Vermeg for BOE uses the following Rules Run Framework of OFSAA. For details on the features refer to OFS Analytical Applications Infrastructure User Guide in OHC documentation library.

- **Rules**: Financial institutions require constant monitoring and measurement of risk in order 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.

- **Process**: A set of Rules collectively form a Process. A Process definition is represented as a Process Tree. The Process option in the Rules Run Framework provides a framework that facilitates the definition and maintenance of a Process. By defining a Process, you can logically group a collection of Rules that pertain to a functional process.

- **Run**: The Run feature in the Rules Run Framework helps you to combine various components and/or processes together and execute them with different underlying approaches. Further, run conditions and/or job conditions can be specified while defining a run.

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. 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 report as part of the OFS Risk Regulatory Solution. 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 measure. 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.

Decision mapping table is processed against the contents of 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 17: Dimension Mapping Example 1

Item/Table Code	Is Derived?	Cell Value Measure	ISO Country Code	Intragroup Customer Indicator	Customer Domicile Country ISO Code
BSL22027	NO	Deferred Original Balance	AU	N	AU
BSL22028	NO	Deferred Original Balance	AU	N	AU

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 template. AgileREPORTER converts the decision table mapping present in excel into configuration entries within their schema.

Table 18: Dimension Mapping Example 2

Item/Table Code	Is Derived?	Cell Value Measure	ISO Country Code	Intragroup Customer Indicator	Customer Domicile Country ISO Code	Original Maturity Band Code	Financial Entity Flag	BOE Regulatory Product Group Code	BOE Regulatory Party Group Code	BOE Regulatory Party Class Code
BSAO27797	NO	Fair Value	AU	N	AU	9;10;11;12;13;14		DEBTSECINV		NFINCORP-REGGOV
BSAO27799	NO	Fair Value	AU	N		1;2;3;4;5;6;7;8	N	DEBTSECINV	NOT GENGOVT-CEN; GENGOVT-SEMIGOV;	NOT NFINCORP-REGGOV
BSAO27799	NO	Fair Value	AU	N	AU	1;2;3;4;5;6;7;8		DEBTSECINV		NFINCORP-REGGOV
BSAO27799	NO	Fair Value	AU	N	AU	1;2;3;4;5;6;7;8		DEBTSECINV	GENGOVT-CEN; GENGOVT-SEMIGOV;	

NOTE All the dimension member codes that are used in the decision table are preceded 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 which result in a single unified reporting dimension must be performed in order to address the complexity of decision table. Reclassification rule is defined in OFSAA and packaged as part of OFSAA Risk Regulatory Reporting (REG REP) Solution.

In some cases, certain sections of the schedule or the entire schedule can be a list of data rows without any mapping to 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 'sheet' column or 'row' column of the template.

NOTE As a part of the solution, metadata exists as out of box / pre-configured with installer.

6 Executing Run through Run Management

Starting from OFSDF 8.0.3.1.0 release, we are packaging two out of the box Runs for data loading. Same can be executed through the Run Management screen. The following are the two runs that are packaged as part of Installer.

- **Financial Services Data Foundation Sourced Run**: This Run can be executed once per day for Data Movement from Staging Area to Results Area for Non-RUN SKEY tables.
- **OFS REG REP BOE Run**: This Run can be executed any number of times per day with each unique RUN SKEY for Data Movement in Run enabled tables.

6.1 Summary and Details Page

Upon initially navigating to Run Management > Run Management, a summary page is displayed showing all the defined Runs. By selecting a Run or by using search criteria, you can control the set of Runs that are displayed. This page displays the list of runs defined in the Run Rule Framework (RRF) except those with Immediate Execution Option Yes in the grid.

6.2 Navigation within the Summary Page

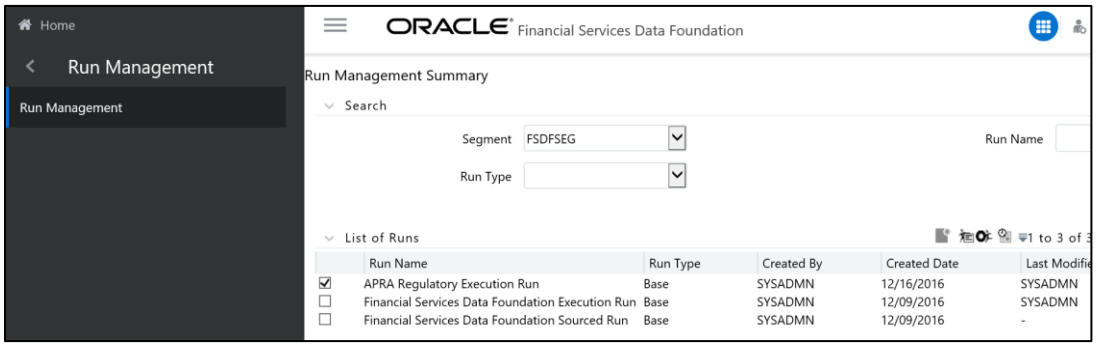
When you first navigate to the Run Management summary page, the Runs defined in the RRF are presented in a summary grid. The Run Management summary page has two sections:

