Oracle® Financial Services Data Foundation Cloud Service for Banking

User Guide

Release 25C
G39682-06
October 2025

ORACLE

Oracle Financial Services Data Foundation Cloud Service for Banking User Guide, Release 25C

G39682-06

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About This Guide

This section provides supporting information for the Oracle Data Foundation Cloud Services for Banking (DFCS).

Audience

This document contains release information of Oracle Data Foundation Cloud Services for Banking (DFCS).

Documentation Accessibility

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Related Resources

- Data Foundation for Banking

Conventions

The following text conventions are used in this document.

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

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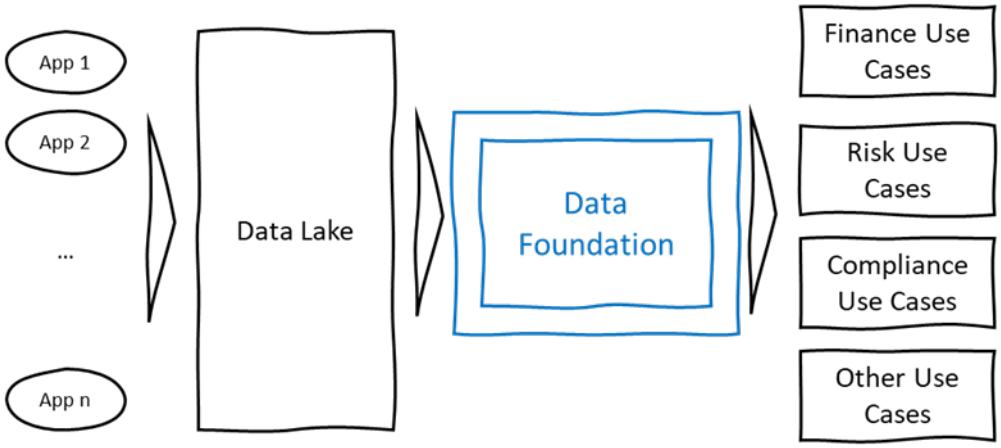
Introduction to Data Foundation Cloud Service

The Oracle Financial Services Data Foundation Cloud Service (DFCS) for Banking offers a consistent, efficient, and well-governed data management solution tailored to meet both internal and regulatory data requirements for banks. It includes a comprehensive data catalog designed to support key analytical use cases across finance, risk, and compliance domains. This solution is powered by a feature-rich platform that enables data ingestion, data quality and reconciliation, hosts high-quality historical data, and facilitates the distribution of validated data through extraction routines and data visualization tools, such as reports.

Figure 2-1 Data Foundation



Oracle Data Foundation Cloud Service (DFCS) is a cloud-native data management and processing platform that offers a single source of truth by using a unified and integrated results area. The platform stages the data directly from the source systems, processes it, and delivers results for downstream consumption.

Below are the salient features of the DFCS:

- Data Foundation **prioritizes consistency in definition of data** (and its governance) of a financial institution by using an industry-leading ontology of business terms to model the data.
- Data Foundation **ensures transparency in data management processes** by enforcing Change Management at its core, leading to safer adaptability (extension) of its comprehensive pre-built data model (and data catalog).
- Data Foundation **provides an extensive Results Area** that acts as the metaphorical single-source-of-truth for all data needs of an organization across key functions, such as, risk, finance, and compliance.
- Data Foundation also **standardizes distribution of data** to downstream applications and use cases by providing certifiable interfaces for consumption.

2.1 Organization of the User Guide

This user guide is divided into nine chapters. Chapters 2 through 7 focus on the core modules of the Data Foundation Platform.

1. **Getting Started**: This chapter outlines the process for ordering and configuring the Data Foundation Cloud Service.
2. **Data Catalog**: This chapter details the structure and organization of the Data Catalog, which outlines the data model for the Data Foundation.
3. **Data Controls**: This chapter covers the two types of data controls supported by the service: **Data Quality** (**DQ**) and **Reconciliation**. It describes the structure of prepackaged DQ rules and provides guidance on configuring and using these rules, along with the new reconciliation rules.
4. **Data Integration**: This chapter details the data integration features that support the sourcing of data into the staging area and the extraction of data from the Data Foundation for downstream consumption.
5. **Data Operations**: This chapter details various DFCS tasks that can be combined into a sequence of data movement activities, including sourcing, curation, and consumption.
6. **Data Visualization**: This chapter is divided into two main sections:
   - **Data Browser**: As DFCS is a SaaS service, users require a cloud-based data browser to explore data. This section explains how to browse both source data and results data.
   - **Pre-Built Reports and KPIs**: DFCS is pre-configured with pre-built reports and KPIs. This section provides guidance on using these examples for reference and customization.
7. **Change Management**: All changes in DFSC are managed through a comprehensive issue-mechanism. This chapter describes how to capture data events as issues and assign appropriate actions for resolution to the respective action owners.
8. **Key Terms and Concepts**: This chapter defines the key terms and concepts used throughout the User Guide.
9. **Support**: This chapter describes how to contact Oracle for support and clarification requests.

3
Getting Started

The Oracle Financial Services Data Foundation Cloud Service (DFCS) for Banking provides a consistent, efficient, and well-governed data management platform for internal as well as regulatory/jurisdictional data needs of a bank. It comes with prebuilt data integration pipelines and a comprehensive data catalog for well-known use cases of a bank.

3.1 Why DFCS?

Consider a bank with a diverse portfolio of products. They aim to accomplish the following two primary data management objectives.

- Maintain a consistent view of data to meet regulatory obligations and support internal performance measurement reporting.
- Reduce data sourcing costs by retrieving data once from a book-of-record system and utilizing it across multiple downstream applications.

Suppose the bank encounters challenges in achieving these objectives:

- The data nomenclature used by regulatory agencies and internal use cases does not align well with the terminology used in book-of-record systems.
- Each consuming application is developed independently, making it easier to source data multiple times rather than achieving alignment across all consuming applications.

To address these challenges and achieve their data management objectives, the bank decides to implement DFCS.

- DFCS offers a unified view of data sourced from book-of-record systems for all commonly known consumption use cases in a bank. With DFCS, the bank only needs to source data once, regardless of the number of downstream use cases currently in scope.
- A standardized set of quality-checked and reconciled datasets feeds into downstream applications, ensuring consistent reporting for both regulatory and internal use cases.

3.2 Product Setup

To get started, you must activate the Data Foundation Cloud Service (DFCS). Refer to Oracle® Financial Services Data Foundation Cloud Service for Banking Getting Started Guide.

3.3 Configuring DFCS

This section provides the details on setting up Data Foundation Cloud Service (DFCS).

- Deployment Processes
- Deploying the Domain

3.3.1 Deployment Processes

The pre-deployment process requires selecting business domains, which determine deployed data and metadata. Domains can be added later but cannot be removed once deployed. Extra domains do not impact service usage.

- Domain

3.3.1.1 Domain

Domains represent business segments that you operate. The list of domains available with your service will be listed for you to choose from. Your choice will determine data and metadata artifacts that are deployed by the service for your use. You may choose one or more domains and subsequently revise your choice with additional domains, as needed. You will not, however, be allowed to drop domains once selected and deployed. Please note that additional domains, even when chosen in error, will not adversely affect your usage of the service.

3.3.1.1.1 Select your Domain

This section helps you to select the business domain that aligns with your data deployment. This will tailor the service to instantiate the right data structure for banking-specific needs.

1. In the **Choose Domain** page, select **Banking** to deploy.
2. Click **Continue**.

   A confirmation message is displayed.

> **Note**
>
> - If you click **Continue** without selecting a domain, a warning message *Please select at least one domain.* appears.
> - Once you select a domain, the **Continue** button is enabled.
> - By clicking **Continue**, the **deployment process** is initiated for the selected domain.
> - The system displays the **deployment status**, indicating progress and completion.

3.3.1.1.2 Deploying the Domain

1. On the **Deploy Domain** page, the deployment steps, and the status of the deployment is displayed.
   The following is the list of steps initiated in the deployment process.
   - **Deploy Catalog**: Deploys a physical instance of data structures based on the selected Domains.
   - **Refresh Data Interface**: Generates and deploys a logical abstraction layer to support Data Services, following the specifications in the Catalog.
   - **Generate Data Quality Checks**: Creates and deploys Data Quality assessment routines as per the specifications in the Data Catalog.
   - **Deploy Dimension Rules**: Deploys Dimensions required by the service, including Slowly Changing Dimensions (SCDs).

- **Reporting Object Registration**: Registers reporting objects, enabling them to access and utilize within the reporting framework.
- **Generate Data Connections**: Deploys Data Services necessary for facilitating data movement within the deployed data structures.
- **Applying Redaction Policy**: Implements data protection by applying redaction rules to sensitive portions of the Catalog, including Personally Identifiable Information (PII).
- **Generate Pipelines**: Creates and deploys process definitions in the service's Process Management Framework to execute required functional tasks.
- **Deploy Application Data Service**: Deploys the data service layer required for application-level interactions with the underlying data structures.

The following is the list of statuses displayed in the deployment process.

- – **Deployment Status Indicators:** Each step is marked with a success, failure, or yet to start status.
  - **Deployment Progress**: The deployment status will change to **Ongoing**.
  - **Verify Deployment Status:** Ensure that all deployment statuses are marked as **Completed**.

2. Click **Start Deployment** to initiate the process.
3. Once the deployment is **Successful**, you will be automatically redirected to the login page.

> **Note**
>
> - If you are still logged in when the deployment is completed, you will be redirected directly to the homepage.
> - If you log out after triggering the deployment and log back in later, you will be taken to the homepage.
> - If the deployment is still in progress, you will be redirected to the deployment page displaying the progress.

3.3.2 Post-deployment Processes

After the deployment process is complete, additional steps are required to ensure the domain-specific configurations are fully functional and optimized.

1. After completing the pre-deployment steps, the **admin** must configure the following:
   a. Legal Entity
   b. Fiscal Period
   c. Configure Parameters
2. To configure the above steps, navigate to the DFCS URL, and then click the **User Menu** > **Administration**.
   The system displays all the required configurations.

3.3.2.1 Legal Entity

The **Legal Entity** setup is used to define the reporting currency and specify the fiscal period for posting entries. You can configure one or more Legal Entities for which the service maintains the Management Ledger and performs related financial tasks. For each Legal Entity, a

Management Ledger is maintained to generate financial reports as part of the reporting process. The service also supports a hierarchical structure of Legal Entities, enabling the capture and organization of financial data accordingly.

- Legal Entity Settings

> **Note**
>
> Maximum levels supported for Legal Entity hierarchy in Balance reconciliation is 5.

3.3.2.1.1 Legal Entity Settings

The **Legal Entity Settings** allow you to define the **reporting currency** used for financial transactions and reporting.

To set up the Reporting Currency, follow these steps:

1. To access **Legal Entity Settings**, go to the **Home** page, click **Administration**, and then select **Legal Entity**.

   The **Legal Entity Settings** page is displayed.

2. On the **Legal Entity** page, all available Legal Entities are listed on the left-hand side. To configure the **Reporting Currency** and **Fiscal Year** for a specific Legal Entity, follow these steps:

   a. Select the required Legal Entity from the list (if available).

   b. Set the fiscal period to open for posting entries by disabling or closed for posting entries by enabling the **Locked?** option. An open posting period is when the selected posting period is set to open and the other posting periods stay closed.

   c. Set the **Reporting Currency** to the required standard. This Reporting Currency is used during the Execution Process in Process Orchestration.

3. Click **Save** to save the Legal Entity settings.

3.3.2.2 Fiscal Period

The **Fiscal Period Setup** allows you to define the financial reporting periods for a specific **Legal Entity**. It ensures all transactions are recorded within the correct accounting periods, supporting accurate financial reporting and compliance with fiscal regulations.

- Set Up Fiscal Periods
- Compile Fiscal Periods

3.3.2.2.1 Set Up Fiscal Periods

Using this setup, you can:

- **Add a new Fiscal Period** to establish reporting timelines.
- **Edit an existing Fiscal Period** to update details such as start and end dates.
- **Open or close posting periods** to control financial entries.

To add or edit a Fiscal Period, perform the following steps:
To access this page:

1. To navigate to the **Fiscal Period Settings** screen, on the **Home** page, click **User Menu** > **Administration** > **Fiscal Period**.

The Fiscal Period Settings page is displayed.

Adding Fiscal Period

1. Click the **Setup** tab, the four built-in Fiscal Year Quarters are displayed: **Quarter 1, Quarter 2, Quarter 3, and Quarter 4**.
2. Select the required **quarter** for a specific **Legal Entity** before proceeding.
3. Click **Add Fiscal Period** to add a new row in the Fiscal Periods list.
4. Double-click the **Fiscal Period Name** to edit and update it.

> **Note**
>
> The Fiscal Period Name and Quarter Name must contain 50 or lesser characters.

5. Double-click the **Start Month** field and select the required month (default: January).
6. Double-click the **Start Day** field and choose the appropriate start day.
7. Similarly, select the **End Month** and **End Day** values.
8. Verify these values across all quarters before proceeding.
9. Click **Save** to save the added fiscal period for the selected quarter.

Editing the Fiscal Period

1. Follow the above steps, and double-click on any of the field to edit the values.
2. Click **Save** to save the modified changes.

Deleting the Fiscal Period

1. To delete an existing Fiscal Period, click the corresponding **Delete** icon.
   A confirmation message is displayed. Acknowledge the message.

> **Note**
>
> The Fiscal Periods set up in this Fiscal Period Module are associated with the Legal Entity. This Fiscal Period Attribute is sourced as a part of the Legal Entity.

3.3.2.2.2 Compile Fiscal Periods

To assign a year or a fiscal year to the fiscal periods of the legal entity, use the **Compile Fiscal Periods** process. The administrator can set up **Compile Fiscal Periods** using this procedure, or, after deployment.

To compile a set of fiscal periods for a year, perform the following steps:

1. To navigate to the **Fiscal Period Settings** screen, on the Home page, click **User Menu** > **Administration** > **Fiscal Period**.

   The **Fiscal Period Settings** page is displayed.
2. Click the **Compile** tab.

> **Note**
>
> If the fiscal period added in the setup page does not match with the compile date range, the system displays an error message *Error occurred while getting fiscal periods*.

3. Click **Start Date** and choose the required start date.
4. Click **End Date** and choose the required end date.

> **Note**
>
> Once a start date has been compiled, you cannot load data for earlier dates. Attempting to do so will result in a data ingestion failure due to partition restrictions.

5. Click **Compile** to generate a date dimension and fiscal calendar for the selected date range.

   The selected date range is generated.

3.3.2.3 Configure Parameters

The Parameters are constant-value, run-time, or current-date variables intended for use with DFCS. Apart from a seeded (predefined) set of **System Parameters**, you can add, modify, or remove them as needed.

- Accessing Parameters
- Parameter Settings
- Defining a Parameter
- Modifying and Viewing a Parameter
- Deleting a Parameter

3.3.2.3.1 Accessing Parameters

To access the Parameters window, follow these steps.

1. To navigate to the **Parameters** screen, on the **Home** page, click on **User Menu** > **Administration** > **Parameters**.

   The Parameters Summary window is displayed.
2. Use the search option to search for a specific source.
3. Click **Add** to create a parameter. For more information, see Defining a Parameter section.

3.3.2.3.2 Parameter Settings

This section describes the parameter settings.

Table 3-1 Fields in the Parameters Window

Fields	Description
Parameter Name	The name for the placeholder that you want to define. For example, MISDATE, which can be used as a placeholder for Date.
Parameter Description	The description for the parameter you want to define. Example description: “MISDATE can be used to substitute the date values for each day, dynamically, in mmddyyyy format.”
Parameter Type	There are three parameter data types: • **Constant** is selected for substituting a constant value. • **RunTime**is selected for substituting a value, dynamically, in run time. In the example that is used here, MISDATE can be selected as Run Time because it is used to make a substitution dynamically. • **CurrDate** is selected for substituting a value as Current System Date.
Value	Applicable only for **Constant** data types. Holds the actual value of the parameter.

3.3.2.3.3 Defining a Parameter

To define a new Parameter, follow these steps:

1. Click **Add** on the **Parameters Summary** screen.
2. Specify the information as described in the Parameter Settings section Parameter Settings.
3. Click **Save**.

3.3.2.3.4 Modifying and Viewing a Parameter

You can edit or view an existing parameter.

To edit or view a parameter, follow these steps:

1. Click the required parameter from the **Parameters Summary** screen.
2. Modify the name, description, type, value, default value or date format.
3. Click **Save**.

3.3.2.3.5 Deleting a Parameter

To delete an existing parameter, follow these steps:

1. On the **Parameters Summary**, click **Delete** corresponding to the parameter you want to delete.

   Confirm your action.
2. Click **Yes** to delete the Parameter.

> **Note**
>
> You cannot delete parameters in the following cases:
>
> - If the parameter is used by any higher object. Example: Connector/EDD.
> - If the parameter is pre-seeded.

3.4 DFCS User Interface

The **Data Foundation Cloud Service (DFCS)** application provides a tailored user interface based on the user's role. The landing page and available menu options are dynamically adjusted according to the user's assigned group.

1. **Business Analyst** – Focused on data exploration and analysis.
2. **Data Governance Analyst** – Provides tools for data quality, compliance, and governance.
3. **Administrator** – Manages system configurations, user access, and administrative tasks.

Each user group sees a customized dashboard and navigation menu, ensuring a role-specific experience within the application.

3.4.1 Business Analyst

The **Business Analyst** in **DFCS** is to support **data exploration and analysis**. It provides tools and functionalities that enable users to access, analyze, and visualize data efficiently.

3.4.1.1 Data Catalog - Line of Business (LOB)

Upon logging into the **DFCS** application, a **Business Analyst** is presented with a streamlined interface tailored for efficient data exploration and issue tracking.

Landing Page Components

- **Data Catalog View:**
  - Access **Line of Business (LOB)** and **Subject Area** views.
  - Ability to view **Entities** and **Ingress Connectors** for data exploration.
- **Data Browsing & Issue Logging**:
  - **Browse Data** with a dropdown option to refine searches in the **Subject** and **Results** area.
  - **Log Issue** directly from the home page for quick issue reporting.
- **Task List & Issue Management:**
  - Displays the top 5 items from **Issues & Actions**, highlighting overdue tasks.
  - Option to **Review Issues** directly from the home page without navigating to the inbox.
  - **View Inbox** option for a full list of tasks and communications.

Table 3-2 Data Catalog – Line of Business (LOB): Landing Page Components

Menu Option	Description
Source / Results	Land on the OAS Home page

Table 3-2 (Cont.) Data Catalog – Line of Business (LOB): Landing Page Components

Menu Option	Description
Log Issue	Open Issues and Actions module
Review	Open Issues and Actions module
View Issue	Open Issues and Actions module
No. of Ingress Connectors	Open Ingress connectors, no default filtration available for now
Number of Entities	Open Entities, no default filtration available for now

> **Note**
>
> The Task List displays only the **five most recently updated** items from **Issues & Actions**, based on the latest available updates.
> The **View Inbox** button below the task list, the **Review** button for each task item, and the **Log Issue** button all redirect to the same page—**Issues & Actions**—functioning similarly to an inbox. They do not navigate to any specific issue within Issues & Actions.

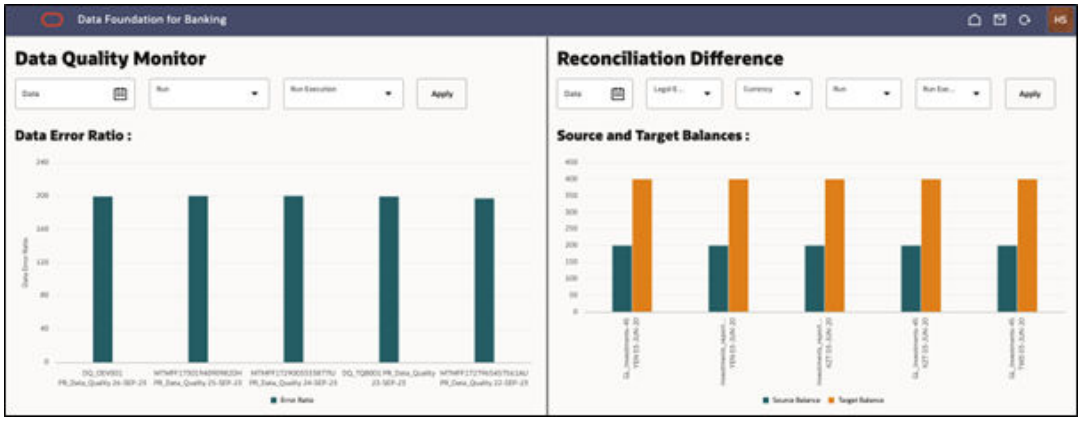
3.4.2 DFCS Data Governance Analyst

Upon logging into the **DFCS** application, a **Data Governance / Data Control User** is presented with a dashboard displaying key data quality and reconciliation metrics through pre-built graphs.

Landing Page Components:

- **Data Quality Monitor (DQ Monitor):**
  - Displays **two graphs**:
    1. **Data Error Ratio**
    2. **Number of Records Failed vs. Scanned**
  - Clicking on the **DQ Monitor graph** redirects the user to the **Data Visualization Report for DQ Monitor**.
  - A **Refresh Data** button at the top right corner allows users to update the displayed data.
- **Reconciliation Difference:**
  - Displays **two graphs**:
    1. **Source and Target Balances**
    2. **Negative and Positive Absolute Differences**
  - Clicking on the **Reconciliation Difference graph** redirects the user to the **Data Visualization Report for Reconciliation Difference**.
  - A **Refresh Data** button at the top right corner allows users to update the displayed data.