- Search
- List of Runs

6.2.1 Search Section

Among other properties, each Run possesses a segment, a Run Name, and a Run Type. You may search on any of these properties in the Search section.

Figure 19: Run Search Section



6.2.2 List of Runs Section

The List of Runs section presents a grid containing all of the Runs that meet your search criteria. This summary grid offers several icons that allow you to perform different functions when a Run is selected.

To select a Run, click the check box in the first column of the grid.

- **View** (): Selecting a single row out of the grid enables the View icon. Clicking the View icon allows you to view the detailed definition of a Run on a read-only basis. The View icon is only enabled when a single Run has been selected.
- **Run Default Parameters** (): Selecting a single row out of the grid enables you to define the default parameters of a Run.
- **Run Execution Parameters** (): Selecting a single row out of the grid enables you to define the execution parameters of a Run.
- **Run Execution Summary** (): Selecting a single row out of the grid enables you to view the status of the Run executed in the Run Execution parameters window.

6.2.2.1 List of Runs Summary Grid

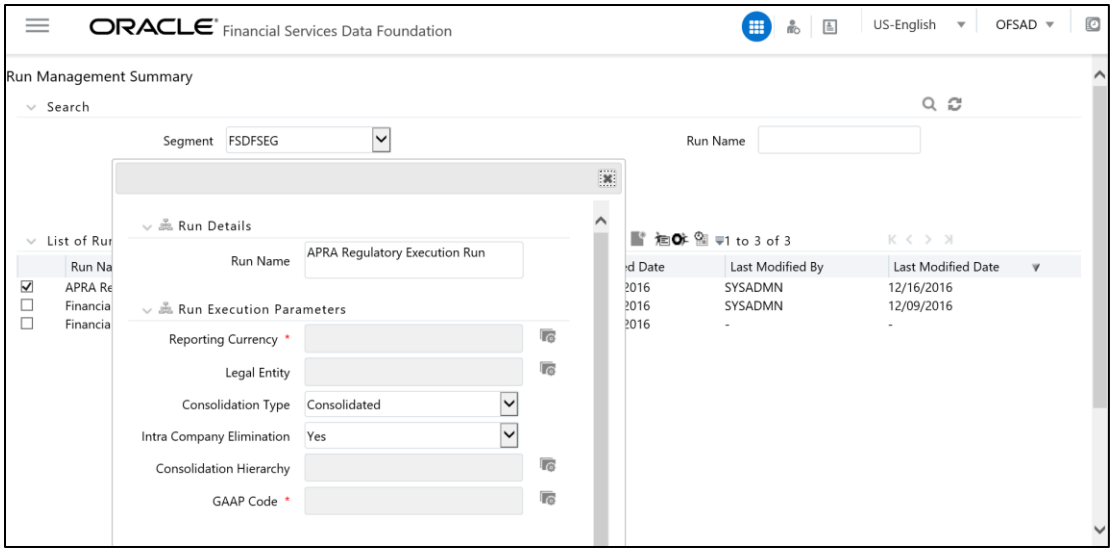
The following columns categorize each Run in the summary grid:

- **Run Name**: Displays the short name of the Run.
- **Run Type**: Displays the type of Run, Simulation or Baseline Run.
- **Created By**: Displays the name of the User who defined the Run.
- **Created Date**: Displays the date on which the Run was created.
- **Last Modified By**: Displays the name of the User who has performed any modifications to the Original Run details.
- **Last Modified Date**: Displays the date on which the Original Run details were modified.

6.2.3 Navigation within Run Default Parameters Window

Click Run Default Parameters icon on the navigation bar of the Run Management Summary Window to input the Run level parameters. The Run Parameters Window is displayed.

Figure 20: Run Details Summary



NOTE	To modify or view the parameters, the Modify Run Parameters role should be mapped to that relevant User profile.

This window consists of two sections Run Details and Run Execution Parameters.