Figure 3-1 DFCS Data Governance Analyst User Interface



3.4.3 Administrator

Upon logging into the **DFCS** application, an **Administrator User** is presented with a **Foldout Menu** and a **Task List** for efficient system management and oversight.

The following task lists are available for easy navigation.

- **Home**: The user can view the dashboard/ homepage of the DFCS application.
- **Inbox**: It provides a centralized view of recent tasks, issues, and actions. You can log an issue by clicking on **Log Issue** icon on the top right corner of the screen. It lists items with key details such as status (e.g., *New*, *Closed*), type (Action or Issue), source (Catalog), and timestamps for creation and modification. Users can search, select multiple items, log new issues, and access item-specific options via the action menu.
- **Refresh**: Refreshes the current view or data on the page.
- **User Menu**: Displays username, privileges, Object Migration - Import and Export, Data Management Interface, and About details.
    1. **Administration Privilege** – Access to system administration features.

> **Note**
>
> This depends on the access privilege listed for the user.

    2. **Object Migration - Import** – Import data objects into the system.
    3. **Object Migration - Export** – Export data objects out of the system.
    4. **Data Management Interface** – Likely opens a module for managing data operations.
    5. **About** – Expandable option for viewing application or version details.
    6. **Sign Out** – Logs the user out of the platform.

Landing Page Components:

- **Foldout Menu:**
    - The welcome banner provides a status indicating that the session is currently **Active** and the last login date.
    - Provides access to key administrative functions, including:
        1. **Data Catalog**

2. **Data Services**
3. **Data Controls**
4. **Data Visualization**
5. **Task List**

Table 3-3 Landing Page Components

Foldout Menu Item	Sub menu options
Data Catalog	– Business Terms – Derived Business Terms – Entities – Glossaries – Application Connectors – Glossary Mapping * Extend Data Catalog

Data Services	– Data Source Templates
	– Data Operations
	– Data Extraction
	– Ingest Connectors
	  * Add Data Source Templates
	  * Add Data Operations
	  * Add Data Extraction
	  * Add Connectors

Data Controls	– Data Quality Check
	– Data Quality Group
	– Data Quality Exceptions
	– Reconciliation Rules
	  * Add Reconciliation Rule
	  * Extend Data Quality

Data Visualizations	– Source Data Visualization – Results Data Visualization – Data Quality Dashboard – GL Reconciliation Dashboard – Add New Visualization * View Pre-built Reports

Task List	The **Task List (Top 5 Items)** panel provides a quick overview of the most relevant pending tasks assigned to the user.
	– Displays the **top 5 tasks** based on relevance.
	– Each entry includes:
	  * **Priority Level** (e.g., Medium, Low)
	  * **Task Name** (clickable link, e.g., `test_doc_act`)
	  * **Due Date** (all shown as "Due in 7 months")

Ask Oracle	Click on the Ask Oracle icon at the bottom-right corner to enable users to navigate through various configuration and data governance areas of the Oracle platform.

> **Note**
>
> The number displayed beneath the items in the Foldout menu denotes the **cumulative count of items** available under that category.

4

Data Catalog

Data Foundation organizes metadata for the underlying data model using a shared glossary of business terms and entities. By sharing business terms across entities, it ensures consistency in physical data characteristics, such as data types and lengths. It also centralizes data governance by automatically applying rules, like data quality standards, to any entity that uses a field mapped to the business model.

4.1 Business Terms

The catalog acts as a **central repository** for **Business Terms (BT)**, ensuring consistent definitions for business concepts across the platform. It contains nearly **10,000 business terms** spanning more than **1,500 entities**.

Each **business term** includes key attributes such as:

- **Catalog Data Type**
- **Element Type**
- **Seeded/ Custom Business Terms**
- **Originating Application**
- **PII Indicator** (identifying if it contains Personally Identifiable Information)

Related business terms share a **common definition** while maintaining **context-specific relevance** for different user roles, ensuring clarity and consistency across the organization.

4.1.1 Business Term Name

The **Business Term Name** serves as the **standardized identifier** for a Business Term within the **Data Catalog**, ensuring **uniformity and clarity** across the application. It provides a **concise, human-readable representation** that effectively captures the term's **purpose and meaning** in a logical and structured format.

Key Characteristics:

- **Standardized & Consistent** – Ensures uniform terminology across systems.
- **Clear & Readable** – Designed for both technical and business stakeholders.
- **Supports Data Traceability** – Facilitates seamless mapping across diverse systems.

For example, a **logical name** like *End of Period Balance* clearly conveys its **role and relevance** within financial reporting and analysis.

The **naming conventions** follow best practices, prioritizing **clarity, scalability, and alignment** with the associated entity and attributes, ensuring effective communication and governance across the data ecosystem.

4.1.2 Business Term Data Type

Data Types provide a framework for classification that defines the nature of data within a system, ensuring proper interpretation, storage, and manipulation. Each logical data type is

designed for specific use cases, clearly distinguishing how different types of data should be handled. For instance, types like *amount*, *amount_long*, and *amount_medium* represent financial figures with varying levels of precision and scale, while currency denotes monetary values linked to a specific currency. These logical data types help maintain the structure, integrity, and compatibility of data models across various systems and applications.

Following are some of the Data Types supported in DFCS:

Table 4-1 Mapping of logical data types to Oracle-specific data types

Logical Data Type	Oracle Data Type
Amount	`NUMBER(22,3)`
Date	`DATE`
Flag	`CHAR(1)`
Indicator	`VARCHAR2(1)`
Rate_Percent	`NUMBER(11,6)`
Code_Alphanumeric	`VARCHAR2(20)`

4.1.3 Business Term Description

A Business Term Description provides a fundamental explanation of a Business Term, offering a base definition that remains consistent and relevant across all contexts. It outlines the term's core purpose and meaning, ensuring clarity and uniformity in its understanding and application. This description serves as a common reference for stakeholders, connecting technical and business perspectives while remaining independent of specific implementations or use cases. For example, **End of Period Balance** could be defined as *the account balance at the end of a reporting period, reflecting a snapshot of financial standing*. By delivering a universal and context-neutral definition, the Business Term Description promotes clear communication, traceability, and alignment with business objectives across various systems and processes.

4.1.4 Business Term References

Business Term References represent a comprehensive list of all entities within the data catalog where a specific Business Term is used or mentioned. This includes the source and result entities that store, process, or propagate the term, enabling complete traceability within the data architecture. By documenting these references, stakeholders can track the flow and usage of the term across various system tables, ensuring consistency and alignment. For instance, the term **End of Period Balance** might appear in tables related to financial reporting, account summaries, and transactional data. These references ensure that all data models adhere to accurate term definitions and interpretations, promoting data integrity and consistency.

4.1.5 Related Business Terms

Related Business Terms are variations of a core business term, each adapted to a specific contextual meaning within different business processes or applications. While they share a common foundational concept, their interpretation or usage may vary to address distinct functional requirements. For example, "Country Code" might refer to a standardized ISO code for global identification, whereas **Regulatory Country** could represent a jurisdiction-specific classification used in compliance or regulatory reporting. Defining related business terms ensures clarity and precision in data usage, fostering effective communication across diverse teams and systems. This approach enhances traceability, minimizes ambiguity, and

strengthens data governance by connecting related terms under a unified framework while accommodating their contextual distinctions.

4.1.6 Business Term Contextual Descriptions

The Contextual Description offers application-specific definitions of a Business Term, tailored to reflect its unique interpretation and usage within particular systems or domains. It complements the universal Business Term Description by providing context that aligns with the functional and technical requirements of each application. For instance, the term **End of Period Balance** may refer to a customer's account balance at the close of a financial period in a core banking application, while in the insurance domain, it could represent the balance remaining on a policyholder’s account. These tailored definitions ensure clear communication, promote accurate data usage, and ensure that the term’s meaning aligns with the operational and analytical needs of each system. By providing targeted descriptions, the Contextual Description helps bridge potential gaps in understanding and maintains consistency across diverse applications.

4.1.7 Business Term Data Quality

Data Quality Rules establish the criteria and constraints necessary to ensure the accuracy, consistency, completeness, and reliability of data associated with a Business Term. These rules define validation checks, threshold limits, and compliance conditions that data must meet to maintain its integrity across systems and processes. For example, for the term **End of Period Balance**, data quality rules might include ensuring the value is non-negative, matches the sum of debits and credits for a reporting period, and corresponds correctly to the associated account type. These rules are applied at both the table and attribute levels in the data model to detect anomalies, prevent errors, and ensure compliance with regulatory or business standards. By implementing strong Data Quality Rules, organizations can uphold data integrity, foster trust in their data assets, and enable accurate decision-making.

4.1.8 Business Term List of Values

The List of Values (LoV) for Business Terms consists of a predefined set of acceptable values or categories associated with a specific Business Term. These values establish clear boundaries for data entry, ensuring consistency, standardization, and accuracy across systems and processes. For example, the Business Term might have a List of Values such as "**Active**, **Inactive**, **Closed**, and **Suspended**. The LoV is typically managed in lookup tables within the data model and plays a key role in validation, reporting, and analysis. By defining and enforcing the List of Values, organizations can reduce errors, simplify data interpretation, and ensure consistent application of the term across various operational and analytical contexts.

4.1.9 Business Term Use Case

The Business Term Use Case documents the specific applications of a Business Term across various systems, illustrating how the term supports distinct business processes and analytical needs. This mapping ensures that the term’s definition and usage align with the objectives of each system. For example, the term **End of Period Balance** might be used in Profitability applications to calculate income and expense margins, in Asset Liability Management to evaluate balance sheet stability, and in Liquidity Risk management to assess cash flow sufficiency. By outlining these use cases, the Business Term Use Case promotes accurate data alignment across systems, facilitates seamless integration, and ensures the term is effectively utilized to achieve both operational and strategic goals.

> **Note**
>
> Once the term's definition and usage are aligned with the intended objectives, you can provide your comments, including any relevant details related to the definition.

4.2 Entities

Entity refers to a distinct and logically defined data object that represents a set of data in banking operations. Entities are used to structure and organize data within a database or data warehouse and are critical to maintaining consistency, traceability, and clarity in data management. The entity contains business terms. The granularity of the entity is decided by Primary Key which can be one or many business terms. The entity will hold the data from various source systems or data within Data Foundation.

4.2.1 Line of Business

Data Catalog in DFCS provides comprehensive support for data for the following lines of business.

- Retail and Personal Banking
- Wholesale Banking
- Investment Banking and Wealth Management
- Treasury
- Ancillary Lines of Business

It also has rich coverage for Reference and Market Data that are needed by the lines of business.

Additionally, it supports a rich dimensional model for storing results for a comprehensive set of use cases across Finance, Risk, and Compliance domains.

Table 4-2 Line of Business

Category	Total No. of Entities
Retail and Personal Banking	64
Wholesale Banking	103
Investment Banking and Wealth Management	68
Treasury Services	28
Ancillary Lines of Business	33
Reference and Market Data	799

4.2.1.1 Grain Classification

Data Catalog in DFCS provides the grain classification. Each grain can have one or more entities. Grains represent the smallest, indivisible units of financial data that form the foundation for processing and analyzing entities. These grains ensure granular-level detail and traceability across various entities. Examples include entries such as *Customer Account*, which identifies individual customer financial details, and *Customer Account Transactions*, which record specific financial movements. *Date* serves as a temporal dimension for tracking

transaction timelines, while *Exchange Rates* provide currency conversion details essential for multi-currency operations. *General Ledger Data* consolidates financial information at the account level for reporting and analysis, complemented by *Management Ledger* for managerial insights. Other granular elements, such as *Group Insurance Policy Beneficiary* and *Group Insurance Summary*, capture policy-specific details, while *Policy Claim*, *Policy Claim Transaction*, and *Policy Commission Transactions* detail insurance operations. Finally, *Party Consent* represents customer authorization for processing sensitive financial data. These grains collectively create a robust and detailed framework for accurate and transparent financial accounting.

Some of the examples for grain counts are Customer Accounts, General Ledger Data.

4.2.1.2 Entity Type Classifications

Entity type classification is a structured method for organizing entities based on their roles and functionality within a data catalog. Each entity type plays a distinct role in ensuring seamless data processing and analysis. Within this framework, the distribution emphasizes the importance of each classifications:

- **Dimension Results**: These entities offer contextual and descriptive master data.
- **Fact Results**: These entities store transactional and quantitative data that serve as the foundation for performance measurement and reporting.
- **Point of Integration**: These pivotal entities act as connectors, ensuring the smooth exchange and alignment of data across different Apps.
- **Processing**: These entities handle computational logic and business operations, transforming raw data into actionable insights.
- **Staging**: The most numerous, these entities store raw or intermediate data, playing a vital role in validation, enrichment, and data transformation workflows.

This classification ensures each entity is effectively utilized for its specific function, fostering efficiency and consistency in data-driven processes.

Table 4-3 List of Entity Type

Entity Type	Count
Dimension Results	779
Fact Results	626
Point of Integration	8
Processing	14
Staging	1203

4.2.2 Product Processor Entities

The classification of financial products based on their processor categories and catalog entities is crucial for organizing and managing data within financial systems. This systematic approach categorizes various financial instruments and contracts across different domains, ensuring accuracy and consistency. By organizing products into distinct categories such as assets, derivatives, liabilities, and off-balance sheet assets, this classification helps improve data accuracy, ensure regulatory compliance, and streamline reporting. Examples of such classifications include assets like loan contracts, overdraft accounts, and investments; derivatives like credit derivatives, swaps, and options; liabilities such as term deposits and borrowings; and off-balance sheet assets like commitments and letters of credit. This

structured framework supports consistent product processing, facilitates seamless integration across financial systems, and ensures clarity in the representation of financial data.

Some of the core products of banking are:

- Loan Contracts
- Term Deposits
- Option Contracts
- Letter of Credit

4.2.3 Reference Data Entities

Reference data in a data catalog serves as a foundational component that standardizes and contextualizes data across systems and processes. It represents relatively static datasets used to provide consistency, alignment, and meaning in data-driven workflows. Examples of reference data include Catalog Entity, which organizes and identifies key entities; Currency, which defines monetary units for financial transactions; and Country, which standardizes geographical identifiers. Additional reference data like Forecast Exchange Rate provides predictive currency values essential for planning and analysis, while Macro Economic Variables and Macro Economic Variable Details capture high-level economic indicators and their granular components, respectively. By maintaining centralized, accurate, and easily accessible reference data, the data catalog ensures reliability, fosters interoperability, and enhances the integrity of analytics and reporting processes.

Some examples of the catalog entities are Currency, and Country.

4.2.4 Results Area Population

Data Foundation has ability to provide data for analytical applications in finance, risk, and compliance domains. It also has well-designed placeholders to store results data from these applications.

Key Features of the Results Area Design

- **Design**: The Reporting Area data model is a dimensional data model. This means that it consists primarily of central fact tables (de-normalized), related to multiple dimension tables, also called a Star Schema. Additionally, the dimension tables are shared across the star schemas in the reporting mode, meaning they are Conformed Dimensions.
- **Support for multiple scenarios of analysis**: The reporting data model has been designed to support scenario analysis of the sort required by financial institutions that need to measure and report risk and performance under a variety of economic scenarios. The reporting model provides support for this kind of analysis via a Run Dimension – it allows analytical engines to load multiple result sets identified by scenarios.
- **Support for Cross Functional Reporting**: The third critical feature of the Reporting area design is the support for cross-functional reporting. Majority of emerging needs relate to the analytical problems at the intersection of the distinct areas of Risk, Performance, Customer Insight, and Compliance. This is addressed amply by the results area of Data Foundation.

4.3 Catalog Extensions

Extension of data catalog is carried out with due consideration for Change Management through an Issue-Action Management feature. Final step of Change Management includes a built-in administrator level oversight for publishing the catalog changes into actionable

metadata as per a schedule that does not conflict with the data pipelines under execution. For further information about how to browse and extend the Data Catalog, refer to the Oracle® Data Foundation Cloud Service Data Catalog User Guide.

5

Data Services

This section outlines how data is exchanged between the Financial Services Data Foundation Cloud Service for Banking and external systems. This is achieved through the logical abstraction of the Data Catalog, which is exposed as Application Data Interfaces (ADIs). Users can define External Data Descriptors (EDDs) through the interface, enabling seamless mapping of EDDs to ADIs and the creation of Connectors for efficient data services.

For more information, see Oracle® Financial Services Data Foundation Cloud Service for Banking Data Services Guide.

5.1 Background and Coverage

Data Foundation comes pre-configured with capabilities for assimilating data for the following products. Assimilated data will act as single source of truth for all product related data. Data Foundation also supports extensions of the underlying platform to support unique needs of the customer not available in the pre-configured version.

While customers are expected to setup sourcing of data using EDDs, Data Foundation ships with pre-built results area connectors for the following products.

- Bills Acceptances
- Common Account Derived Attributes
- Common Account Summary
- Deposits
- Financial Derivatives
- Loan Account Summary
- Annuity Contracts
- Bill Contracts
- Borrowings
- Cards
- Casa (Current/Checking Accounts, Savings Accounts)
- Commitment Contracts
- Commodity Contracts
- Correspondent Accounts
- Credit Derivatives
- Forwards Contracts
- Futures Contracts
- Foreign Exchange Contracts
- Investments
- Letter Of Credit Contracts

- Leases Contracts
- Loan Contracts
- Merchant Cards
- Overdraft Accounts
- Option Contracts
- Payment Settlement Accounts
- Prepaid Cards
- Repo Contracts
- Swaps Contracts
- Term Deposit Contracts
- Other Assets
- Custodial Accounts
- Trusts
- Trading Account
- Connectors for Islamic Banking products too are supported out-of-the-box.
  - Ijarah Accounts
  - Istisna Accounts
  - Mudarbah Accounts
  - Murabahah Accounts
  - Musharkah Accounts
  - Salam Accounts
  - Sukuk Accounts

5.2 Data Sourcing

Data Sourcing refers to the processes of acquiring data from both internal and external systems (data sourcing) and transferring it to other environments or applications. Data sourcing involves identifying, extracting, and collecting data from various sources, such as transactional systems, third-party providers, or data warehouses. This data is then processed and integrated to support business operations, reporting, or analytics. In contrast, data egress deals with the movement of processed data from its original system or database to other platforms, systems, or end-users. This may include sharing data with downstream applications, regulatory reporting systems, or external partners. Data sourcing must be carefully managed to ensure data quality, security, and compliance with regulatory standards, particularly when handling sensitive financial or customer information. Effective strategies for data sourcing is vital to ensuring that the right data is delivered to the right destinations in a timely, secure, and accurate manner. In DFCS, data sourcing is facilitated through Connectors using External Data Descriptors for each entity.

For more information on External Data Descriptor and Connectors, see Data Services guide.

5.3 Application Data Services

Application Data Service (ADS) is a multi-tenant, microservices-based integration framework that enables secure, automated data exchange between Oracle Cloud Infrastructure (OCI) services. It facilitates seamless connectivity between Data Foundation and other OCI applications, such as Profitability and Balance Sheet Management Cloud Service (PBSMCS), by managing data flow and integration at scale.

ADS Provides pre-built components for execution and scheduling of data exchange jobs. For more information, refer to Oracle® Financial Services Data Foundation Cloud Service for Banking Data Services Guide and DFCS Integration with PBSMCS for ADS User Guide.

6

Data Controls

Data Controls consists of a scalable, rule-based engine that uses a single-pass integration process to standardize, match, and duplicate information across global data. This framework within the infrastructure system facilitates you to define rules and execute them to query, validate, and correct the transformed data existing in an Information Domain.

For more information, refer to Oracle® Financial Services Data Foundation Cloud Service for Banking Data Controls User Guide.

6.1 DQ Checks

Data Quality Framework consists of a scalable rule-based engine that uses a single-pass integration process to standardize, match, and duplicate information across global data. This framework within the infrastructure system facilitates you to define rules and execute them to query, validate, and correct the transformed data existing in an Information Domain.

Data Catalog Contents include Data Quality Check Rules and DQ Groups (logical grouping of DQ rules). These Rules are defined at the Business Term and Entity Level, and seeded as a part of the Data Catalog Content.

For instructions on how to create/edit/delete DQ rule, please refer to Oracle® Data Foundation Cloud Service Data Catalog.

The following is a list of pre-configured Data Quality rules included in the offering:

In the banking domain, data quality is essential for ensuring the integrity, accuracy, and reliability of financial information that supports decision-making, compliance, and operational efficiency. To maintain high standards of data quality, various validation rules are applied to the data. These rules help identify and prevent errors, inconsistencies, and incomplete data entries that could lead to incorrect business processes or regulatory violations. Common data quality rules used in banking include Prebuilt Business check, list of values, referential integrity checks, range checks, and more. Below is an overview of these rules, along with examples specific to the banking domain, which highlight their importance in managing data effectively across banking systems.

Data Quality Rules	Definition	Example	Objective
Prebuilt Business Checks (Custom Checks)	Prebuilt Business check is a rule based on business specific or unique conditions that don’t fall under standard data quality rule categories.	A customer's Account Balance must not be negative if the account type is 'Savings'.	To apply business-specific logic that isn't captured by standard validation rules.
List of Values or Code Check	This rule ensures that a field contains a value from a predefined list of valid values, such as bank codes, account types, or country codes.	The Account Type must be one of the following: 'Checking', 'Savings', 'Credit''.	To ensure only valid and standardized data entries are used in the system.

Data Quality Rules	Definition	Example	Objective
Referential Integrity Check	Ensures that relationships between different tables or data entities are correct, typically by checking foreign keys against primary keys.	The Loan ID in the Payment History table must exist in the Loan Account table.	To prevent orphaned records and ensure that linked data entities are consistent across the system.
Column Reference or Specific Value Check	Ensures that the value in one column is consistent with values in another column or a related data set.	If the Account Status is 'Closed', then the AccountBalance must be zero.	To ensure that business logic between columns is followed correctly.
Generic Check	A general validation check applied across various data sets, such as length checks or format checks, which doesn't belong to a specific category.	The IBAN number should be 22 characters long and contain only alphanumeric characters.	To apply basic checks that are common across different data sets.
NULL Value Check	Verifies that required fields are not missing, meaning they are not NULL.	The Customer Name field must not be NULL for all active customer records.	To ensure that essential customer or transaction information is always captured.
Range Check	Verifies that data values fall within a valid range, which is commonly used for numeric fields or dates in banking systems.	The Credit Score must be between 300 and 850.	To ensure that data, such as credit scores or loan amounts, falls within realistic and acceptable ranges.
BLANK Value Check	Ensures that fields do not contain blank or empty string values, which may represent missing or incomplete data.	The Loan Amount field must not be blank or contain only spaces in a loan application.	To prevent incomplete data from being entered into critical banking systems, ensuring full and valid records.

These banking-specific examples help ensure that critical financial data is correct, consistent, and adheres to industry standards for data integrity and compliance.

In DFCS the following number of rules are bundled /autogenerated in each category.

Table 6-1 Number of Tools that are bundled

Check Type	No of Rules
Prebuilt Business Checks	807
List of Values or Code Check	129859
Referential Integrity Check	7612
Column Reference or Specific Value Check	3998
Generic Check	1030
NULL Value Check	279
Range Check	895
Duplicate Check	0
Data Length Check	475

Table 6-1 (Cont.) Number of Tools that are bundled

Check Type	No of Rules
BLANK Value Check	3998

6.2 Balance Reconciliation

Balance Reconciliation reconciles the balances from the operational systems of a bank with the balances maintained in General Ledger (GL) of the bank. The bank's operational data are sourced into standard product processor entities or other operational data entities used by the bank.

The balances in the GL of a bank are the ones that are audited and duly certified by internal and external auditors. Hence, considered to be the final version of the truth in a bank. Therefore, all data extracted from any other operating system of a bank must be reconciled with the balances maintained in the GL to ensure they are complete, accurate, and comprehensive. It acts as an authentic and reliable base for any further decision-making.

DFCS' GL Reconciliation has pre-configured definition process. Currently DFCS supports below type of reconciliation:

- General Ledger to Product Processor

> **Note**
>
> For more information on Balance Reconciliation, see Balance Reconciliation in the **Data Controls** user guide.

7

Data Operations

Process Orchestration is a design and execution service that enables process pipeline developers to implement pipelines modeled by business analysts. Process pipeline developers use this framework to orchestrate Run Pipelines within DFCS, and also to design the artifacts that are used in the pipelines.

The Process Modeller and the Process Monitor are two key parts of Process Orchestration. The Process Modeller is used to model pipelines. It aids in representing the various artifacts required for modeling and provides implementation details of the DFCS process artifacts. The Process Monitor is used to monitor instantiated pipelines of DFCS.

Please refer to Data Operations User Guide to learn about navigating Process Modeller and the Process Monitor interfaces.

This section also describes a user data entry interface for managing reference or master data entities. DFCS-specific pre-built process components included in the process modeler are detailed at the end of the chapter, while other pre-built process components are covered in the Oracle® Financial Services Data Foundation Cloud Service for Banking Data Operations User Guide.

7.1 Uploading Data Files for Ingestion

The **File Operations** process allows users to upload and download files to and from the object store. It provides options to generate Pre-Authenticated Request (PAR) URLs for secure uploads and manage stored files through an easy-to-use interface.

You can upload any CSV, XLSX, and Text file, zip file that you wish to be stored in the object store, which can be processed later.

To upload a file, complete the following steps:

1. On the DFCS home page, click the **User Menu** and click **Administration**.
2. Click **File Operations**.
3. Click **Upload File** or **Generate PAR URL to upload file** .

A **Pre-Authenticated Request (PAR) URL** is used to upload files directly to the object store securely.

1. Click **Generate PAR URL**.
2. In the popup window:
   - Enter the **File Name**.
   - Select the **File Type** from the dropdown list.
   - Enter the **File Size** (in MB).
3. Click **Add** to include multiple file details (optional).
4. Click **Generate** to create the PAR URLs.
5. The system will display the generated URLs for use in file uploads. This generates a PAR (pre-authenticated request) URL which is valid for 24 hours. This PAR URL is used to upload the file into the object store.

6. Enter the File Name.

Upload File

You can upload a file either directly or by using the generated PAR URL.

Steps to Upload a File

1. Click **Upload File**.
2. The **Upload** popup appears.
3. Either:
   - **Drag and drop** the file into the box, or
   - Click to browse and select a file.
4. Supported file formats: **XLSX**, **CSV**, **TXT**, and **ZIP**.

> **Note**
>
> Enter a number between 0 and 8,053,063,681. The input should be no more than 255 characters. Ensure the value matches the following format: '[a-zA-Z0-9][a-zA-Z0-9.-_:]*[a-zA-Z0-9]'.

5. The selected file name appears under **Selected file**.
6. Click **Upload** to begin uploading.
7. Once uploaded successfully, the file status will be updated in the main table.

After uploading, all available files are listed in the table with the following details:

Column	Description
File Type	Type of file (e.g., XLSX, CSV, ZIP)
File Name	Name of the file stored in the object store
File Size	File Size
Created by	User who uploaded the file
Last Updated	Timestamp of the last modification
Status	Indicates whether the file is Uploading, Available, or Failed
Download	Provides a link/button to download the file

File Status Flow

1. **Uploading** – When a PAR URL is generated and file upload is in progress.
2. **Available** – Once the file is successfully uploaded, scanned, and ready for download.
3. **Failed** – If upload or validation fails.

7.2 Data Maintenance Interface

Data Maintenance Interface (DMI) helps to design a Data Form in a user-specified format. Further, it allows performing data entry-type actions using the Designed Form.

The **Form Builder** within the **Data Management Interface (DMI)** provides users with the capability to design and configure custom forms tailored to data-related activities. These forms serve two primary purposes:

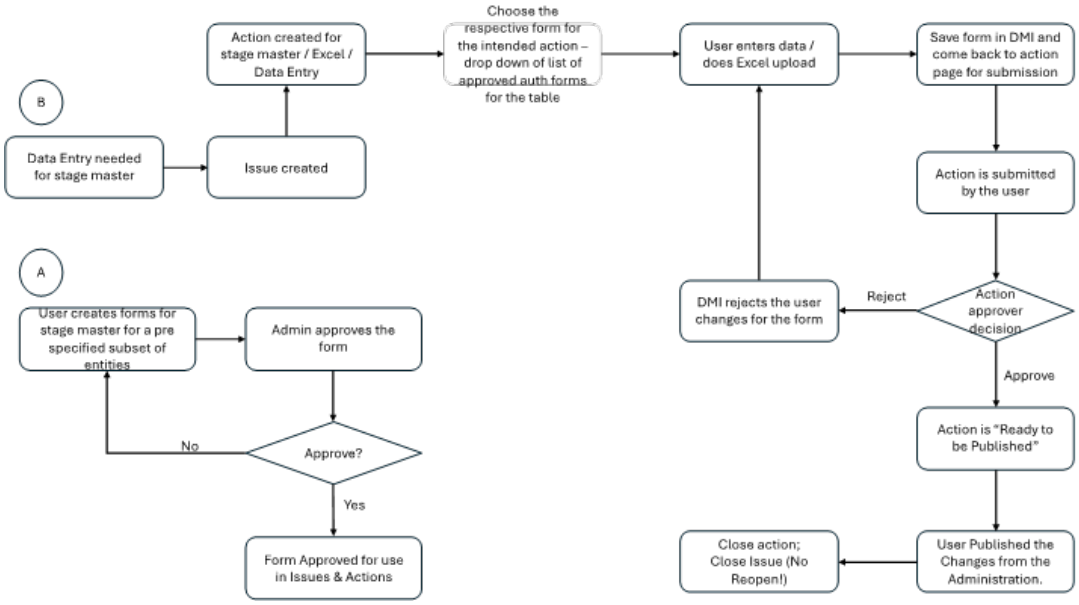
- **Data Entry**: To enable manual input of data into structured formats.
- **Excel Upload**: To allow users to upload datasets in bulk using Excel files.

The **Data Management Interface (DMI)** facilitates a structured workflow for creating, authorizing, and using forms to manage data input. The process consists of the following key stages:

- **Form Creation**: A user initiates the process by creating a form using the **Data Entry** or **Excel Upload**. This form includes configurations such as entities, attributes.
- **Form Authorization**: Once the form is created, it must be reviewed and authorized by a user with **authorization privileges**. This step ensures the form complies with data standards and access controls.
- **Form Activation**: Upon approval, the form is marked as **Authorized**.
- **Data Entry**: Users can now **enter data** using the authorized forms. The inputted data is then captured and stored in the **database**.

> **Note**
>
> Authorized Forms are the central point of control, ensuring only approved data structures are used. The process enforces data governance by involving validation and authorization steps before data input. Supports both manual entry and bulk upload depending on the form type.

Figure 7-1 DMI Process Flowchart



Refer to the Identity Management User Guide for details on user roles and their descriptions, which define the permissions required to perform the actions described above.

7.2.1 Configuring Data Maintenance Forms

You can create forms from the Form Designer View. The forms in the application are created with details configured for data maintenance and require authorization for use after creation. You can also edit, view, and delete forms, from the Forms Definitions Summary, based on the assigned roles and privileges. For more information, refer To access the Data Maintenance Interface (DMI):

1. Login to your Oracle Cloud account, with the required credentials to access DMI.
2. Select the **Profile** button and click on **Data Maintenance Interface** to display the **Forms Definition - Summary** page. This section enables users to create and manage custom forms for data operations. It provides a summary of all existing DMI forms and an option to add new ones.

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

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

       > **Note**
       >
       > Make sure the Excel files are saved in the Microsoft Office 2016 Standard version. Excel files saved in Office 365 version cause compatibility issues.

     - **Data Exporter** – creates form based on an entity table.
     - **Data Entry** – creates the form based on the entities, attributes and rulesets provided by the user.
   - **Status** - The processing status of the form definition. The various processing statuses are:
     - **Draft** – when the form is under development and is yet to be submitted for approval.
     - **Pending Approval** – When the approval is pending.
     - **Approved** – When the form definition is approved.
   - **Created By** - The Username of the logged in User who created the form.
   - **Actions** - View, copy or edit or amend a form definition.
   - **Info** - The form definition details including:
     - Created Date
     - Last Modified By
     - Authorizer

– Authorizer comments

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

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

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

7.2.2 Creating New Form

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

1. In the **Data Maintenance Interface** page, click **Add**, to access the **Create Forms Definition** page.

   Opens the **Designer - Configure** screen.

2. Enter the following details.

   - **Excel Upload** – creates form based on uploaded Excel sheet. For bulk uploads via spreadsheet.
   - **Data Entry** – creates the form based on the entities, attributes and rulesets provided by the user. For manual data input.
   - **Code**: Auto-generated.
   - **Name**: Enter the form name.
   - **Description**: Provide a short explanation of the form's purpose.

> **Note**
>
> For more information about creating various form definitions:
>
> - Configuring Data Entry
> - Configuring Excel Upload

7.2.2.1 Configuring Data Entry

Use the Data Entry option to create a Forms Definition and select the table and attributes that you want to modify.

You can enter the values for the table records in the approved Forms Definition from Data Entry, after the new Forms Definition is approved from the Forms Definition Summary Page.

To configure the Data Entry definition, enter the details in the following sequence.

- Details
- Entities
- Attributes
- Ruleset

- User Security

1. Select **Data Entry** in Create New Form Definition page and enter the required details.
2. Enter the following details:
   - **Code** - Unique form code. This value is auto-generated.
   - **Name** - Enter the name. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed.
   - **Description** - Enter the form description. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed.
3. Click **Continue** to access the **Entities** tab or **Save** to store as draft.
4. Once the form is updated, click **Submit** if you want to submit the Forms Definition for manual/auto approval.

7.2.2.1.1 Entities

In the Entities tab, you can associate an entity with the form. An entity typically represents a data object or database table where the data entered through the form will be stored.

1. In the Entity search box, enter an entity name and select from a list of predefined entities. The key icon signifies that the entity is a primary reference for data mapping.
2. Click **Continue**, to proceed with the **Attributes** tab.

7.2.2.1.2 Attribute

This step allows users to define **which data attributes** (fields) from the selected entity will be included in the form. These attributes form the actual input fields visible to the end-user.

1. Select the **Filter** from the existing filters in the drop-down list or click **Filter** to define a new one for the form definition. The use of Filters is optional.

   Filter Condition: Enables conditional filtering of entity attributes to display only relevant fields.

   - Click the **filter icon** to open the **Expression Builder**.

   Filter Condition Builder (Pop-up): This builder helps you create logic to filter attributes based on values.

   - **Select Columns**: Pick an attribute to filter on.
   - **Condition**: Choose a logical operator (e.g., equals, contains).
   - **Filter Value**: Define the specific value to match.
   - Use the **Validate** button to test your expression.
   - Click **Apply** to activate the filter and return to the attributes list.

> **Note**
>
> If no columns are available, it means no entity was selected or the entity has no attributes mapped.

Table 7-1 Attribute Grid Columns

Field	Description
Entity Name	The name of the associated entity.
Source Attribute Name	The actual field name from the entity.
Participate in Data Security	Marks if the attribute should be part of access control logic.

2. Click the drop-down arrow corresponding to the table in the **Entity Name**, to view the attributes in the entity table.
3. Select the attributes for which you want to modify the data from the **Attribute Name**.
4. Once attributes are selected, click **Continue** to proceed to Ruleset configuration, where form logic and validations can be defined.

7.2.2.1.2.1 Creating Data Filters for New Form Definitions

Filters help to view and export specific set of data from data exporter forms.

Complete the following steps if you want to add filters to the Forms Definition:

1. Click on **Launch Filter Condition**, to access the Filter Condition pane.
2. Enter/ select the following details.
   - **Column** - Select the column from the applying the filter.
   - **Condition** - Select one of the following filter conditions, to filter the column data.
     - **Comparison** - '=', '!=', '< >', '>', '<', >=, <=,'IN', 'NOT IN', 'ANY', 'BETWEEN', 'LIKE', 'IS NULL', and 'IS NOT NULL'.
   - **Filter Value** - Select/enter the filter value.

   > **Note**
   >
   > For Language Placeholder the default locale language is displayed and cannot be modified.

3. Click **Add** to add a new Filter expression. You can add multiple Filter expressions to the same filter.

   The filter is added to the list of filters.

   Mouse-over the place holder filter, to view more details about the filter.
4. Click **Validate** to verify the filter condition is valid.

   A confirmation is message is displayed, if the filter is valid.
5. Click **Apply**, to add the new filter to the filter condition.
6. Click **Reset**, to clear all the filter expressions and create a new expression.
7. Click **Delete** to delete an existing filter expression.
8. Click **Edit** to modify a filter expression. After editing the expression, click **Validate**, to verify if the condition is valid. If user wants to update any filter condition, the user can select the existing condition and then change the condition or filter value and click on Validate to verify if the condition is valid.
9. Click **Apply** to add the filter expression to the form definition.

7.2.2.1.3 Ruleset

The **Ruleset** validates the rules or conditional logic (e.g., mandatory fields, value constraints) and enables you to apply logic, validations, and formatting rules to the attributes selected in the form.

1. In the **Ruleset** tab, you can view the following details.

Table 7-2 Ruleset Table Columns

Field	Description
Display Name	The label shown on the form for the attribute.
In View Mode	Indicates whether the field is visible in read-only/ view mode.
Rules	Logic or conditions applied to the field (e.g., required, read-only, min/max value).
Format Type	Specifies the data type or format (e.g., text, number, date, dropdown).

2. Select the Attribute listed, and define rules.
3. Click **Continue** to access the **User Security** tab or **Save** to store as draft.

7.2.2.2 Configuring Excel Upload

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

While creating forms using Excel Upload, you can also modify the mapping for the attributes. After the new form is approved from the Forms Definition Summary Page, users with the necessary role and permission can perform Data Entry for the records updated by the Excel file.

> **Note**
>
> Make sure the Excel files are saved in the Microsoft Office 2016 Standard version. Excel files saved in Office 365 version cause compatibility issues.

To create forms using Excel Upload:

1. Select Excel Upload in the Create Form Definition page and add the following details.
   - **Code** - The unique Form code. This value is auto-generated.
   - **Name** - The Form Name. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed.
   - **Description** - The Form Definition description. You can enter between 3 to 100 characters. Only alphabets, numbers, spaces, and underscores are allowed.
   - **Auto Map Entities** - Enable this option to auto map the attributes in the Excel file with the attributes in the Entity Table.

> **Note**
>
> Auto Map attributes feature does not always map all attributes between the user defined excel and the entities. In such a case where Auto Mapping fails, the user should manually map such attributes which were not auto mapped.

At any point of time during the form creation, click **Save** to add the new form to the Form Summary. The form is saved in the **Draft** format. Click **Actions** and select **Edit**, to update the form definition.

2. Click **Continue** to access the **File Upload** tab.

7.2.2.2.1 File Upload

Upload an Excel file that contains the data you want to ingest into the system. This step defines the upload template and allows you to add the actual file.

1. In the **File Upload** tab, enter the following details.

Table 7-3 File Upload

Field	Description
Name / Code / Description	Displays the template's predefined name, system-generated code, and description.
Template Name	A user-defined name for the upload template (e.g., "Q3_2025_Profit_Upload").
Description	Optional field to describe the file/template content.
Drag and Drop Area	Upload your Excel file: Click to browse Or drag-and-drop the file directly

The excel file is uploaded and a confirmation box is displayed, and the **Mapped Entities Tab** is displayed.

2. After the **File Upload**, click **Continue** to access the **Mapped Entities** tab.

7.2.2.2.2 Mapped Entities

This step links the uploaded Excel data to a specific business entity (like a data table or object) where the records will be stored or processed.

1. In the **Mapped Entities** tab, select the **Primary Entity** name of the table that needs to be modified.

Table 7-4 Mapped Entities

Field	Description
Entity Name	Use the search bar to find and select the target entity to map your Excel data to. This is usually a predefined structure like a database table, business object, or form entity.

2. Click the search icon or begin typing the entity name.
3. Select the appropriate entity from the dropdown list. Only one entity can be mapped per upload configuration.

4. Click **Continue**, to proceed with the **Mapped Attributes** tab.

7.2.2.2.3 Mapped Attributes

In this step, you map the columns from your uploaded Excel file to the target entity's attributes (fields). This ensures that data from the Excel file is correctly inserted into the system.

1. Click the grid icon on the left to begin mapping attributes.

   A list of entity attributes and corresponding Excel columns will appear.

2. Click the required mapping in the **Override Mapping Column** and enter the required attribute name if you want to change the default mapping.
3. Click **Continue** to proceed to the **User Security** tab.

7.2.2.2.4 User Security – Map Users / Groups

This section allows administrators to **assign access permissions** to specific users or user groups for managing data entry operations. Mapping users with proper authorization ensures data security and role-based access control.

- Click **User Security** to select the user or user groups who can perform data entry to maintain the data in the table.

Table 7-5 User Security

Field	Description
Search Bar	Used to find users or user groups by name.
Mapped Users	Displays the list of users or groups currently associated with the configuration. It lists available **groups** such as: • Application Admin of Data Foundation For Banking • Data Maintenance Admin Group • FRC Data Analyst • FRC Data Catalog Administrator
Add / Edit	Allows administrators to assign or modify users/ groups and define their roles.
Delete	Removes selected users/groups from the configuration.
Authorize	Marks the configuration as authorized, which is often a prerequisite for applying changes.
Duration From / To	Defines the validity period during which the user/ group will have access.

> **Note**
>
> Only authorized users/groups can interact with data based on the mapping. Unmapped users will be restricted.

For more information refer to Approving and Rejecting New Form Definitions. After approval/auto approval, the form is added to the Form Definition Summary.

7.2.2.2.4.1 Enabling User Security for New Form Definitions

The User Security option helps you to select the users/user groups who can add, edit, delete and/or authorize forms.

To enable user security:

- Select the required user group or user to assign permissions from the **Map Users / Groups**, to complete the user security configuration.

  When you select the user group or user, the permissions for each approved Forms Definition are displayed. These permissions are the actions that the selected user group or user can perform while performing Data Entry.

Table 7-6 Permissions in the Map Users / Groups Pane

Option	Description
Add /Edit	Add or modify records in an approved Forms Definition
Delete	Deletion of all intermediate work (draft / awaiting records) of a form 1. While closing the action associated to the form. 2. While picking another form in an action which already has a form associated to it. All the intermediate work is deleted / cleaned up from the previous form before opening the new form.
Authorize	Authorize the records, Return the Action and Publish action in which the form is present. **Note** A user who submits the form cannot approve or reject the same form.
Duration From	Optional. Select the start date for which the permissions are available to the user or user group.
Duration To	Optional. Select the end date for which the permissions are available to the user or user group.