6.2.3.1 Run Details Section

This section displays the name of the Run which is a read-only value.

6.2.3.2 Run Execution Parameters Section

In this section, you can update the following:

- **Reporting Currency**: Reporting Currency Code parameter is used for calculation of amounts in Reporting Currency during Data Population.
- **Legal Entity**: Legal Entity Code parameter is used for identifying the legal entity, which is used for the Run.
- **Consolidation Type**: Consolidation Type parameter is used for selecting legal entities on a solo or consolidation basis. In a solo run, only the selected legal entity will be used. In a consolidated run, along with the selected legal entitiy, all its child legal entities are also used.
- **Intra Company Elimination**: Intra Company Elimination parameter is selected “Yes” or “No” to display during Data Population.
- **Consolidation Hierarchy**: Legal Entity Hierarchy parameter is used for selecting the required hierarchy for the consolidated run. This parameter is not required for solo run.
- **GAAP Code**: The GAAP code for the particular Run is displayed here.

Before proceeding further, to ensure that you do not lose the updated data, click Save.

NOTE To get the values for Reporting Currency parameter and Legal Entity parameter, you must save the following hierarchies under Save Metadata screen:

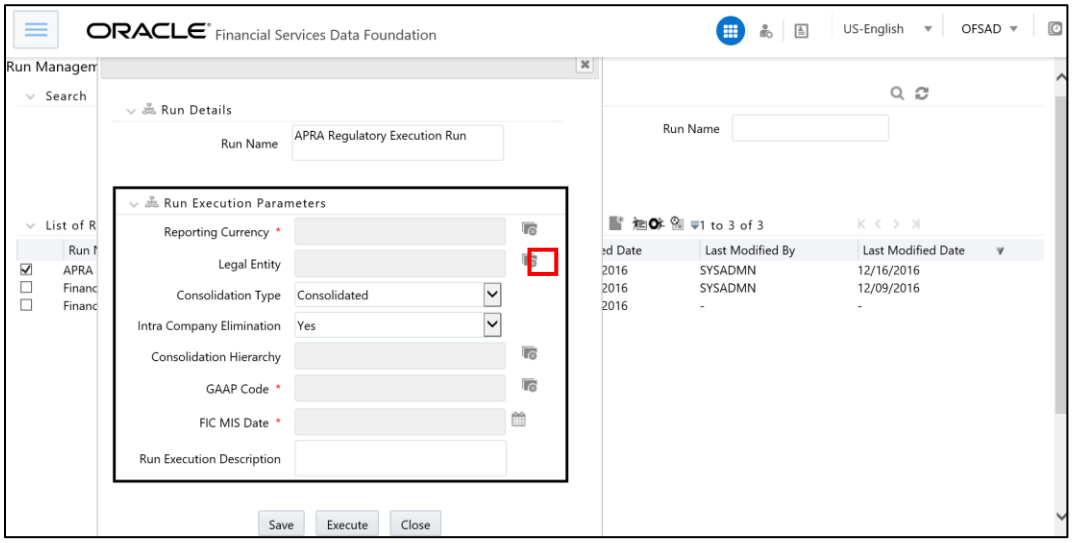
1. Legal Entity Code for Run (HFSDF001)
2. Reporting Currency Code for Run (HFSDF002)
3. Legal Entity Hierarchy for Run (HFSDF003)
4. GAAP Code for Run (HFSDF005)
   For further details on Save Hierarchy, refer to Oracle Financial Services Advanced Analytical Applications Infrastructure Application Pack 8.0.5.0.0 on OHC.

The values selected for reporting currency and Legal entity for the selected Run is shown as the default selected value in the Run Execution Parameters window.

6.2.4 Navigation within Run Execution Parameters Window

Click Run Execution Parameters icon on the navigation bar of the Run Management Summary window. The Run Execution Parameter window allows you to enter and save the Run execution parameters.

Figure 21: Run Execution Parameters Window



The Run Execution Parameters window consists of two sections **Run Details** and **Run Execution** Parameters.

6.2.4.1 Run Details Section

This section displays the name of the Run which is a read only value.