Note

If you select a user group for User Security, you can view the users mapped to that group by clicking the **Users** icon.

7.2.2.2.5 Data Preview

This final step lets users **preview the data extracted** from the uploaded Excel file **before final submission**. It helps verify if data has been correctly mapped, cleaned, and is ready for upload into the system.

1. Click **Data Preview** to preview the form data.
2. Click **Save** if you want to save the forms definition in draft format. The form is added to the **Form Summary** with **Draft** status.
3. Click **Submit** when Forms Definition is ready for approval. Post approval, the form will be available in the Data Entry Action in Issues and Actions. For more information refer to Approving and Rejecting New Form Definitions. After approval, the form is added to the Form Definition Summary.

7.2.3 Approving and Rejecting New Form Definitions

You can validate and approve the new Forms Definition if you have the required role assigned to you.

If the configuration in the Forms Definition is incorrect, you can reject the Forms Definition. The rejected Forms Definition changes into Draft status. You can then request the required user to edit the Forms Definition and submit it for approval again.

You can also view, copy, and edit each Forms Definition from the Forms Definition – Summary page by clicking Menu. These actions are available based on the roles assigned to you. For more information, refer Identity Management.

7.2.3.1 Approving a Forms Definition

You can approve new forms based on the assigned roles.

To check about the assigned roles, refer user-roles-and-privileges.

To approve a Forms Definition:

1. In the Designer View, click **Menu** in the Forms Definition that is in **Pending Approval** status, and then click **Approve**, to access the **Configure page**.
2. Click **Approve** and then enter the required description for the approval in the Comments field.
3. Click **Submit**, to approve the form definition and view it in the **Data Entry page**.

   Once the form is approved, you can Editing/Amending Form Definitions if you have **DMIDGNAMND** role assigned.

7.2.3.2 Rejecting a Forms Definition

You can reject new forms based on the assigned roles.

To check about the assigned roles, refer user-roles-and-privileges .

To reject a Forms Definition:

1. In the Designer View, click **Menu** in the Forms Definition that is in **Pending Approval** status, and then click **Reject**, to access the **Configure page**.
2. Click **Reject** and then enter the required description for the approval in the Comments field.

3. Click **Submit**.

   The Forms Definition is rejected, moved to **draft** status. The form definition is displayed in Forms Definition Summary page. You can then edit the Forms Definition in draft status and submit it for approval again.

   For more information on editing a Forms Definition, see Editing/Amending Form Definitions.

7.2.4 Managing Form Definitions

You can view, edit, copy, and delete the existing Form Definitions from the Form Definition Summary Page, based on the assigned roles.

To check about the assigned roles, refer to user-roles-and-privileges.

In the Summary Page, highlight a specific Definition and click **Action**. The following options are displayed:

Table 7-7 Action Details

Action	Description
Viewing Form Definitions	View the **Member details** for a specific Member Definition.
Editing/Amending Form Definitions	Edit/amend the **Member details** of a form definition.
Copying Form Definitions	Copy the Member Definition Details and create another Member Definition by changing Alphanumeric Code, Numeric Code and Name.
Re-Uploading Form Definitions	Upload a new Excel sheet for an Excel upload form definition. You need to delete the attached excel sheet before uploading the new data.
Deleting Form Definitions	If you have the required role, you can delete a new Form that is in Awaiting Approval status.
Approving and Rejecting New Form Definitions	If you have the required role, you can reject a new Form that is in Awaiting Approval status.

7.2.5 Viewing Form Definitions

You can view the form definition details using the View option, based on the assigned roles.

To check about the assigned roles, refer user-roles-and-privileges.

You can view the details of an individual Form Definition:

1. Highlight the Form Definition and click **Action**.
2. Click **View**, to access the **Form Definition page** with the selected Form definition details.

7.2.6 Editing/Amending Form Definitions

You can modify both approved and rejected form definitions, based on the assigned roles.

To check about the assigned roles, refer user-roles-and-privileges. Forms that are already approved cannot be edited. You can amend the approved forms if you have **DMIDGNAMND** role assigned.

> **Note**
>
> You cannot amend an approved form, if the form has any pending data entry activity.

To edit individual form details:

1. Highlight the form definition and click the **Action**.
2. Click **Edit**, to access the **Form Definition page** with the details.

   To modify an approved form, click **Amend**.
3. Update the required information and click **Submit**.

> **Note**
>
> Do not edit the Business Key or As of Date attributes. .These are critical for data integrityand used for identifying unique records.

You can also **auto-approve** the form during submission.

The modified form definition is updated in the form design summary.

7.2.7 Copying Form Definitions

You can copy individual Definition Details, to recreate another new Definition, if you have assigned roles.

To check about the assigned roles, refer user-roles-and-privileges.

To copy an existing form definition:

1. Highlight the Definition and click **Action**.
2. Click **Copy**, to view the **Form Definition Page**.
3. Edit the unique information and modify details like entity table, attribute filters, user and data security details and click **Save**, to create a new form definition.

7.2.7.1 Re-Uploading Form Definitions

You can attach a new Excel Sheet to an Excel upload form definition and re-upload the form definition, based on the assigned roles.

To check about the assigned roles, refer to user-roles-and-privileges.

To re-upload an Excel upload form definition:

1. Highlight the Definition and click **Action**.
2. Click **Re-Upload**, to access the **Form Definition page**.
3. In the **File Upload** tab, click **Remove**, to delete the existing Excel sheet.
4. Click **Drag and Drop** and select the new Excel sheet to be uploaded.

7.2.8 Deleting Form Definitions

You can delete the form definitions that are in Draft status, based on the assigned roles.

To check about the assigned roles, refer user-roles-and-privileges.

To delete a form definition:

1. Highlight the form definition and click the **Action**.
2. click **Delete**.

   The selected form definition is deleted after confirmation.

7.2.9 Data View

The Data View feature of Data Maintenance Interface (DMI) enables you to maintain or modify the table data by using the Forms Definition that is created and approved from Forms Definition Summary page.

If the approved Forms Definition is created by using the designer option, a user with the necessary role can add or modify the records in the table as per the configuration in the Forms Definition. These records are then sent to another user with the necessary permission for final approval.

If the approved Forms Definition is created by using an Excel file, a user with the necessary permission can verify and approve the records that are modified with the values from the Excel file. If the records modified by the Excel file are incorrect, the user can reject the records. The rejected record can be modified by a different user with the necessary role and can be sent for the final approval again. The Forms Definitions that are created by using an Excel file are labelled with an Excel icon in Data Entry.

7.2.9.1 Adding Data to Entity – Forms Created Using Data Entry

Once a Data Entry Form is created, the user with the necessary role can add records and also update the values for the table records as per the configuration in the Forms Definition. Issues and Actions Governance is followed for adding, approving and Publishing Data using the form.

These records are then submitted for approval to another user with the necessary role. For more information, refer to user-roles-and-privileges.
To update/delete data in the table records:

1. Highlight the record and click the **Action**.
2. Click **Edit**, to update the records. The records are classified based on the following status:
3. **Draft** – Records that are created but not submitted. In Draft state, you can add new rows or delete/edit an existing row submitted for auto-approval.
4. **Ready** – Records that are approved. You can only edit the records.

   For adding/deleting records and editing existing draft or Ready records, refer to the following sections:

   Related Topics

   - Adding/Editing a Draft Record: You can add a record to the table or edit a record set in the Draft status. The added record is set to Draft status.
   - Deleting Draft Records

7.2.9.2 Adding/Editing a Draft Record

You can add a record to the table or edit a record set in the Draft status. The added record is set to Draft status.

To add or edit a draft record:

1. Select **Draft** from the **Status** drop-down list, to view all the entity records set to **Draft** status.
2. To add a new record, click **Add**.

   A new entry set to **Draft** status is added to Entity details page. This entry is empty. Edit the record to add the attribute details.
3. To edit a record, click **Edit** next to the record.
4. In the **Edit** page, enter the values in the attributes that you want to modify and click **OK**.

   You can repeat the steps for all the records for which the data needs to be entered.
5. To modify all the entries in a specific column, click **Bulk Update**.
   a. Select the column to modify the data.
   b. Enter the new value and click **OK**.
6. Click the modified record in draft status, and then click **Submit**.
7. After Publish, the status is changed from **Awaiting to Ready**. Refer Editing Published Records, to edit the records in **Ready** status.

7.2.9.3 Deleting Draft Records

You can delete the records in Draft status. If the record is approved and moved to Ready status, it cannot be deleted.

1. Select **Draft** from the Status drop-down list.

   The entity records with Draft status are displayed for entering data are displayed.
2. Select a record and click **Delete**.

7.2.9.4 Editing Published Records

The published records are set to Ready Status.

When you edit the record, it is moved to Draft Status.

1. Select **Ready** from the Status drop-down list, to view the entity records with Ready status are displayed.
2. To edit a record, click **Edit** next to the record.
3. Update the values for the attributes that you want to modify and click **OK**.

   User will have the ability and should not edit the Business Key or ‘As of Date’ attribute of the entity. You can repeat the steps for all the records for which the data needs to be entered.
4. To modify all the entries in a specific column, click **Bulk Update**.
   a. Select the column to modify the data.
   b. Enter the new value and click **OK**.

5. Click the modified record in draft status, and then click **Submit for Approval**.

7.2.9.5 Forms Created Using Excel Upload

When a Forms Definition created using an Excel file is approved from Forms Definition Summary Page, the table records in the selected table are updated using the data in the Excel file.

The records are set to **Awaiting** status for the approved forms definition in data entry page. You can verify the records modified by the Excel file records and approve them if you are assigned to the necessary role. If the records modified by the Excel file are incorrect, you can reject the records. The status of the rejected records is changed to Draft. A user with the necessary role can edit the records in draft status and submit them for approval again.

- To approve records, see Approving and Rejecting Records.
- To reject records, see Rejecting a Record.
- To edit a record in draft status, see Editing a Rejected Record .

7.2.9.5.1 Approving and Rejecting Records

A user with the necessary role can approve or reject the edited records.

For more information related to user roles, refer to user-roles-and-privileges.

7.2.9.5.1.1 Approving Draft Records

You can approve the records set to Draft status.

To approve records:

1. In the **Data Entry** page, select **Draft** from the **Status** drop-down list.

   The entity records with Draft status are displayed.

2. Select the required record.

   You can select multiple records, to perform bulk Approval. Bulk Approval is enabled only if Bulk Authorization is activated during Form Creation.

3. Enter the required comment in the Comments Field, and then click **Approve**.

   The record is approved successfully with the values from the Excel file.

7.2.9.5.2 Rejecting a Record

You can reject a record set to Awaiting status.

To reject a record:

1. Click **Menu** in the required Forms Definition from the Data Entry page.
2. Click **Edit**.

   The Entity Details page is displayed. The records that are waiting for the final approval are displayed here.

   Select the required record, and then click **Reject**.

   You can select multiple records to perform bulk rejection. Bulk rejection is enabled only if Bulk Authorization is activated during Form Creation.

3. Enter the required comment in the Comments field, and then click **Reject**.

The record is rejected, and the status is changed to **Draft**. A user with the necessary role can now edit the record.

7.2.9.5.3 Editing a Rejected Record

You can edit the records that are in draft status and send them approval to the user with the necessary role.

To edit a record:

1. Select **Draft** from the **Status** drop-down list.
2. Click **Edit** in the record that you want to edit.
3. Modify the required attributes, and click **OK**.
4. Select the record and then click **Send for Approval**.

   The modified record is now moved to **Awaiting** status. A user with the necessary role can approve the record.

7.3 Built-in Process Components

7.3.1 Account Load Run Map Population

The Account Load Run Map Population process is a feature in Data Foundation Cloud Service (DFCS) that manages and organizes the loading of intra-day accounts, particularly for incremental and snapshot updates.

This section provides an overview of the operation process.

1. **Intra-Day Accounts:** Accounts are updated within a day based on specific activities or events, and the system captures these changes efficiently.
2. **Incremental and Snapshot Updates:**
   - **Incremental Updates:** Only the changes that have occurred since the last update are captured (e.g., modifications or new records such as transactions or account status changes).
   - **Snapshot Updates:** A full view of the data at a specific point in time is captured, including all account data, regardless of whether changes have occurred since the last snapshot.
3. **Load Run ID:** Each account load (whether incremental or snapshot) generates a unique Load Run ID. This ID is used to track, distinguish, audit, and ensure accurate tracing of each load process.
4. **Map Population:** The loaded account data is mapped to a predefined structure or schema within DFCS, ensuring it is correctly placed in the appropriate tables, formats, or structures for further processing or reporting.

7.3.1.1 Benefits

- **Data Traceability**: The Load Run ID provides an audit trail for each load operation, ensuring traceability and transparency.
- **Efficient Data Handling**: The system can process intra-day account data efficiently by only loading necessary changes with incremental updates while maintaining full data integrity with snapshots.

- **Consistency**: The process ensures that the data is loaded into DFCS consistently and accurately, making it ready for further downstream applications such as regulatory reporting, analytics, and other business processes.

In essence, the **Account Load Run Map Population** process is key in handling dynamic, intra-day account updates within DFCS, ensuring both data completeness (via snapshots) and efficiency (via incremental updates).

7.3.2 Configuring Reporting Currency

Pre-requisite:
Before executing **Result Area Population jobs**, you must configure the necessary settings to ensure that the **Reporting Currency Attributes** in the **Common Account Derived Attributes Entity** are populated with accurate conversion values. The **Currency Exchange Module** must be executed before proceeding with this configuration.

1. Navigate to **Administration** → Click **Run Execution Parameter**.
2. Click **Add Run Execution Parameter**.
3. Enter the following values in the popup screen:
   - **Parameter Name** – Specify the execution parameter configuration name (required for executing Result Area Population job).
   - **Description** – Provide a brief description of the execution parameter configuration.
   - **Currency Rate Type** – Select an appropriate value from the **Currency Rate Type Dimension**.
   - **Currency Rate Nature** – Select an appropriate value from the **Currency Rate Nature Dimension**.
   - **Currency Rate Version** – Choose a value from the **Currency Rate Version Dimension**.
   - **Currency** – Specify the **target currency** for conversion.
4. Click **Save**.

   By completing this setup, the system will accurately derive and populate the **Reporting Currency Attributes** for correct financial reporting.

7.3.3 Fact Based Dimension Loader

The "Populating Missing Master Data from Factual Data" feature allows you to extract distinct values of the specified business term from the factual data which are missing in the Dimension table and load them into Stage Master tables. This helps to ensure that the references are accurate in the Fact Results.

This feature allows populating the stage dimension table from Stage Fact tables in case the source for dimension table did not provide the references.

1. Share the configuration as an excel file with the details such as Dimension Name, Stage Fact Table Name and Stage Fact Column Name to the support team. SOP will be prepared based on this and the configuration table will be set. The sample is as follows:

Table 7-8 Configuration

Dimension Name	Stage Fact Table Name	Stage Fact Column Name
Account	Casa	Account or Contract Number

Table 7-8 (Cont.) Configuration

Dimension Name	Stage Fact Table Name	Stage Fact Column Name
Account	Credit Derivatives	Account or Contract Number
Accounting Standard	Commodity Contracts	Accounting Standard Code

2. After loading the Stage Fact tables, navigate to the PMF Widget **Missing Master Loader** and trigger it. Before triggering the widget, the data between the Stage Master and the Dimension must be synchronized by running the SCD.
3. For the input **As of Date**, this feature will extract distinct values of the specified Business Term (column) from the factual data which are missing in the Dimension table and load them into the Stage Master tables.

> **Note**
>
> Only **As of Date** runtime parameter is considered by the Missing Master Loader.

4. The numeric identifier field for the newly remediated data will be a 14 digit unique number and for the existing but inactive records of the dimension, it will be the existing numeric identifier. The Data Source will be set as 'SYSTEM'.

   The non-nullable columns will be set with default values as below:

   - Varchar- 'MSG' or Space (If the length of the column is less than 3 characters)
   - Numeric- 0
   - Flag- 'N'
   - Date- As of Date provided by the user
5. Run the SCDs for the remediated Master tables and load the dimensions.

> **Note**
>
> - In case some data is pending to be loaded to Dimension, then the SCD needs to be executed before the execution of **Missing Master Loader**.
> - Each execution of **Missing Master Loader** should be followed by an SCD execution of all the dimensions that are remediated.
> - This feature is expected to be used for only remediation of missing records and must not be primarily used for Stage Master load.

7.3.3.1 Steps to Perform Post Execution Failure

- In case of any failure encountered during the Missing Master Loader execution at a particular dimension, then none of the records for that dimension will be remediated and execution will fail and stop.
- Verify the execution logs to verify which dimension remediation has failed.
- Ensure the SCD is executed for all the records for that dimension.
- In case of any failures, the run can be resumed after the required fix so that only the pending dimensions will be remediated.

Points to Consider

- For customers using EDMCS as single source of dimension data, there will be some gaps between DFCS and EDMCS.
- Addition of record is limited to the dimension table and no update will be done to hierarchy tables.
- Dimensions given below cannot be remediated:
  - Prime Brokerage Agreement
  - Trade Restriction Reason
  - Asset Allocation
- Custom Dimensions created with numeric identifier of type SurrogateKey_Long are only supported for remediation.
- Parallel execution of Missing Master Loader is not allowed.
- During the Missing Master Loader execution, any parallel execution that loads data to the Stage Master of the dimensions involved in remediation is not allowed.
- Missing Master Loader is not intended to remediate large volume of records.

7.3.4 Slowly Changing Dimensions

A Slowly Changing Dimension (SCD) is a dimension that stores and manages both current and historical data over time in a Data Warehouse.

> **Note**
>
> If you have entered the **Full Load** parameter as **YES**, you can load snapshot data for master tables and execute SCD process with additional parameters.
> In case, when you have entered the **Full Load** parameter as **YES** and if the load is incremental and does not contain all the nodes, those nodes are retired by default.
>
> When entered as **NO**, you can load incremental data for master tables and execute SCD process with additional parameters. The incremental data load for master tables is supported.
> The retired dimensions can be brought back as part of subsequent SCD load by updating the Closed Flag column to null or **N**.

Current behavior of Disabled Nodes:

- The Closed Flag attribute is not supported for the Product Processor (PP) accounts.
- A new node in the Stage Master table with Closed Flag **Y** is supported and will be ignored during SCD load.

7.3.4.1 Types of SCDs

The type of SCD Catalog supports is:

- **Type 2 SCDs** - Creating another dimension record: A Type 2 SCD retains the full history of values. When the value of a chosen attribute changes, the current record is closed. A new record is created with the changed data values and this new record becomes the current record. Each record contains the effective time and expiration time to identify the time period between which the record was active.

The Dimension Data population in the Process Orchestration displays the available SCDs with details such as Map Reference Number and Entity Name.

7.3.4.1.1 Dimension Data population

Following fields are mandatory and must be sourced.

Table 7-9 Generic Dimension attribute description

Business Term	Comments
As Of Date	The data must be valid.
Code / Business Key	The data must be unique.
Numeric Identifier	Numeric Identifier data should be unique across business key values, and no two-dimensional values should share the same numeric identifier. This can be ensured by generating unique numeric IDs using the Data Integration component. Additionally, there are Data Quality (DQ) checks in place to ensure there are no duplicate numeric identifiers.
Closed Flag	For Example: Y, N, or Null. Null will be considered as No. This value determines whether the Node is enabled or disabled.
Name	The data must be valid.
Description	The data must be valid.

7.3.4.1.2 Hierarchy Data Loading

A Business Hierarchy refers to organizing data into logical tree structure to represent the groups and relations among various levels at which measure can be viewed. A measure can be viewed at different levels depending upon the hierarchy breakdown of the dimension category.

Data Catalog supports data loading using the following Hierarchies:

- Account Hierarchy Dimension
- Cash Flow Type Hierarchy Dimension
- Employee Hierarchy Dimension
- General Ledger Hierarchy Dimension
- Legal Entity Hierarchy Dimension
- Line Of Business Hierarchy Dimension
- Organization Unit Hierarchy Dimension
- Party Hierarchy Dimension
- Product Hierarchy Dimension
- Project Hierarchy Dimension
- Ledger Hierarchy Dimension
- Business Unit Hierarchy Dimension
- Channel Hierarchy Dimension
- Branch Hierarchy Dimension

- Location Hierarchy Dimension
- Instrument Contract Hierarchy Dimension
- Business Segment Hierarchy Dimension

> **Note**
>
> You must provide the snapshot for the Hierarchy code that has been corrected or modified when you reload the Hierarchy data.

Hierarchy data loading is a part of the Dimension Data population.

7.3.4.1.2.1 Hierarchy Data Load

Following fields are mandatory and must be sourced.

Table 7-10 Generic Dimension attribute description

Business Term	Comments
As Of Date	The data must be valid.
Hierarchy Code	Each hierarchy code for a specific As Of date must have one root node.
Effective Date	Refers to the effective date of the account or contract or interest rate or exchange rate from which it is effective. In the case of hierarchy dimension entities, it refers to the effective date of the hierarchy code, and while sourcing data, users need to provide a snapshot of the latest hierarchy code with the same effective date. The data must be valid.
Child Code	Child Code should be available in corresponding Master Table and should be unique.
Parent Code	Parent Code should be available in corresponding Master Table.
Name	The data must be valid.
Description	The data must be valid.

7.3.4.1.2.2 Account Dimension

Data Platform supports sourcing of account information from Product Processors like Annuity, Loan contracts, Repo contracts and so on. The Dimension Account must be populated through Product Processor.

> **Note**
>
> If Product Processor contains data, then Account Dimension must be populated through Product Processor and you must not populate Account Master.

To populate Account Dimension through Product Processors, perform the following:

1. Execute **Account Load Run Map Population** pipeline containing the data in Product Processor tables.

> **Note**
>
> Account Master should not contain any data.

2. Execute **Dimension Population Process** pipeline has to be executed for all dimension table population.

7.3.4.1.3 Use and Execute the Dimension Population Process

Use this Run Pipeline (Process) to manage past and historical data for various Dimensions.

To use and execute the Dimension Population Process in the Process Orchestration, do the following:

1. To access the Dimension Population Process Pipeline, on the home page, select **Data Pipeline** for **Process Orchestration**. The **Process Modeller** page is displayed.
2. On the **Process Modeller** Page, search and select the Dimension Population Process. The **Process Flow** Page is displayed. This Process Flow is designed on the Drawing Canvas using the Transition, Activity, and Widgets Components available in the floating tool bar. SCD Widgets representing individual SCDs are set up in parallel to each other. At the end of this process, the Connectors representing Hierarchies are set in parallel.
3. To view the details of any Node, double-click on the Node and the details related to its Activity, Transition, and Notification are displayed. On the drawing canvas, you can select and see the Definition, Data Fields, and Application Rule details.
4. To execute the Run, you can select the Run Parameter Values using the **Execution** Button on the Process Flow Page or on the Process Modeller Page.

   Go to the **Process Modeller** Page to execute the Run. Click the **Menu** Button corresponding to the Dimension Population Process that needs to be executed. Click **Execute Run**. The **Execution** Page is displayed.
5. On the **Execution** Page, to execute the Run with parameters, select **With Parameters** in the **Execution Type List**. Select the required **As of Date** for which the SCDs need to be processed. Select the required **Data Source** option and click the **Apply** Button to initiate the Run Pipeline execution.

   > **Note**
   >
   > The execution of the Run Pipeline is triggered using the selected Extraction Date. See the Process Orchestration Section for more details about the Process Orchestration.

6. To verify the Run Execution of the Dimension Population Process, do the following:
   a. To open the **Process Monitor** page, on the **Process Modeler** page, click the **Process Monitor** button or select **Process Flow Monitor** on the Process Modeler menu.

      The **Process Monitor** page is displayed, which lists all the Run Instances corresponding to the Dimension Population Process.

   b. On the **Process Monitor** page, search by the Process ID, or by the Process Name **Dimension Population Process**, and select the Process Instance for the required Run Pipeline (Process) that was executed.
7. The **Process Flow** page is displayed with the Run Execution Status on each Node of the Dimension Population Process.

8. To verify the Run Execution Logs, do the following:
    a. On the **Process Monitor** page, click the required Process Instance for which you need to verify the Execution Logs. The **Process Flow** page is displayed with the Run Execution Status on each Node.
    b. To see the Execution Status details of a Node, double-click on that Node. The Execution Status details page is displayed.
    c. Click **Execution Logs**.

       The Log Viewer page is displayed, which lists all the Logs related to the Process Instance.
    d. To see the details of a log entry, click the **Show More** button. Click outside the Log Viewer page to close it.

    Once this pipeline process is complete, ensure to run the **Reporting Parent Child Relation Data Population** process to create and refresh parent/child hierarchy data. For more details, see Create and Refresh Parent/Child Hierarchy Data.

7.3.4.1.3.1 Create and Refresh Parent/Child Hierarchy Data

OBIEE RPD is enhanced to read the data of hierarchies from database. This is achieved using views in database so that data is pre-prepared before OBIEE layer needs it. Use the Run pipeline (process) Reporting Parent Child Relation Data Population to create and refresh parent/child hierarchy data.

> **Note**
>
> This pipeline must be executed even after completing the custom pipeline with SCD and connector data population.

To use and execute the Reporting Parent-Child Relation Data Population process within Process Orchestration, follow these steps:

1. On the home page, select the **Process Orchestration**. The **Process Modeller** page is displayed.
2. To execute the run, follow these steps:
    a. Navigate to the **Process Flow** page or the **Process Modeller** page.
    b. Select the **Run Parameter Values** using the **Execution** button.
    c. On the **Process Modeller** page, locate the **Reporting Parent-Child Relation Data Population** process.
    d. Click the **Menu** button corresponding to the process you want to execute.
    e. Click **Execute Run**. The **Execution Page** will be displayed.

    To execute a run with parameters on the **Execution** page, follow these steps:
    a. In the **Execution Type** list, select **With Parameters**.
    b. Choose the required **As of Date** for which the SCDs need to be processed.
    c. Select **NA** as the **Data Source** option.
    d. Click **Execute** to initiate the Run Pipeline execution.

7.3.5 Results Area Population

Data Foundation has ability to provide data for analytical applications in finance, risk, and compliance domains. It also has well-designed placeholders to store results data from these applications.

Key Features of the Results Area Design

- **Design**: The Reporting Area data model is a dimensional data model. This means that it consists primarily of central fact tables (de-normalized), related to multiple dimension tables, also called a Star Schema. Additionally, the dimension tables are shared across the star schemas in the reporting mode, meaning they are Conformed Dimensions.
- **Support for multiple scenarios of analysis**: The reporting data model has been designed to support scenario analysis of the sort required by financial institutions that need to measure and report risk and performance under a variety of economic scenarios. The reporting model provides support for this kind of analysis via a Run Dimension – it allows analytical engines to load multiple result sets identified by scenarios.
- **Support for Cross Functional Reporting**: The third critical feature of the Reporting area design is the support for cross-functional reporting. Majority of emerging needs relate to the analytical problems at the intersection of the distinct areas of Risk, Performance, Customer Insight, and Compliance. This is addressed amply by the results area of Data Foundation.

7.3.5.1 Result Area Entity Data Population Run Execution

The Entity Data Population process involves filling and validating data for entities within the result area. This ensures accurate mapping, integration, and usability of entity data.

1. Navigate to **Data Operations** and search for **Results Area Entity**.
2. On the results window, click on the menu button, and then select **Execute Run**.

   The Execution window appears.
3. In the Execution window, select the **Execution Type** as **Without Parameters**.
4. Enter the Object ID. The Object ID is a unique identifier.
5. Enter the RUNPARAM (in JSON format). For example, Run Param: `{"FIC_MIS_DATE":"2024-09-01","RUNPARAM":"TEST"}`.

   > **Note**
   >
   > The **RUNPARAM** value must match the **execution parameter configuration name**, ensuring it is identical to the **Parameter Name** specified in the executing Configuring Reporting Currency .
6. Click **Execute**.

7.3.5.2 Results Area Load Batch

The **Results Area Load Batch** is a process in **Data Foundation Cloud Service (DFCS)** that facilitates the loading of **fact results** from the **staging results** area into the final results area for reporting purposes. This process ensures that the data is properly processed, organized, and available for consumption by downstream reporting applications.

1. **Loading Fact Results**:
   - **Fact results** are essentially the processed data that is typically used for reporting, analytics, and business intelligence purposes.
   - These facts could include various financial and transactional data points, such as accounting entries, general ledger (GL) data, currency exchange rates, and so on.
   - The data in the **staging area** may be raw, intermediate, or partially processed, and the **Results Area Load Batch** is responsible for moving it into the final results area where it is aggregated, cleansed, and made ready for reporting.
2. **Run Surrogate Key**:
   - The **Run Surrogate Key** is a unique identifier that allows for tracking and managing multiple **load runs**.
   - Since data loads may occur multiple times a day, the surrogate key helps to differentiate between different runs of the same type of fact data (e.g., accounting entries or GL data). This ensures that even if the data loads are similar, each load can be identified and handled independently.
   - The surrogate key is important for data traceability, ensuring that each batch can be traced back for auditing, version control, and historical analysis.
3. **Examples of Fact Loads**:
   - **Load Fact Accounting Entries**: This process loads detailed accounting data, which includes financial transactions that affect accounts, such as debits, credits, account balances, and other related financial details.
   - **Load Fact GL Data**: Loads general ledger data, which is aggregated and provides a summarized view of financial transactions by categories such as account codes, periods, and balances.
   - **Load Fact Currency Exchange Rates**: Loads data regarding the exchange rates between different currencies, which are essential for converting financial amounts into consistent currency representations across different regions.
   - **Load Fact Accounting Entries Header**: This is the header-level data associated with accounting entries, which may include metadata such as transaction type, reference numbers, and other summary information.

7.3.5.2.1 Benefits

- **Continuous Data Updates**: By supporting multiple load runs per day, the system ensures that the most up-to-date fact data is always available for reporting purposes.
- **Efficient Tracking and Management**: The use of a **Run Surrogate Key**.

7.3.6 Average Balance Computation

Average balance computation is a method used to track and report average and end-of-day balances for financial institutions. It helps create both average and standard balance sheets and income statements, which are important for regulatory compliance and internal financial reporting.

This process is essential for calculating daily and monthly average balances, taking into account situations like missing data, new accounts, or closed accounts. The following functions are also supported:

- Period to date (month) average values of instrument-level accounting balance.

> **Note**
>
> Currently, only monthly averages are supported. Quarter-to-date and year-to-date averages will be introduced in future releases.

- Revaluation of instrument-level accounting balance
- Currency translation of instrument-level accounting balance as a part of the period balance

Table 7-11 Execution Parameters

Parameter	Description
MIS Date	Business date for which balances are to be computed. The selection type is a Single Select.
Data Source	Source system providing account data. The selection type is Multi Select.
Product Processor	Application that processes the product/account. The selection type is Multi Select.

> **Note**
>
> For more information on execution of PMF log, see Steps for Execution.

7.3.6.1 Examples of Average Balance Computation

Here are some examples that illustrate the concepts of average balance computation. These examples show how the application calculates period, monthly average balances.

Monthly Average-to-Date Balances

In this example, the ending balance in an account on July 20th is 100,000 (USD). Here are the daily activity, end-of-day (EOD), period-to-date (PTD) aggregate, and monthly average balances for the first three days in August.

Table 7-12 Monthly Average Balances for June

Date	Daily Activity	End of Day	Monthly Aggregate	Monthly Average Balance
June 1	5000	105,000	105,000	105,000
June 2	8000	113,000	218,000	109,000
June 3	4000	117,000	335,000	111,667.67

This shows how the **Monthly Average balance** is calculated by taking the **Monthly Aggregate Balance** and dividing it by the **Days in Period to Date**. In this example, we calculate the average balance over the first three days of June. Each day's **EOD balance** is added to the **Monthly Aggregate**, and the **Average** balance is updated accordingly.

> **Note**
>
> Monthly average balances reset to zero at the beginning of each period.

Effective Date Handling

The effective date of transactions directly affects average balance calculations, as these balances are based on the transaction's effective date. This date is also crucial when choosing inquiry or reporting criteria, since reports will show average balances as of the selected effective date.

Backdated Transactions and Average Balances

When you post a backdated transaction, the application adjusts the end-of-day and aggregate balances of the affected accounts, as of the effective date and all subsequent dates.The following example continues the general example and illustrates what happens when you post a backdated transaction. Here are the end-of-day and aggregate balances from the example previously described in the Example of Average Balance computation section.

Day	Account A End-of-Day	Account A Aggregate	Account B End-of-Day	Account B Aggregate	Account C End-of-Day	Account C Aggregate
Day 1	1,000	1,000	(1,000)	(1,000)	0	0
Day 2	1,100	2,100	(1,000)	(2,000)	(100)	(100)
Day 3	1,100	3,200	(800)	(,2,800)	(300)	(400)

Here's the average balance for each account on Day 3.

Account	Calculation	Average Balance
Account A	3,200 / 3	1,066.66
Account B	(2,800) / 3	(933.33)
Account C	(400) / 3	(133.33)

Now assume that the following backdated transaction occurs on Day 3, with an effective date of Day 1.

Account	Debit	Credit
Account A	500	
Account B	500	

The effects of the backdated transaction are shown in the following table.

Day	Account A End-of-Day	Account A Aggregate	Account B End-of-Day	Account B Aggregate	Account C End-of-Day	Account C Aggregate
Day 1	1,500	1,500	(1,500)	(1,500)	0	0
Day 2	1,600	3,100	(1,500)	(3,000)	(100)	(100)
Day 3	1,600	4,700	(1,300)	(4,300)	(300)	(400)

Here's the average balance now for each account on Day 3.

Account	Calculation	Average Balance
Account A	4,700 / 3	1,566.66
Account B	(4,300) / 3	(1,433.33)
Account C	(400) / 3	(133.33)

7.3.6.2 Steps for Execution

1. Navigate to **Data Foundation for Banking** and click **Data Operations**. The **Process Modeller Summary** page is displayed.
2. In the **Search filter placeholder** bar, select **Pipelines** > **Run Pipeline** > **Average Balance Computation**. The available list of Process Id's is displayed.
3. A dropdown is displayed with the following menu items:
   - To access the Process Modeller, click **Process Modeller**.
   - To monitor currently running processes, click **Process Monitor**.
   - To view an overview, click **Dashboard**.

8

Data Visualizations

Data Foundation Cloud Service (DFCS) provides users with a powerful Data Visualization feature to visualize loaded source data and processed results data directly via user interface. The process of data visualization is very user friendly and does not require any query language skills like SQL. Custom visualization report can be generated via direct drag and drop feature on **Oracle Analytics** and can further be used to analyze data insights effectively. Data Visualization enables users to explore and visualize data across the following key sections:

- Source Data Visualization
- Results Data Visualization
- Pre-Built reports and KPIs
- Data Quality dashboard
- General Ledger Reconciliation dashboard
- Use Case Analysis
- Right to Forget Executions
- Data Visualization for Custom attributes

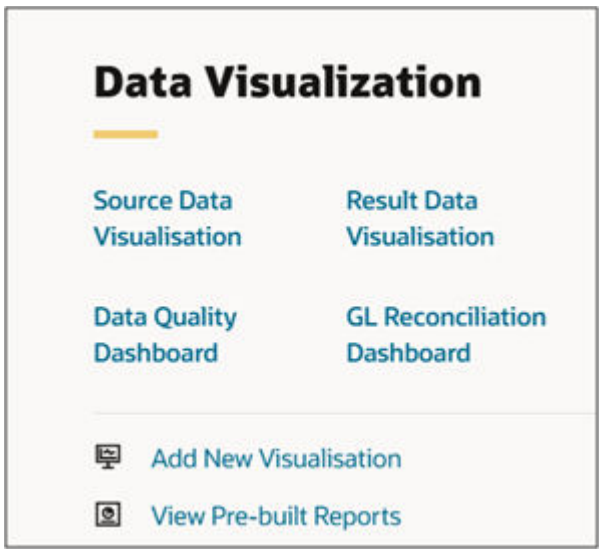
8.1 Browsing Data Visualization

Data Visualization UI varies for different set of users. The two types of UI available 2 personas, Business Analysts and Administrators.

8.1.1 Browsing Experience for Users with Administrator Privileges

1. On the DFCS Home page, navigate to **Data Visualization**.

Figure 8-1 Data Visualization



2. This section consists of the following menu options and features.

Table 8-1 DFCS DV Menu Option

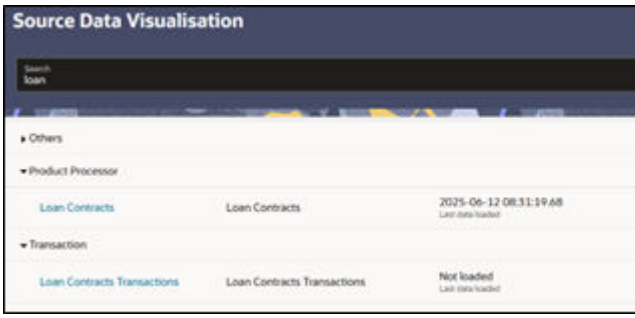
DFCS DV Menu Option	Path
Source Data Visualisation	• **Source SA** list (expandable to view source entities within SA) **Figure 8-2 Source Data**  • Click to **Source entity** to View data **Figure 8-3 Source Data Source Data** 

Table 8-1 (Cont.) DFCS DV Menu Option

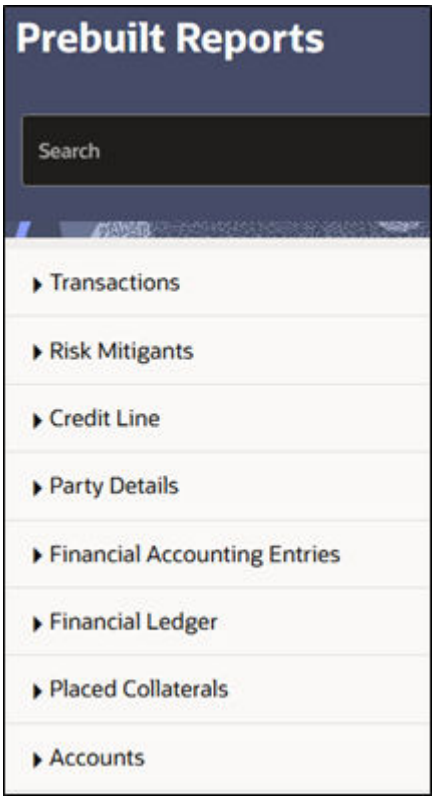
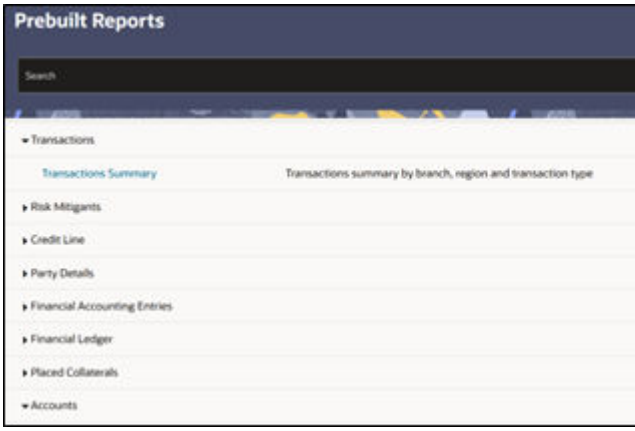
DFCS DV Menu Option	Path
Results Data Visualisation	• **Results SA** list (expandable to view pre-built reports within SA) **Figure 8-4 Pre-built Reports**  • Click to **Pre-built report** to View the report **Figure 8-5 Pre-built Reports List** 

Table 8-1 (Cont.) DFCS DV Menu Option

DFCS DV Menu Option	Path
View Pre-built Reports	• **Results SA** list (expandable to view pre-built reports within SA) • Click to **Pre-built report** to View the report
Data Quality Dashboard	**Data Quality** dashboard.
GL Reconciliation Dashboard	**Balance Reconciliation** dashboard
Add New Visualisation	• **Oracle Analytics Home page** • **Create → Workbook** → Subject Area or Dataset (pre-packaged in the product) • **Create → Dataset** → Select connection → Create dataset

8.1.2 Browsing Experience for Users with Business Analyst Privileges

This section describes the Business Analyst privileges.