6.2.4.2 Run Execution Parameters Section

The following Run execution parameters can be updated:

- Reporting Currency: Reporting Currency Code parameter is used for calculation of amounts in Reporting Currency during Data Population.
- Legal Entity: Legal Entity Code parameter is used for identifying the legal entity, which is used for the Run.
- Consolidation Type: Consolidation Type parameter is used for selecting legal entities on a solo or consolidation basis. In a solo run, only the selected legal entity will be used. In a consolidated run, along with the selected legal entitiy, all its child legal entities are also used.
- Intra Company Elimination: Intra Company Elimination parameter is selected “Yes” or “No” to display during Data Population.
- Consolidation Hierarchy: Legal Entity Hierarchy is used for selecting the required hierarchyfor the consolidated run. This parameter is not required for solo run.
- GAAP Code: The GAAP code for the particular Run is displayed here.
- FIC MIS Date: Enter the extraction date in this field.
- Run Execution Description: Enter a longer description of the Run.

To get the values for Reporting Currency parameter and Legal Entity parameter, you must save the following hierarchies under Save Metadata screen:
1. Legal Entity Code for Run (HFSDF001)
2. Reporting Currency Code for Run (HFSDF002)

By clicking the **Save** button; a batch with the defined Run execution parameters is created. The batch created can be executed from the Batch Execution screen.

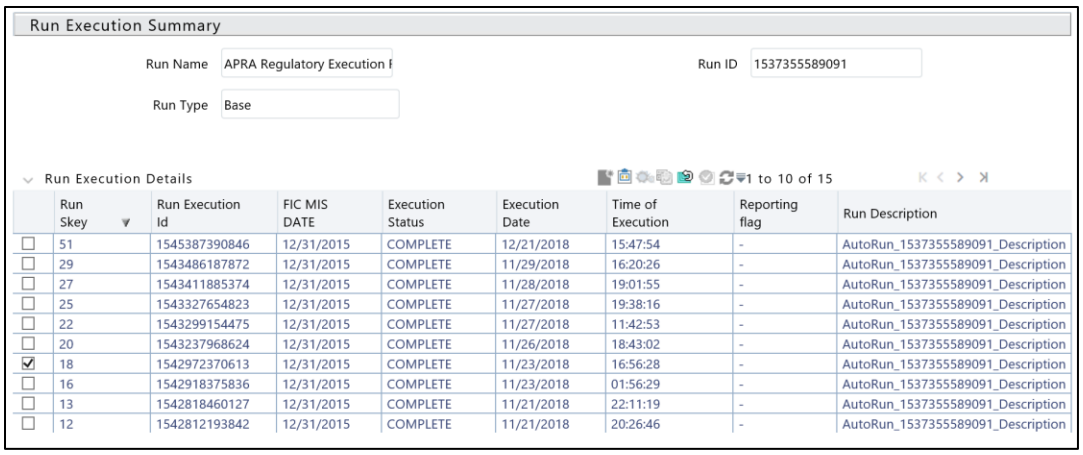
By clicking the **Execute** button, a batch with the defined Run execution parameters is created and executed immediately. Status of the executed run can be seen in Batch Monitor screen or Run Execution Summary page.

For further details on Save Hierarchy and Batch Execution, refer to Oracle Financial Services Advanced Analytical Applications Infrastructure Application Pack 8.0.5.0.0 on OHC. To execute a Run, the execute run role should be mapped to your User profile. Currently, the users mapped under FSDF Admin or FSDF Operator User Groups automatically have this role.

6.2.5 Navigation within Run Execution Summary Page

Select a Run from the Run Management Summary page and click Run Execution Summary icon () to display the Run Execution Summary page where the following sections are displayed.

Figure 22: Run Execution Summary



Run Skey	Run Execution Id	FIC MIS DATE	Execution Status	Execution Date	Time of Execution	Reporting flag	Run Description
51	1545387390846	12/31/2015	COMPLETE	12/21/2018	15:47:54	-	AutoRun_1537355589091_Description
29	1543486187872	12/31/2015	COMPLETE	11/29/2018	16:20:26	-	AutoRun_1537355589091_Description
27	1543411885374	12/31/2015	COMPLETE	11/28/2018	19:01:55	-	AutoRun_1537355589091_Description
25	1543327654823	12/31/2015	COMPLETE	11/27/2018	19:38:16	-	AutoRun_1537355589091_Description
22	1543299154475	12/31/2015	COMPLETE	11/27/2018	11:42:53	-	AutoRun_1537355589091_Description
20	1543237968624	12/31/2015	COMPLETE	11/26/2018	18:43:02	-	AutoRun_1537355589091_Description
18	1542972370613	12/31/2015	COMPLETE	11/23/2018	16:56:28	-	AutoRun_1537355589091_Description
16	1542918375836	12/31/2015	COMPLETE	11/23/2018	01:56:29	-	AutoRun_1537355589091_Description
13	1542818460127	12/31/2015	COMPLETE	11/21/2018	22:11:19	-	AutoRun_1537355589091_Description
12	1542812193842	12/31/2015	COMPLETE	11/21/2018	20:26:46	-	AutoRun_1537355589091_Description

This section consists of **Run Execution Summary** and **Run Execution Details**.