Figure 8-6 Business Analyst Privileges - DFCS Home page - LoB View

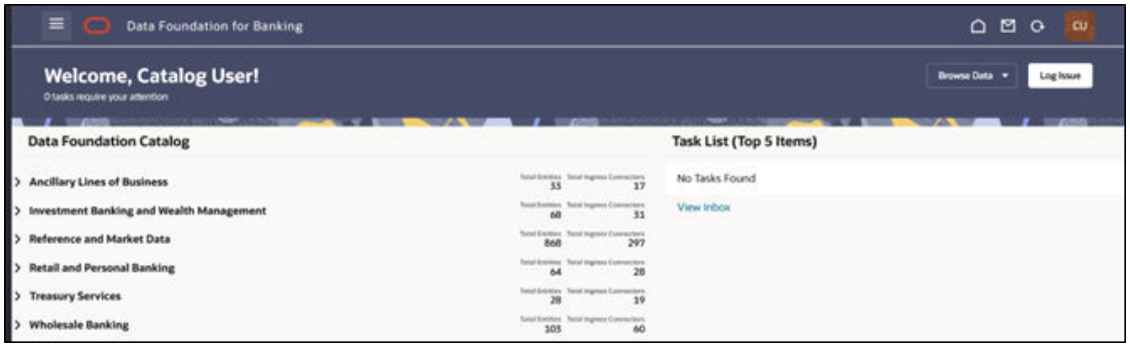


Figure 8-7 Expandable LoB with list of entities tagged to the LoB

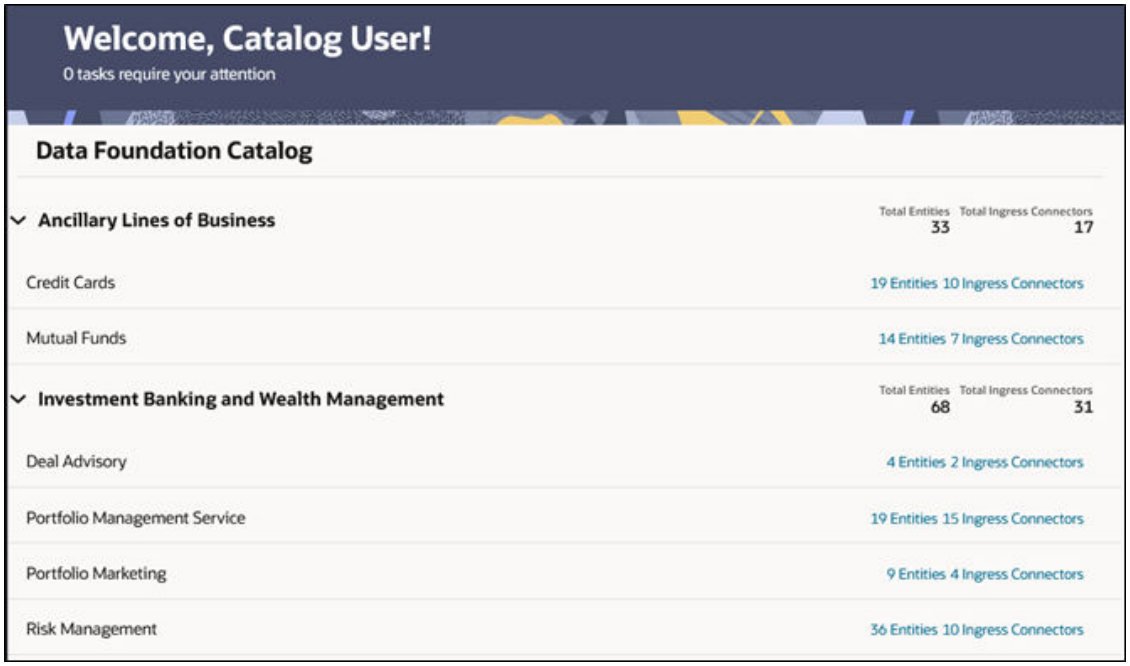


Table 8-2 This table consists of the following menu options and features

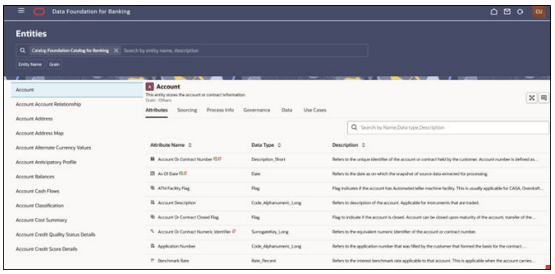
DFCS DV Menu Option	Click path
Line of Business (LoB)	• **LoB** list (expandable to view source entities tagged to LoB) Click to **Source entity** to View Catalog details for entities **Figure 8-8 Catalog View of Entities** 

Table 8-2 (Cont.) This table consists of the following menu options and features

DFCS DV Menu Option	Click path
Browse Data → Source	• **LoB** list (expandable to view source entities tagged to LoB) – Select/**Expand LoB** – View number of Records loaded Click View to view **Source entity** data

Figure 8-9 Browse Data – Source DV

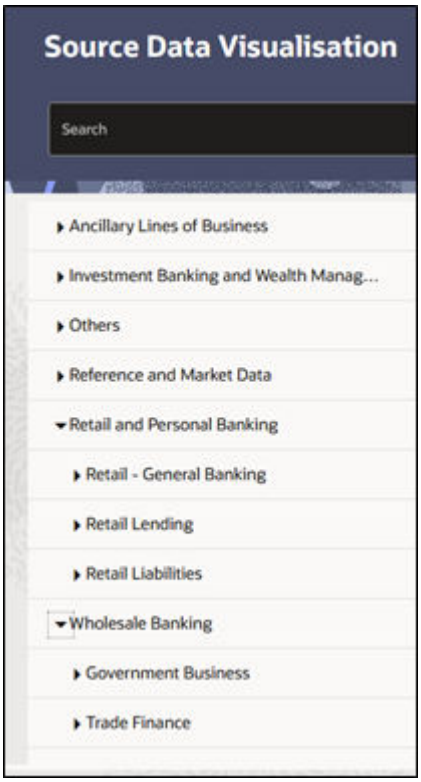
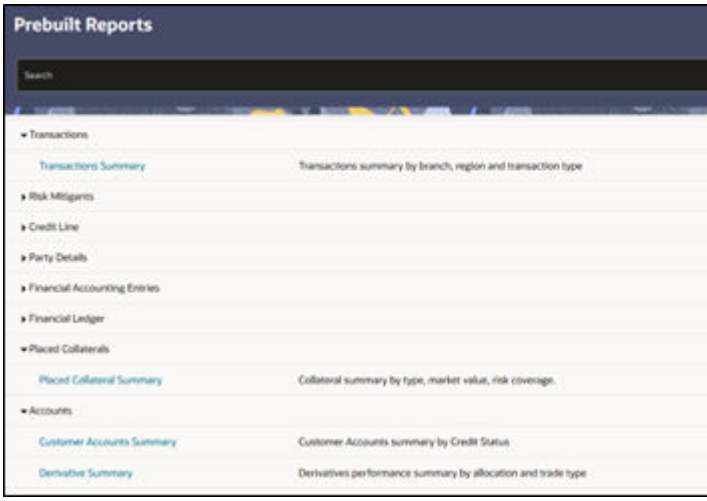


Table 8-2 (Cont.) This table consists of the following menu options and features

DFCS DV Menu Option	Click path
Browse Data -> Results	• **Results SA** list (expandable to view pre-built reports within SA) Click to **Pre-built report** to View the report

Figure 8-10 Browse Data – Results DV



8.1.3 Browsing Experience via Oracle Analytics User Interface

The **Data Browser** is an interactive tool that allows you to explore and interact with the data stored in the system. It provides a real-time view of the data entities and their attributes, making it easier to visualize.

Data Visualization is available via **Oracle Analytics** via below options:

1. **Pre-built reports** that are packaged as part of the product
2. **Creating Workbook for pre-built** Subject areas and datasets
3. **Creating a new Dataset**, then creating a workbook to view data

To navigate through the Pre-built reports path:

1. Navigate to the **Data Foundation for Banking** Home page > **Data Visualization**.
2. Under the **Data Visualisation** section, click **Add new Visualization**.
3. From the LHS menu, select **Catalog** > **Shared Folders**.
4. From the **Shared Folder** window, select **Data Foundation Reports** type. The following Data Foundation Reports are displayed and each type displays various reports.
   - Data Foundation Custom Reports
     - Source Data
     - Result Data

  - Key Performance Indicators
  - Source Data Errors
- Data Foundation Reports
  - Source Data
  - Key Performance Indicators
  - Pre-built Reports
  - Reports Glossary
  - Right To Forget
  - Use Case Analysis
- Data Quality Visualization
  - Data Quality
- Reconciliation Framework
  - Answers
  - Dashboards
  - Prompts
  - Reconciliation Framework Analytics
  - Subject Area Contents
- Data Governance
  - Data Quality Monitor
  - Reconciliation Differences

8.2 Data Foundation Reports

8.2.1 Source Data Visualization

Source data visualization enables you to view raw data loaded into staging entities post data loading. Data visualization is supported for pre-built datasets and is best suited for scenarios where a query will return a few rows of the output.

Source Data Visualization is intended to provide authorized users tactical access to data that is moved into DFCS Data Store. Such tactical access is used for verification purposes, primarily in Test and Non-Production instances.

There are two ways to view source data:

1. Custom source data view
2. Pre-configured source data View

8.2.1.1 Custom Source Data View

User can create new visualization reports to view data for specific attributes that are not a part of pre-configured staging data visualization.

User can create new visualization reports to view data for specific attributes that are not a part of pre-configured staging data visualization.

1. Create (top right of screen) -> Workbook -> Datasets -> Search for relevant source entity.
2. Navigate to **Create** on top right of the screen, select **Workbook** > **Datasets** > **Search** for relevant entity.

Figure 8-11 Custom source data view

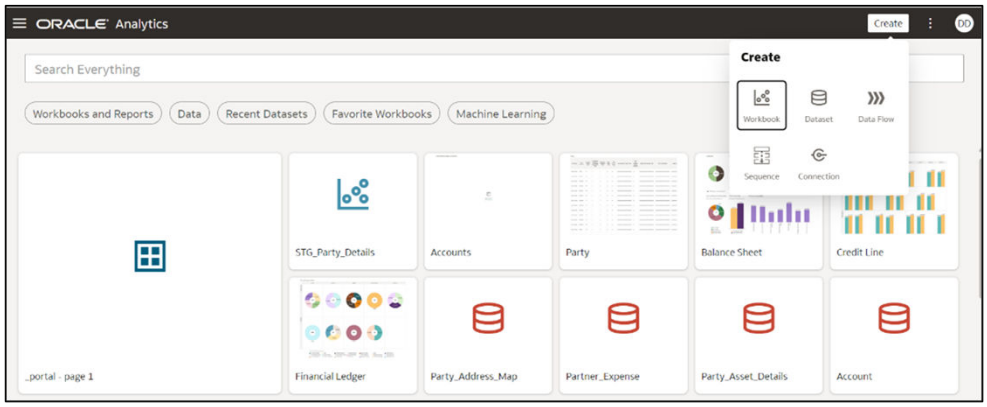


Figure 8-12 Custom source data view 2

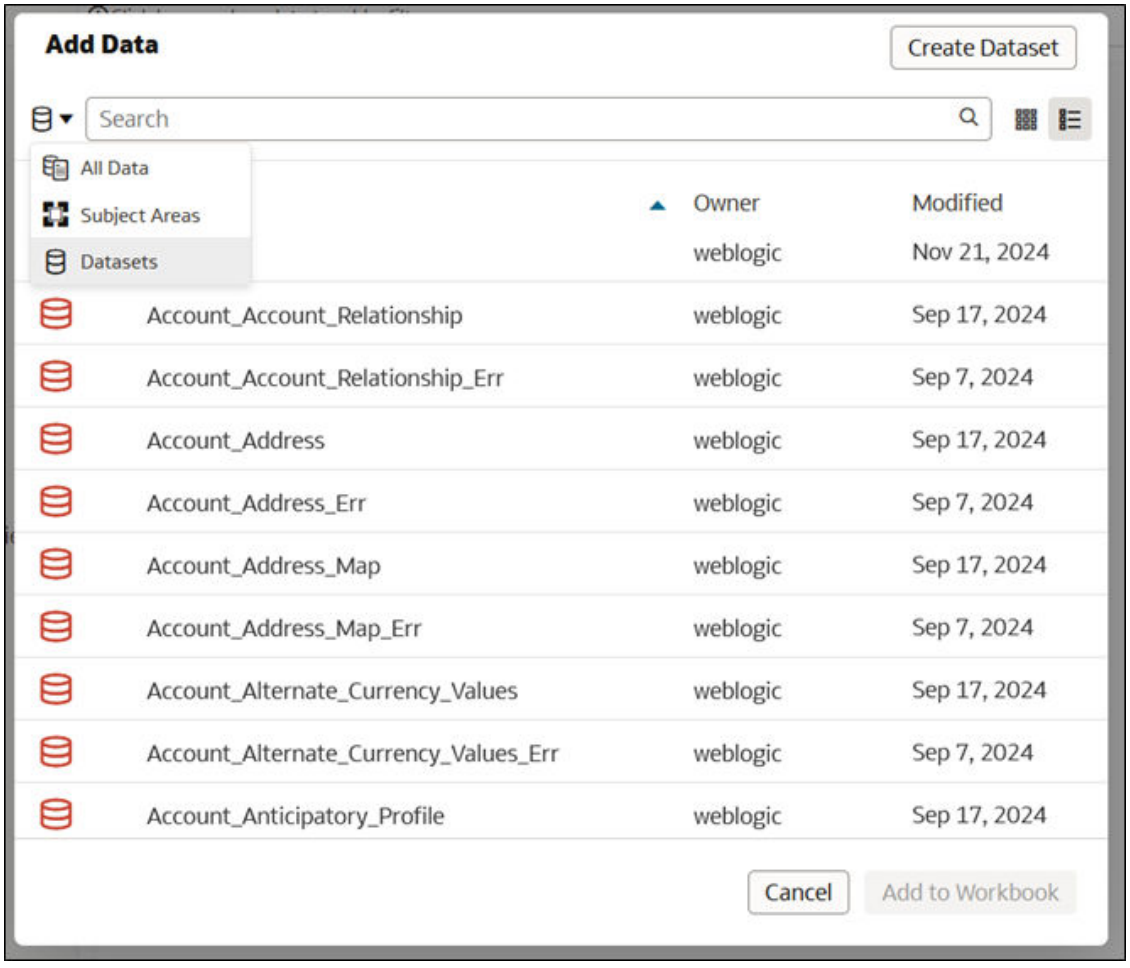
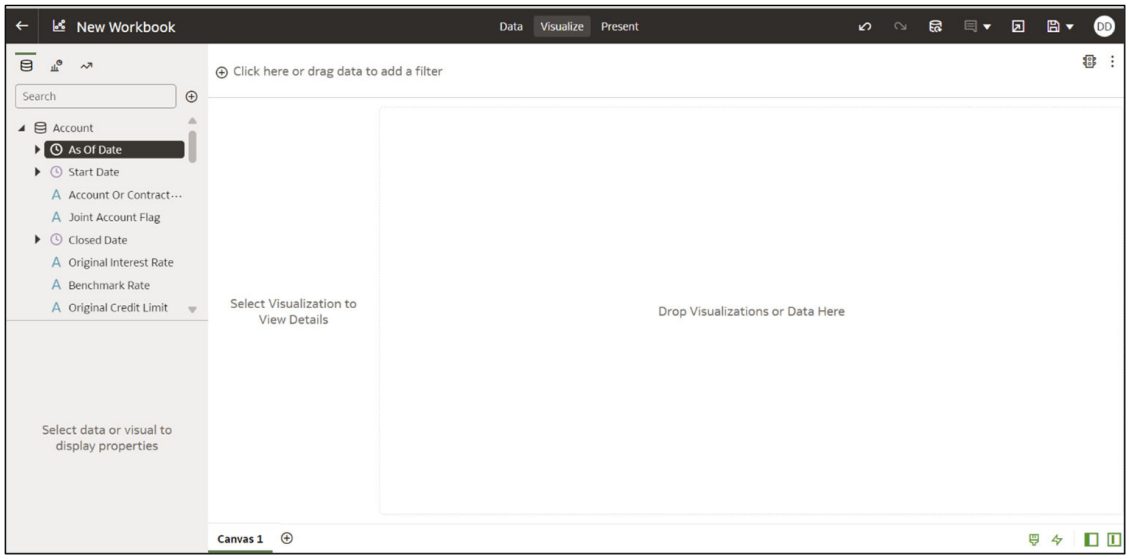


Figure 8-13 Custom source data view 3



> **Note**
>
> Datasetscome as part of out-of-the-box configuration.For any data visualization requirement other than pre-packaged datasets, user can also create their own Dataset and report to view the required data.
> Refer to ***Dataset Visualization via Custom Dataset*** section for more details.

8.2.1.2 Pre-configured source data View

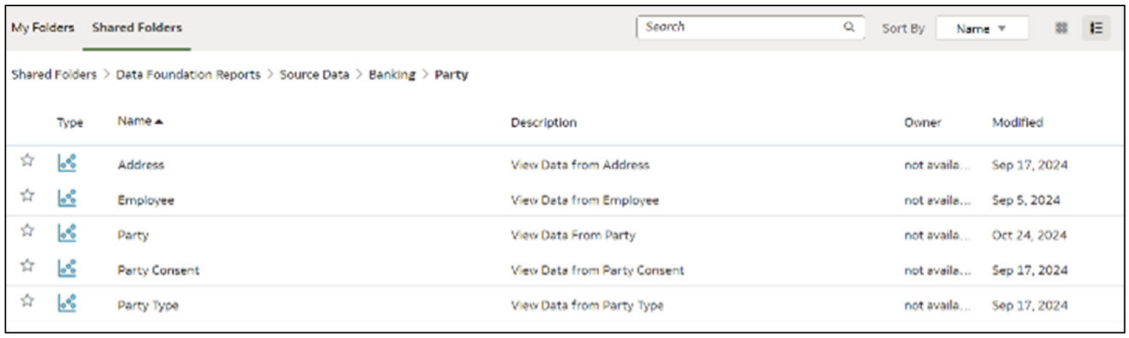
User can view subset of staging data that is loaded from the source systems for a selected pre-configured set of attributes. This is a restricted view that allows users to view only selected attributes that hold the most commonly referred data. The benefit of having this restricted view is faster data load and focused visualization of important data only. The solution also aggregate queries with appropriate filters for use against any dataset.

Data Visualization provided with DFCS can be accessed via following navigation paths:

1. Home -> Catalog -> Shared folders -> Data Foundation reports -> Source Data -> Banking -> Subject Area -> Individual source entity.

Figure 8-14 Pre-configured source data view

Figure 8-15 Pre-configured source data view 2



8.2.1.3 List of Subject Areas for Source Data Visualisation Reports

The Source Data Visualisation Reports helps admin users to visualize data entities such as Party, Product, Transaction, and others directly from the source systems or staging layers.

1. From Oracle analytics, Navigate to **Shared Folders -> Data Foundation Reports -> Source Data -> Banking**
2. The page displays the subject areas tagged to the stage tables.
   - Transaction
   - Product
   - Product Processor
   - Party
   - Others

> **Note**
>
> The search bar enables you to filter entities associated with a specific subject area for example, "Loans." It will display all subject areas related to loans.

3. Click any of the Subject Areas, Eg: Transaction, a list of stage tables is displayed.
4. You will see a list of entities such as:
   - Account Transactions
   - Forex Transactions
   - Casa Transactions
   - Cards Payments Transactions
5. Select specific entity for which you want to view data.

Figure 8-16 Pre-built Source Data Visualization Transaction

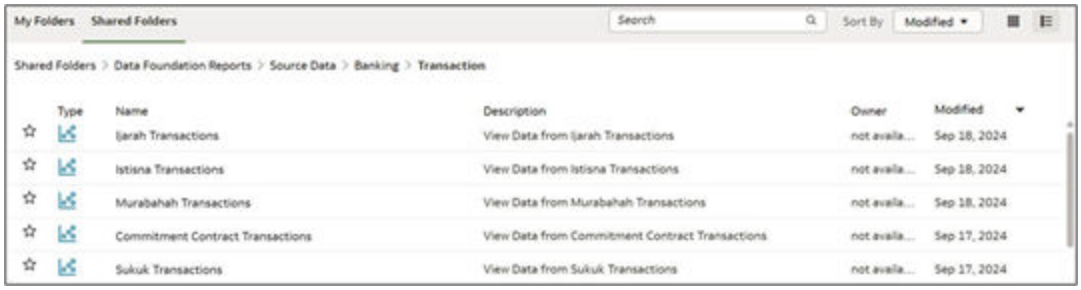


Table 8-3 Subject Area components

Column	Description
Name	Entity name (e.g., CASA Transaction)
Description	Displays the brief description
Owner	The owner is the POC who updated last.
Modified	Timestamp of the most recent data ingestion

6. Click an entity to view the actual record-level data.
7. You can refine your view using:
   - **As Of Date**: Clicked on the **As Of Date** filter tab to adjust data based on reporting dates.

Figure 8-17 As Of Date filter

     - Select **List** to allow selection from a predefined list of dates.
     - Select **Exclude** to remove the selected date range from the results.
     - Select **Null** to include rows where As Of Date is null (missing/ undefined).
     - Select **Date Range** to select records that fall **within a specific time range**.
     - Select **Relative Time** to dynamically filter records based on a relative timeframe from today (or another reference point).
     - Each column represents a field/attribute from the data entity. For the Account entity, key fields include:

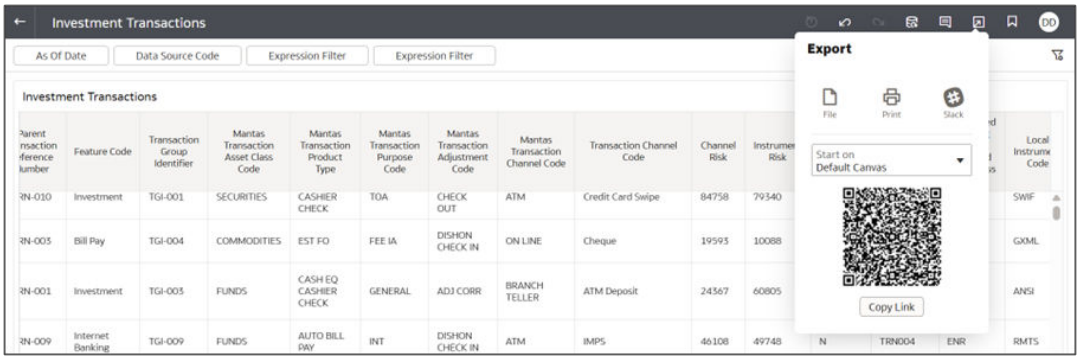
* **Data Source Code** – to view data from a specific source system (if multiple exist).
* Click **Create Expression Filter** – Opens the expression filter interface to define advanced logic-based filters.
* Click the three-dots to sort the list of accounts displayed.
* Click **Drill to Data Element** to enables users to explore related or lower-level data.
* Right-click to view the interactive data table within the report.

8.2.1.4 Exporting Data

Data visualization (source data or results data) can be exported in various format like excel, csv, PowerPoint and image. You can export the data from the report using multiple methods.