6.2.5.1 Run Execution Summary Section

The Run Execution Summary displays the following details:

- Run Name: Displays the name of the Run.
- Run Type: Displays the type of Run, Baseline or Simulation.
- Run ID: Displays the Run Execution ID.

6.2.5.2 Run Execution Details Section

The Run Execution Details section presents a grid containing all of the executions of Run and status of a particular execution of the Run. The menu bar in this grid offers several icons that allow you to perform different functions when a Run Execution is selected. To select a Run Execution, click the check box in the first column of the grid. More than one Run Execution can be selected at a time but this will cause some of the icons to become disabled.

- **Parameter Details** ( ): Click this icon to view the Run execution and Run default parameter details in read-only mode.
- **Copy** ( ): Click Copy icon, to copy the parameters as defined in the Run Execution Parameter window to create a new batch.
- **Execute** ( ): Click Execute icon to trigger the batch which is created from the Run Execution Parameter window. The status of the triggered batch is displayed. In the Execution Summary page, multiple selections of the execution IDs are available to trigger a batch.
- **Request Report Flag** ( ): To request for a Report Flag, select a Run Execution ID in the Run Execution Summary page and click Request for Reporting Execution icon. A dialog box appears to input your comments. Click Submit and the status of this Run is displayed in the Report 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.

- **Override Report Flag** (): Any reporting execution can be overwritten with another execution. Select a successfully triggered batch in the Run Execution Summary page. The Override Report **Flag** icon is enabled, if an execution is already marked as a Report Flag. You can override the execution by updating your comments. This should be approved by the approver and the procedure is similar to the procedure detailed in the Approve Report Flag section.
- **Approve Report Flag** (): After submitting the Reporting Run in the earlier section, the Approve Report Flag icon is enabled. After clicking the icon, a dialog box with the User Comments and Approver Comments is displayed. The Approver can update the comments in the Approver Comments field and then click Approve or Reject button accordingly.
- **Reload** (): Click this icon to refresh / reload the Run Execution Summary details.

6.2.5.3 Run Execution Grid

The Run Execution Details displays the following details:

- **Run Skey**: Displays the Run skey of an individual execution.
- **Run Execution ID**: Displays the execution ID of the Run.
- **FIC MIS DATE**: Enter the extraction date in this field.
- **Execution Status**: Displays the status of the execution which is failed or complete.

Table 19: Run Execution Grid

Name	Description	Example
INFODOM	Specify name of Information Domain (INFODOM) of Run Definition	INFODOM=FSDFINF300
SEGMENT	Specify the Folder Code / Segment Code of Run Definition	SEGMENT=FSDFSEG
RUN_CODE	Specify the Run Code of the Run Definition	RUN_CODE=RGRNBOE
USER_ID	Specify the OFSAAI User ID for the Run Execution	USER_ID=rrruser
HIER_RCY	Specify the Reporting Currency Hierarchy Code for the Run Execution	HIER_RCY=[HFSDF002].[GBP] (default value)
HIER_LE	Specify the Legal Entity Code for the Run Execution	HIER_LE=WFCB
HIER_CONSOHIER	Specify the Consolidation Hierarchy for the Run Execution	HIER_CONSOHIER=[HFSDF003].[Default Org Structure Hierarchy] (default value)
LIST_CONSOTYPE	Specify the Consolidation Type for the Run Execution	LIST_CONSOTYPE=SOLO List of values accepted are: 1. CONSL: Consolidated Run 2. SOLO: Solo Run (default value)

Name	Description	Example
HIER_GAAP	Specify the GAAP Code Hierarchy for the Run Execution	HIER_GAAP=[HFSDF005].[AUGAAP]
RUN_EXE_COMMENTS	Specify the Comments for Run Execution	RUN_EXE_COMMENTS=Reporting Run
REQ_TYPE	Specify the Type of Execution for Run	REQ_TYPE=E Value accepted: E: Create Batch and Execute

- **Execution Date**: Displays the date when the Run was executed.
- **Time of Execution**: Displays the time when the Run was executed.
- **Reporting Flag**: Displays the Report Flag used when the Run was executed.
- **Run Description**: Displays the description for the Run.