1. Navigate to the Report, on the top-right corner click the **Export** icon. A pop-up window appears.

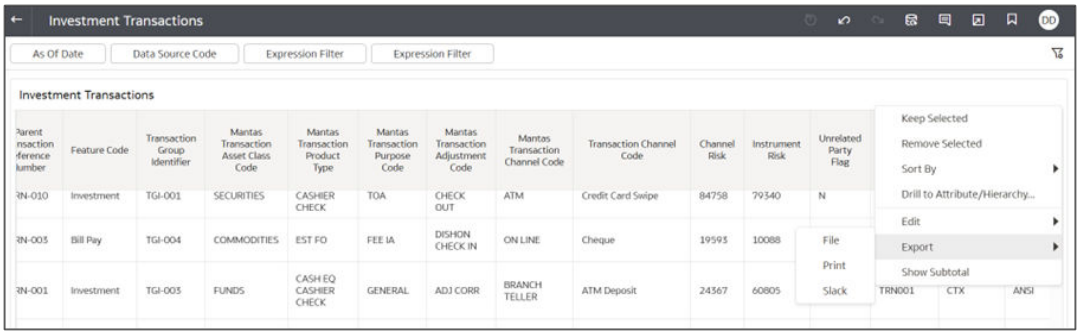
Figure 8-18 Export



Option	Description
File	Export the current report or canvas view to a downloadable file (e.g., PDF, Excel, etc.).
Print	Send the current canvas/report to a printer.
Slack	Share the report directly to a Slack workspace/channel (if integrated).
Dropdown - Start on	Lets you choose where the exported view should start from when accessed via link or QR code.
Default Canvas	Exports starting from the default or main canvas of the report.
Selected Canvas	Starts the export from the canvas currently selected by the user.
Stage Data	Starts the export from a staging or data preparation view (likely raw or pre-processed data).
QR Code	Provides a scannable link to open the report/export on mobile or desktop quickly.
Copy Link	Copies the shareable report/export link to clipboard for quick sharing.

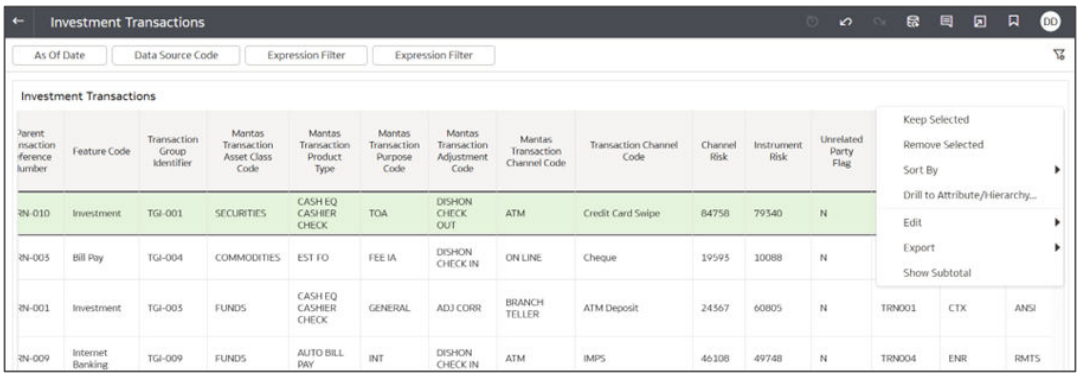
2. Click on the three-dots and then select **Export**.

Figure 8-19 Export



3. Right click on **Data** -> **Export**.

Figure 8-20 Export



4. Right click on **Data** > **Edit** > **Copy Data** > **Paste** to excel. A message Data has been copied to clipboard is displayed.

8.2.2 Results Data Visualization

DFCS supports result entities' data visualization based on pre-defined out-of-the-box datasets called subject areas. Each **subject area** is a pre-configured dataset that brings together all fact entities of similar grain and includes pre-defined relationships with their related dimension entities. **Customized results data visualization canvases** can be created by user to enable them or other staff to access and analyze results data more as per their specific requirement for a given subject area. The service offering also includes pre-built pre-built dashboards called **Pre-Built reports** for user to view results data.

Results Data visualization represents view of results (fact) data either via tables or via various graphics forms such as charts, pie graphs, scatter plots and other such sophisticated forms. Visualization can be for out-of-the box pre-built dashboards or custom requirements of user. There are many visualizations options that help user display data in the form of tables or various graphs and charts. Visualizations options include but are not limited to tabular data, pivots, bar graphs (Vertical, horizontal, stacked bar, etc.) pie charts, line graphs, scatter graphs, tree map, etc. This makes it easier for user to spot patterns and trends in massive data sets that are hard to identify with the naked eye. These interactive dashboards can be created by a business user to enable self and other staff to access information more easily, as data visualizations created by one user can be shared with other users too. Each graphical element

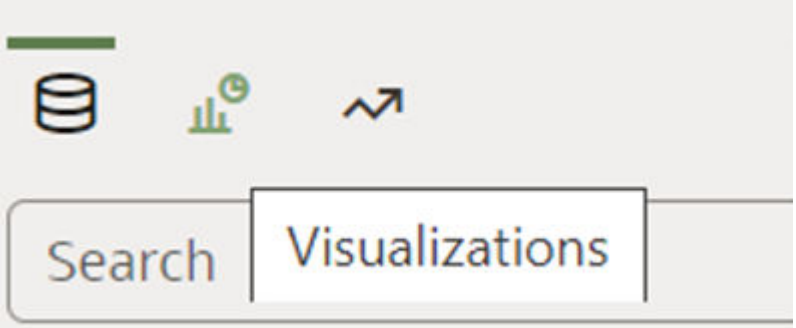
has the potential to provide granular information that updates all visualizations in the dashboard as the user drills down into finer and finer detail even on a single given visualization.

To summarize, the main goal of results data visualization is to:

- Make results (fact) data available for user for each subject area or granularity.
- Make results (fact) data available for user for tabular view without the need to write complex SQL queries or without any dependency on any third party application.
- Make results (fact) data available via graphic visualizations for data analysis and MIS reporting.
- Access out of the box pre-built visualizations and pre-built reports for each subject area.
- Access granular data via drill through.
- Share data visualizations custom created by one user with other users within the organization.
- Access pre-built Key performance Indicators (KPIs).
- Options to export reports to multiple formats such as Microsoft Excel, Microsoft PowerPoint, PDF, and so on.

Visualization options can be seen in LHS top under the **Visualizations** button.

Figure 8-21 Visualization



There are two ways to view results data:

1. Custom results data view

2. Pre-configured pre-built reports

> **Note**
>
> For more information on each subject area, see Pre-Built Reports section.

8.2.2.1 Subject Area

A **Subject Area (SA)** is a pre-configured dataset that includes all **fact entities** (along with their attributes) and their associated **dimension entities**, relevant to a specific functional domain.

Key Features:

- **Domain-Specific Data Access** – Provides users with a structured view of entities and attributes needed for a particular functional area.
- **Fact and Dimension Entities** – Includes key data points (fact entities) and their contextual details (dimension entities).
- **Supports Multiple Granularities** – Most Subject Areas contain entities of the same granularity, but some may include multiple levels.

Example:

- The **Accounts Subject Area** allows users to access all **account-granularity** data, including dimensions such as **product type, party type, and account rating**.
- While most entities follow the **account grain**, some may have different granularities, such as **account-rating** or **account-address grain**.

For **optimal data extraction**, users should first review the **Subject Area Granularity** to ensure they are working with the correct level of detail before extracting data.

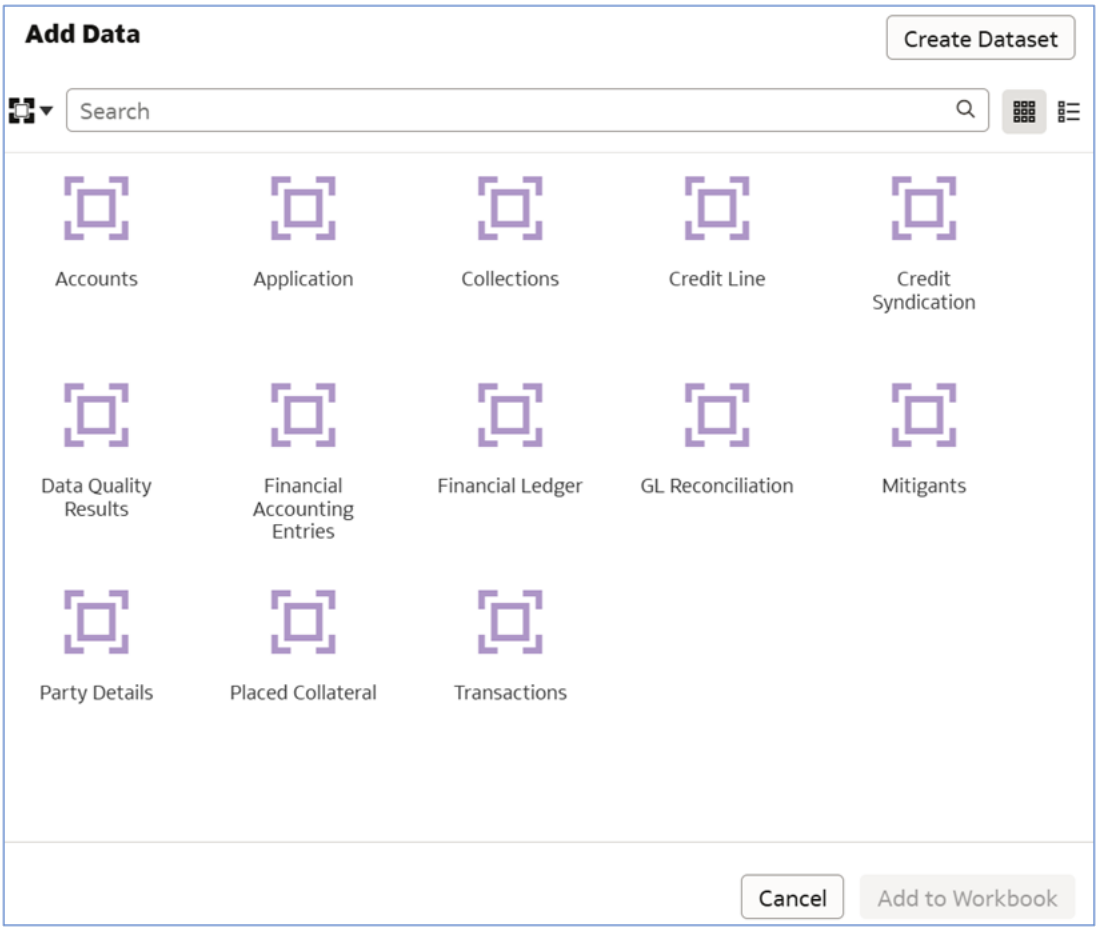
8.2.2.1.1 List of Subject Areas Supported

The subject areas will be enhanced in future releases to accommodate for more specific granularities.

Below is the list of subject areas currently supported:

- Accounts
- Application
- Collections
- Credit Line
- Credit Syndication
- Financial Accounting Entries
- Financial Ledger
- Mitigants
- Party Details
- Placed Collateral
- Transactions

Figure 8-22 List of Subject Areas Supported



1. From the left navigation panel, go to **Data Visualization**, and click **Add New Visualisation**. This option allows you to create a custom visualisation based on the available subject areas. You will be redirected to the Oracle Analytics page.
2. In the Oracle Analytics page, click the **Create** button (top-right corner).
3. You can either click **Workbook** or **Dataset**.

> **Note**
>
> The Dataset includes the subject areas that are pre-configured.

4. Click **Workbook** → **Add Data**.
5. In the **Add Data** window, choose **Subject Areas** from the list. Subject Areas define the data sets you can use for analysis. Examples: Finance, Risk, Customer Data, GL Reconciliation, etc.
6. Select the required option.
7. Click **Add to Workbook** to proceed.
8. After selecting a Subject Area, the Analysis Editor opens.

9. After adding a dataset, the Data panel will display different fields you can use for your visualizations.
10. Click **Save** to save changes in the workbook.

> **Note**
>
> Subject Areas come as part of out-of-the-box configuration and can't be created or modified by user. For any data visualization requirement other than pre-packaged subject areas, user can create Dataset and report to view the required data. Refer to Data Visualization via Custom Datasets section for more details.

8.2.2.1.1.1 Subject Area Glossary

Each **Subject Area** has a **pre-defined glossary** that provides essential documentation for users, helping them understand data structure and relationships.

- List of all result entities included in the subject area
- Entity granularity of each result entity based on the primary keys
- Attribute name and detailed attribute description for all primary keys
- Entity relationships that define relation of attributes with related dimension entity and the related attribute

The glossary helps users determine which attributes can be combined in a single visualization for meaningful insights. A single visualization should include attributes of similar granularities to avoid **Cartesian join issues**, which can lead to data misinterpretation.

For Example:

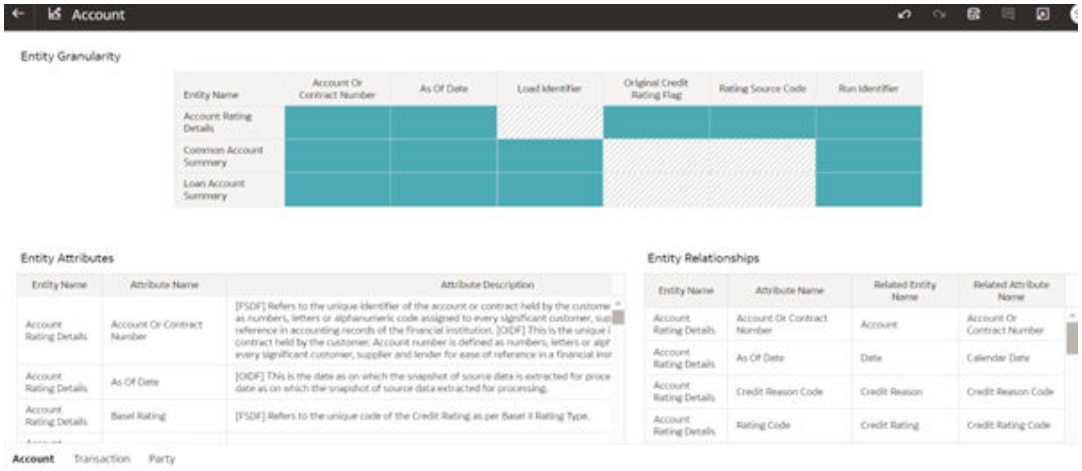
Attributes from **Common Account Summary** and **Loan Account Summary** can be used together in a single visualization.

- **End of Period Balance (EOP Bal)** for loans should **not** be combined across **Account Rating Details** and **Common Account Summary**.
- If an account has **three credit ratings from different agencies**, it will have **three rows for the same account**, repeating the **EOP Bal** value.
- This could lead to the **EOP Bal** being **aggregated incorrectly (e.g., tripled for a single account).**

Subject Area Glossary can be accessed as below:

- Navigate to the Oracle Analytics page → Catalog → Shared folders → Data Foundation Reports → Reports Glossay → Subject Area Glossary

Figure 8-23 Subject Area Glossary

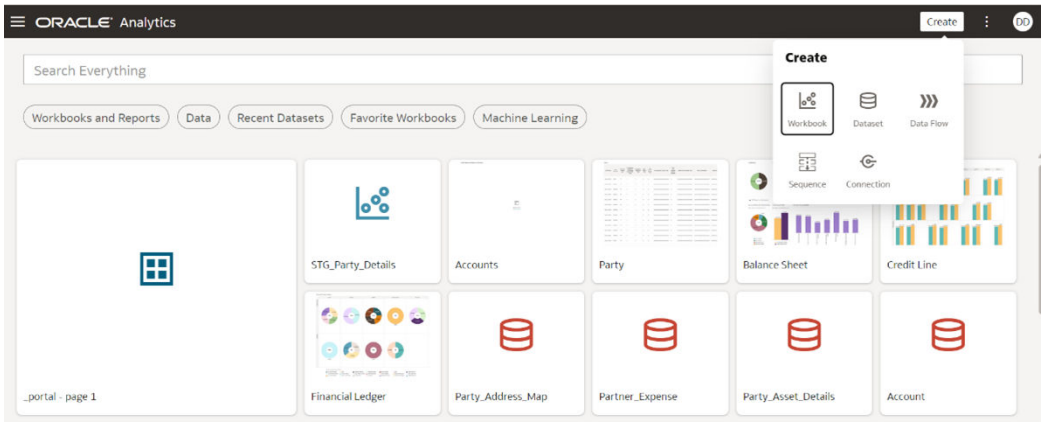


8.2.2.2 Custom results data view

Users can create new visualization reports to view data for specific attributes of results entities. Steps to view custom source data in Data View UI are as below.

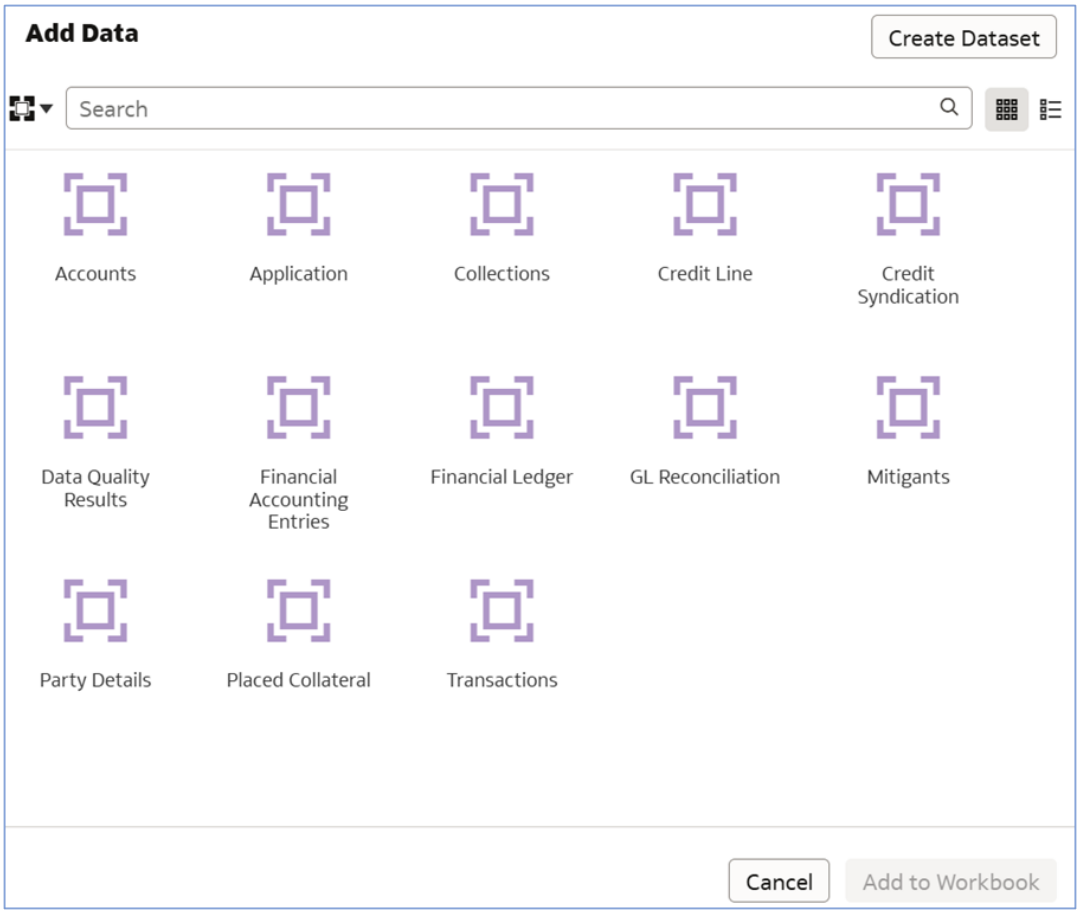
1. Navigate to the Oracle Analytics home page.
2. On the top right corner click **Create** → **Workbook** . The **Add Data** pop-up screen appears.

Figure 8-24 Custom results data view



3. From the **Select Data** drop down, select **Subject Area** → **Choose Subject Area** → **Add to Workbook**.

Figure 8-25 Add Dataset



Note

Each workbook can have multiple Canvases, similar to the way excel workbook has multiple sheets.
Each Canvas can have multiple visualizations, similar to the way single excel sheet can have multiple graphs in single sheet. Maximum of 6 visualization is recommended in a single canvas for optimum system performance.

User can drag and drop attributes required for analysis from left hand side (LHS) under **data** button. This process is very user-friendly and doesn't require the abilities of SQL query writing to fetch data.

Add and manage datasets

Inspect and explore data tables

Join multiple datasets together for analysis

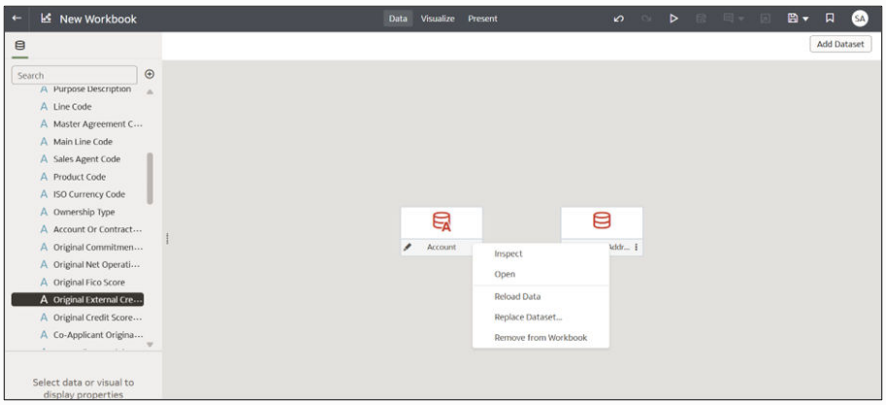
Create custom fields or visuals based on the data

Figure 8-26 Data button

Attributes are displayed in data tab in following order:

- Fact entities in alphabetical order based on Entity logical name
- Dimension entities based on alphabetical order
- Attributes displayed in alphabetical order within fact and dimension entities
- ‘My Calculations’ on left bottom will display any calculation formula added by user

Users can add calculation formula for value measures displayed in the view. Users can also save and share these custom report created with other users.