6.3 Run Execution from Command Line

The Run Execution can be performed from the Command Line Interface with the following steps:

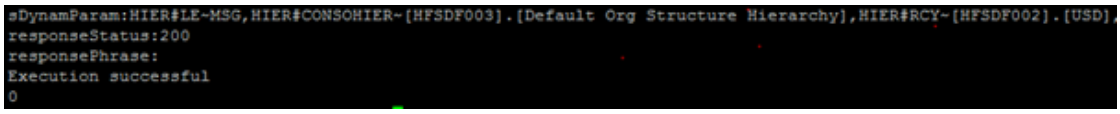
1. Navigate to `$FIC_HOME/ficdb/conf` directory
2. Enter the details for the following fields in the BOE Run - RGRNBOE.properties file:
3. Navigate to `$FIC_HOME/ficdb/bin` directory
4. Execute the following .sh file by passing two arguments:

   ```
   ExecuteRunManagement.sh <FIC_HOME>/ficdb/conf/<propertyfile> <execution date in YYYYMMDD format>
   ```

   For example:

   ```
   ExecuteRunManagement.sh <$FIC_HOME>/ficdb/conf/RGRNBOE.properties 20171130
   ```

5. When the Run execution succeeds, the following message is displayed:

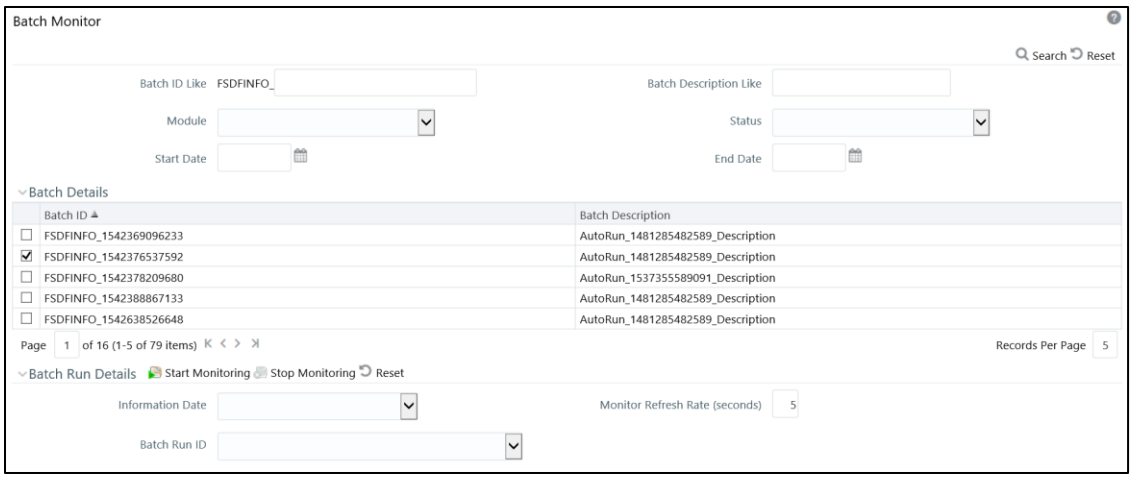
   

   When the Run execution fails, the following message is displayed:

The Batch execution status can be monitored through the Batch Monitor link from the OFSAA Application Interface and the relevant logs are generated under the $FIC_HOME/ficdb/log directory.

Figure 23: Batch Monitor



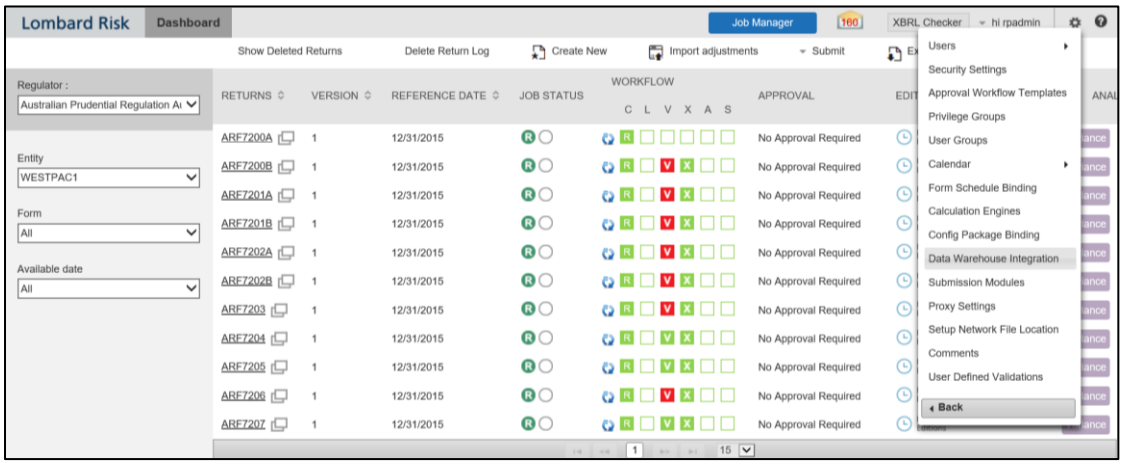
7 Maintenance

This chapter provides an understanding of the maintainence process for the regulatory updates that happen in the templates provided by Vermeg. These changes in templates are part of separate releases provided by Vermeg as part of MFSD template releases related to Bank of England.

- Changes to regulatory template is 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):
- Choosing different execution as a final. After report verification, if requirement is to change the execution, then you must visit Marking Run as Final section. After making these changes you must refresh Derived Entities (Executing Batch to Resave Derived Entities). Then AgileREPORTER also needs to retrieve returns so that revised data is reflected on AgileREPORTER.
- If Executing Batch to Resave Derived Entities is not working, you can look for Batch Operation Log files. For file path, refer to OFS Analytical Applications Infrstructure Installation Manual in OHC documentation library and search for ficdb/log.
- To apply revised patch, refer to the ReadMe file for instructions to be followed.
- To update revised data warehouse configuration pack, perform the following instructions.

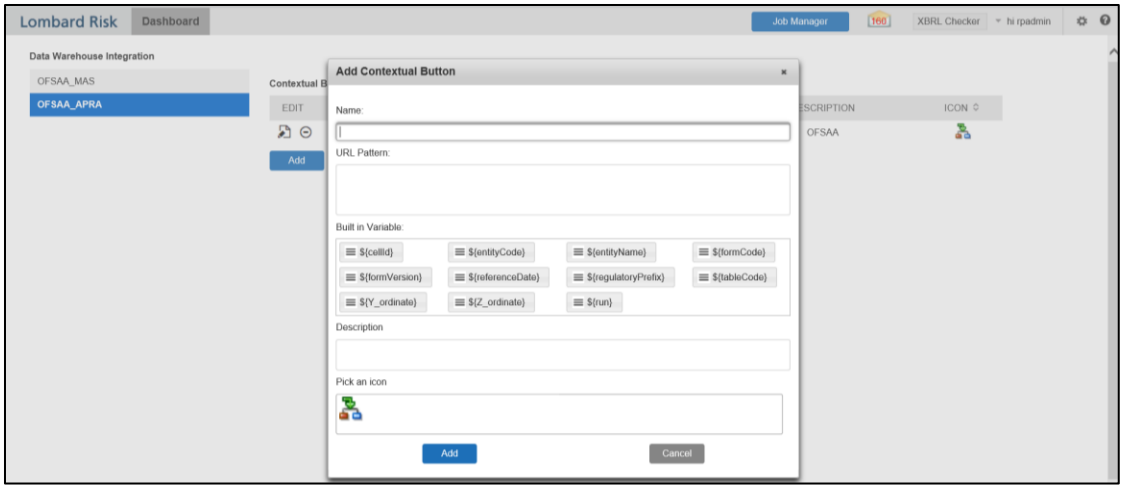
a. Click **Settings** > **Administration** > **Data Warehouse Integration**.

Figure 24: Data Warehouse Integration



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

Figure 25: Adding Contextual Button



c. Enter details of the contextual button.

Name: It is the text that must 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.

Error! Hyperlink reference not valid.

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

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

ii. Pick an icon.

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

- After the data ware configuration pack is updated, Vermeg Configuration pack must reflect this.

> **NOTE** : Refer to OFS AgileREPORTER user documentation for details.

8 Troubleshooting Guidelines

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

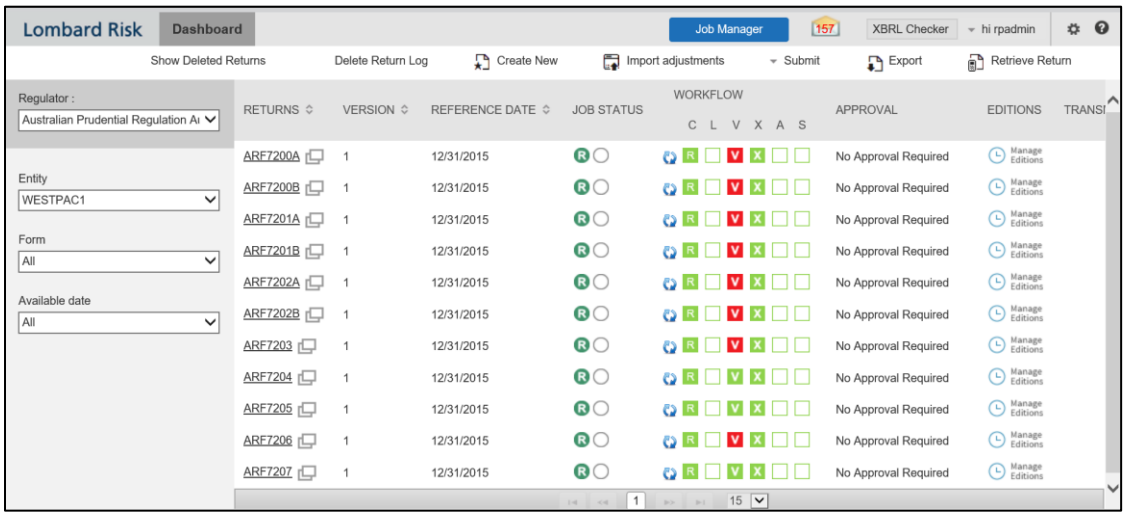
Integration users provide the data inputs through the OFSDF where data is loaded, processed and results are made available for reporting purposes. Integration package then makes this data available in required formats to AgileREPORTER. In AgileREPORTER, this data is then aggregated according to the reporting 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.

8.1 Prerequisites

It is assumed that user can login and see following menus and respective reports in AgileREPORTER.

Figure 26: 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 actual name depends on the integration pack licensed.

8.2 Troubleshooting Use Cases

The following sections show some use cases that are easy to troubleshoot.

8.2.1 Unable to Generate Report

If you are unable to generate reports, meaning none of the derived entities referred 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 login the bug / service request with VERMEG (Lombard Risk).

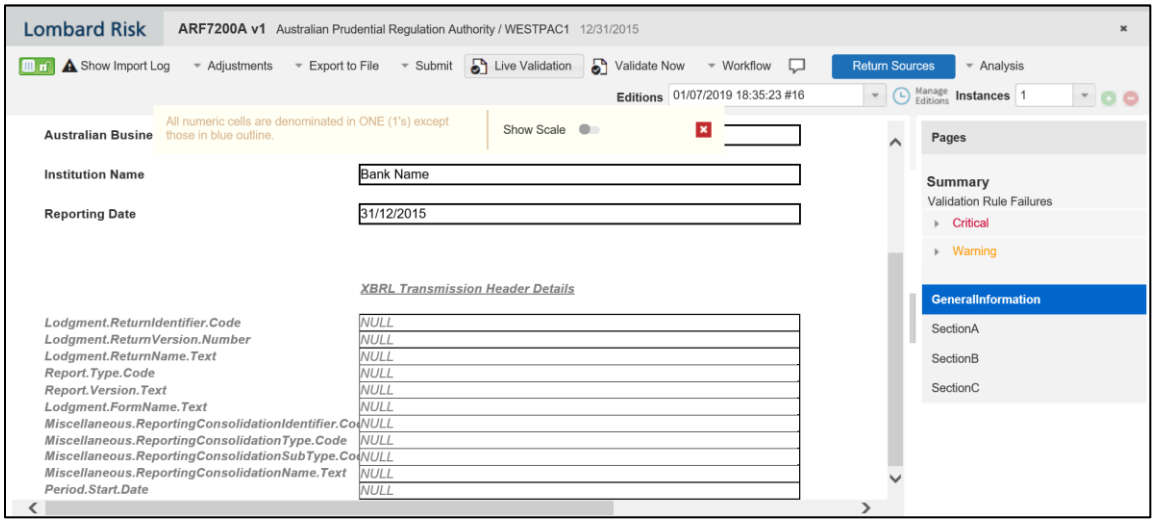
8.2.2 Data Unavailable in AgileREPORTER

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

8.2.2.1 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 27: Fetching Null Values



You must validate as:

1. 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 VERMEG (Lombard Risk).
2. 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 dataset, then check if 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.

8.2.2.2 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 aggregation
3. Measures / Monetary amounts at account granularity are as expected.

Any deviation from expectations can be then checked back for:

1. If measure is stage pass through, then validate using T2T to verify if stage data is as expected or must be corrected.
2. If measure is processed, then validate using T2T to verify processing measure is correctly moved to 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 result area is now showing unexpected output, then log a Bug / Service Request with Oracle Support Services.