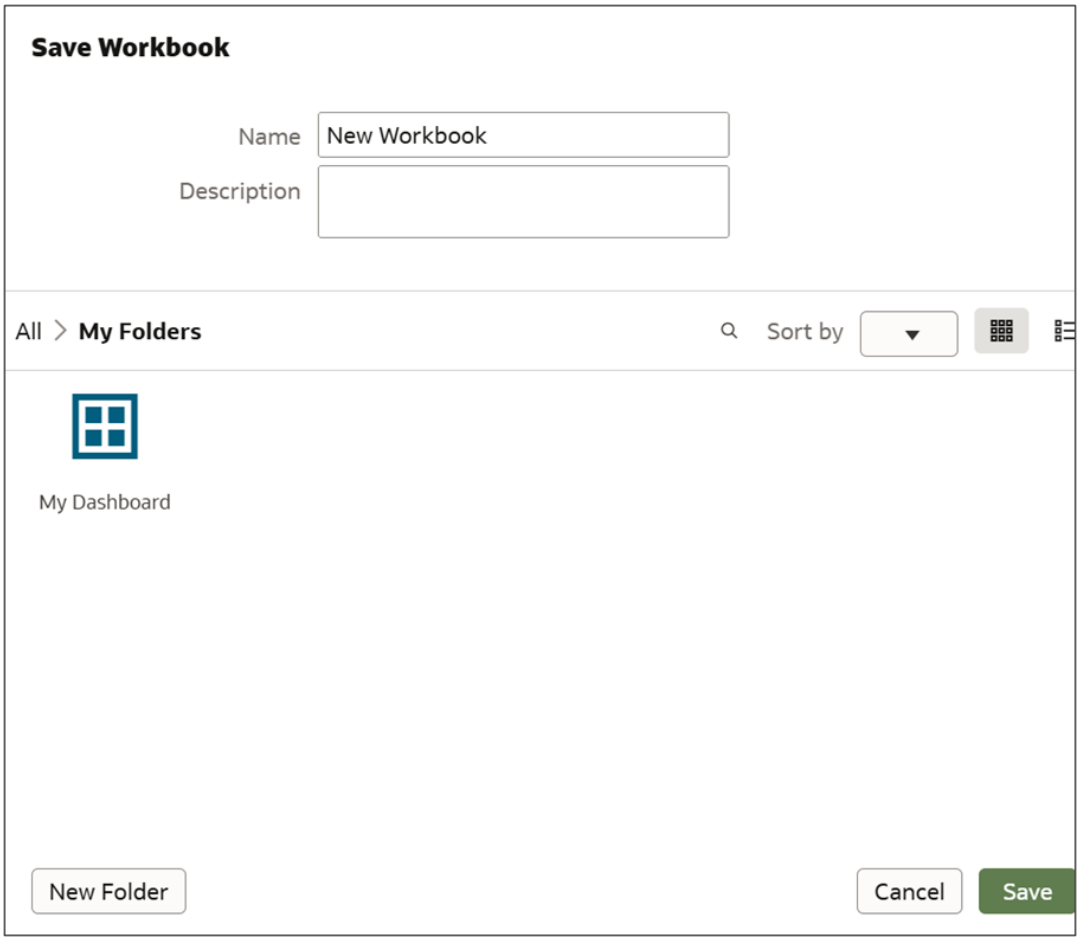
> **Note**
>
> Users can view the following on the canvas.
>
> - Shows datasets as tables (e.g., "Account" and "Address").
> - You can drag and drop to create **joins** between datasets (not yet connected in the screenshot).
> - Right-clicking on a dataset brings up the following options.
>   - **Inspect** – Opens a preview of the dataset including data types, column samples, and row count.
>   - **Open** – Opens the dataset in full for editing or creating calculated fields.
>   - **Reload Data** – Refreshes the data from the original source.
>   - **Replace Dataset** – Swap the dataset with a different one while maintaining visuals (if compatible).
>   - **Remove from Workbook** – Deletes the dataset from the current workbook.
>
> **Figure 8-27 Adding and Replacing a Dataset**
>
> 
>
>
> - Click **Add Dataset** (top-right) to include additional data sources.

4. Click on the + icon to add Datasets to selected Subject Area.
5. Select **Datasets** from the **Add Data** drop down.
6. Select the required **Dataset** and click **Add to Workbook**. For more information, see Adding Dataset section.

> **Note**
>
> Matching is not allowed as each one has already been matched to a different Subject Area.

7. Click **Save** (top-right) to save the workbook.

Figure 8-28 Saving a Dataset



8.2.2.3 Exporting Data

Data visualization (source data or results data) can be exported in various format like excel, csv, PowerPoint and image.

Steps to export data:

1. Right click on **Data** -> **Edit**-> **Copy** -> **Paste** to excel.
2. Right click on **Data** -> **Export** -> **File** -> Chose format (PowerPoint, image, pdf or csv).

Figure 8-29 Data visualization Party Financial Details

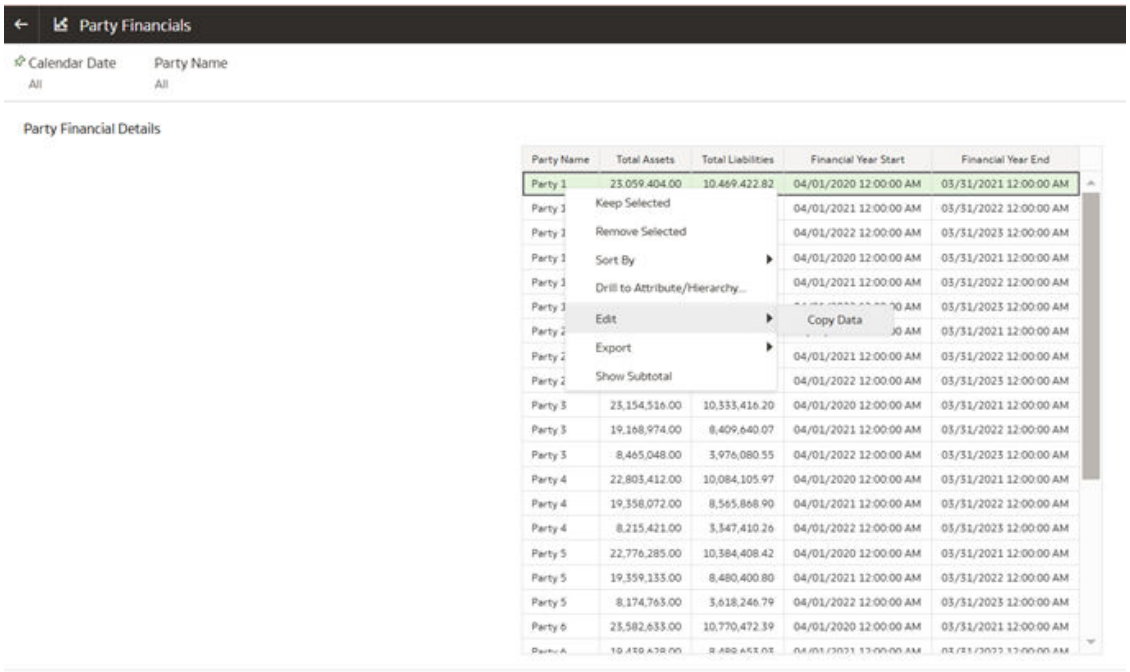


Figure 8-30 Data visualization Party Financial Details Export

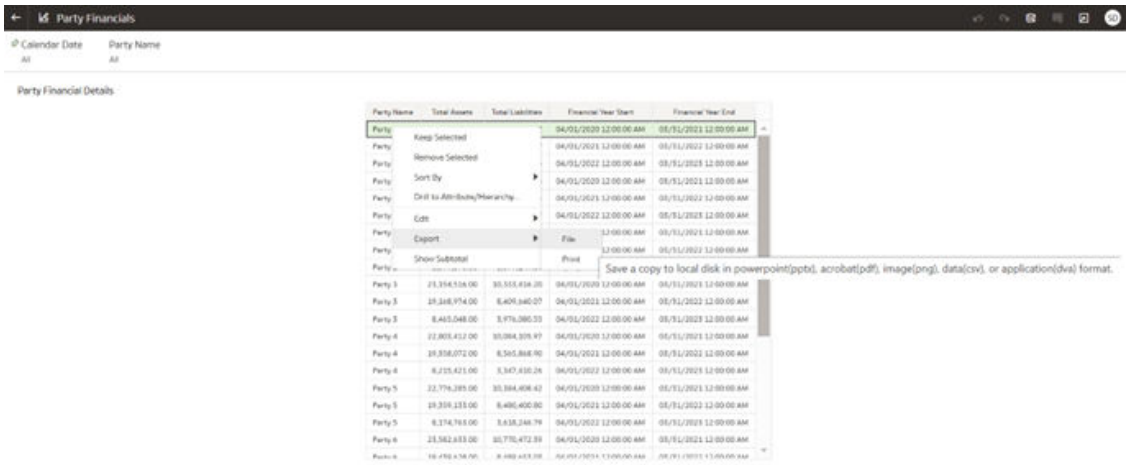
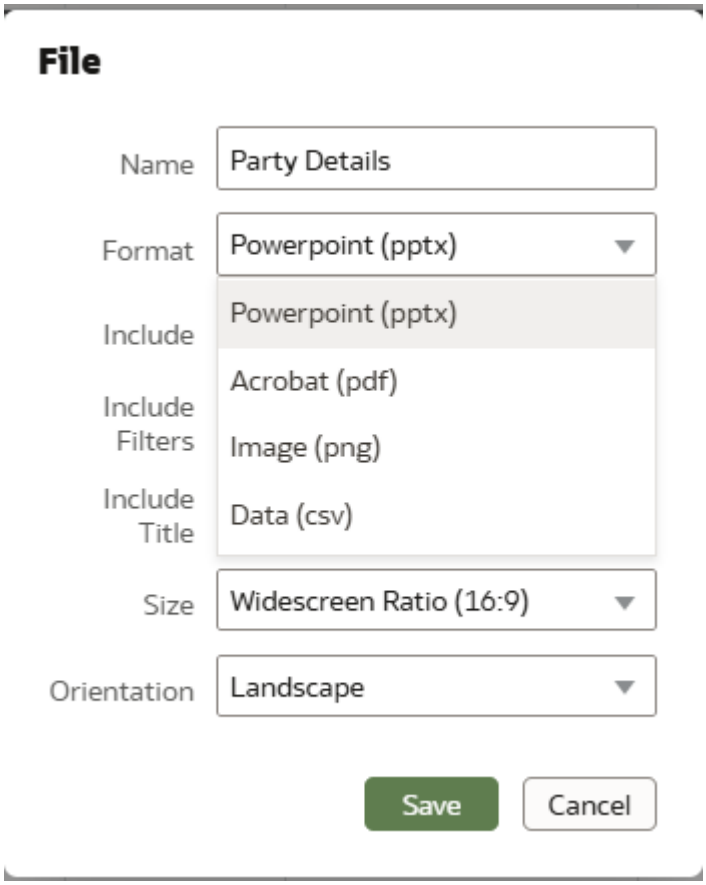


Figure 8-31 Data visualization Party Financial Details Export File



8.2.3 Data Visualization via Custom Datasets

In the previous sections, the guide covered source data visualization and results data visualization using out-of-the-box (pre-packaged) datasets and subject areas. This section includes the steps needed to **build a custom dataset** for visualization of result data (or stage and dimension data), for **entities that are not packaged in out of the box** subject areas or datasets. Post custom dataset creation, users can use the **custom created dataset for data visualization via workbook creation.**

While DFCS contains pre-seeded datasets – which are called results Subject Areas like Accounts or Transactions, creating your own dataset lets you visualize any entities not included out of the box. Custom dataset can also be used to visualize data loaded and processed for custom entities and attributes.

Building a custom dataset allows you to define exactly which fact and dimension entities to join, how they are joined, and which attributes to include in the view. Once created, this dataset is ready for visualizing the results data.

Below are the steps to build a custom dataset.

1. Log in to the DFCS application and go to Data Visualization screen (Oracle Analytics).
2. From the home page, in the top-right corner click **Create** > **Dataset** and then pick the appropriate connection.

Figure 8-32 Custom Dataset

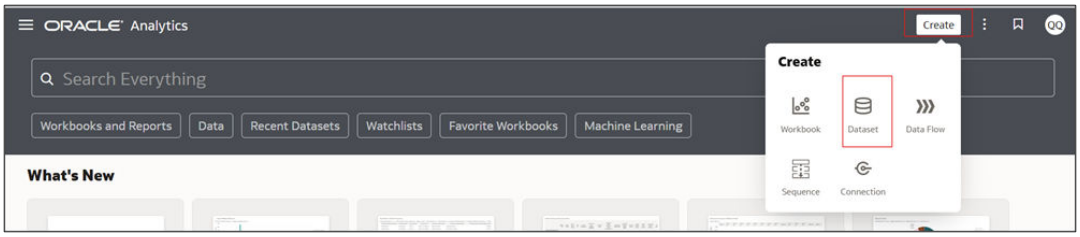
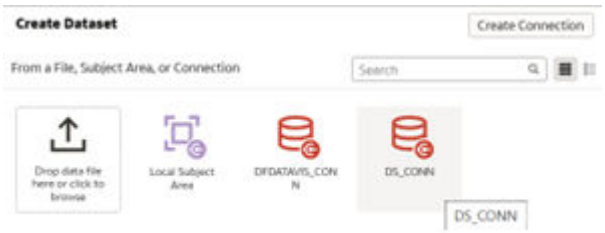


Figure 8-33 Create Dataset

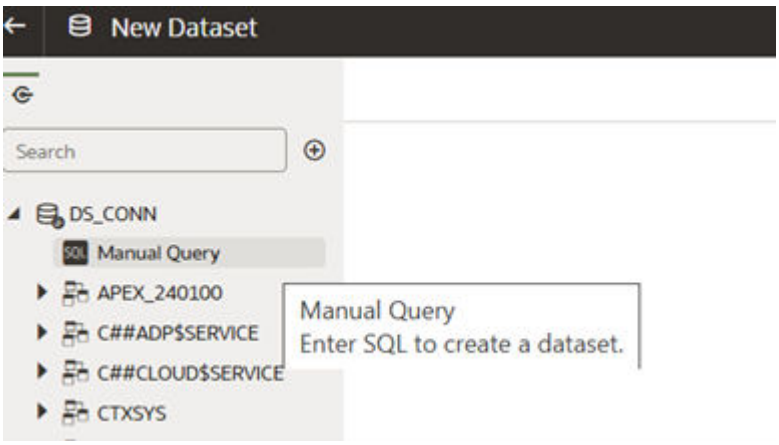


3. On the New Dataset screen, select the appropriate schema. Scroll through the list or use the search bar to find the tables you need, select, drag and drop them to the right-hand side join diagram section.

> **Note**
>
> Always drag the fact table in first - positioned at the left - and then bring in each dimension table you need on top of this fact table, with which you want to create the join. For example, we can drag in the Fact Common Account Summary table and the Account Dimension table.

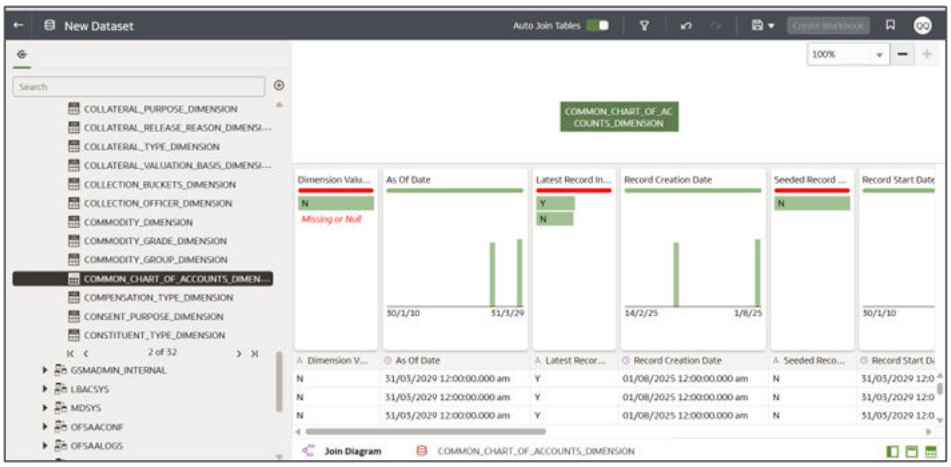
By default, Oracle Analytics will auto-create joins, if you prefer to define them yourself, toggle Auto Join Tables off.

Figure 8-34 New Dataset



4. Configure the join between the selected tables. To do this, click the Join icon and configure the join. Select the type of join you want. Click outside and watch for the join icon to turn from red to green - green denotes your join is successful.

Figure 8-35 Custom Dataset Visualization



5. With your tables linked, click Edit Definition on each table to select only the columns your reports require. You can do this by dragging and dropping the required columns.

Figure 8-36 Edit Custom Dataset Visualization

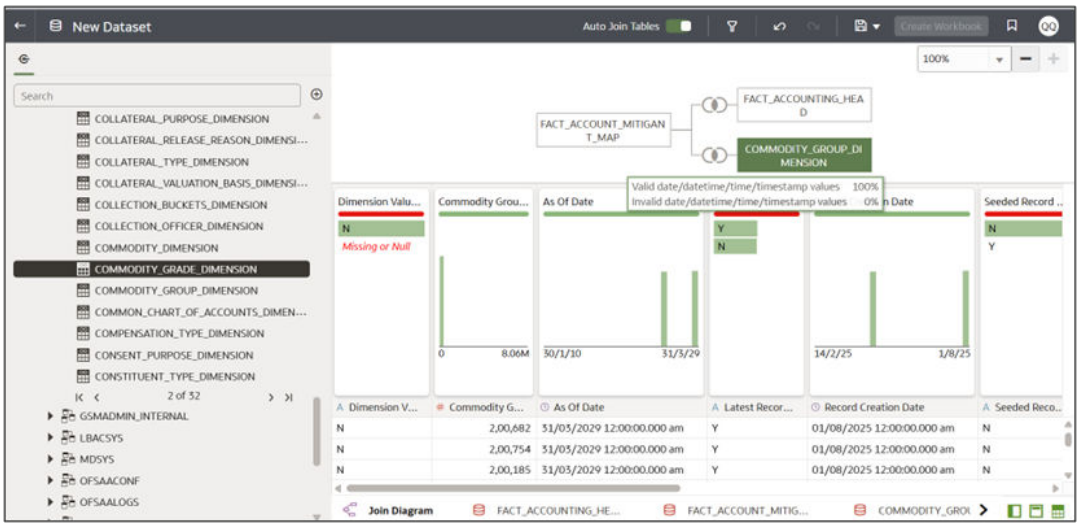
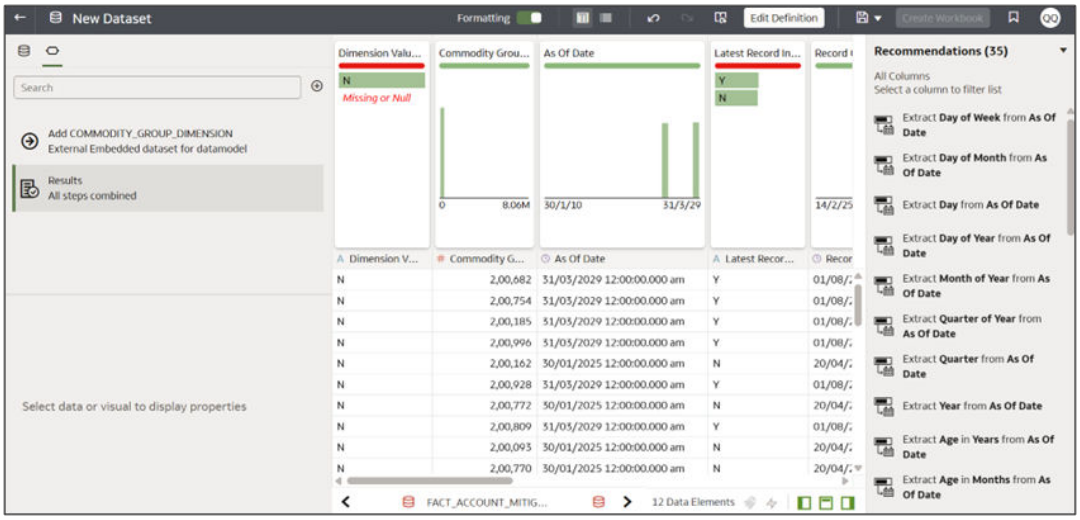


Figure 8-37 Edit Custom Dataset Visualization_2



6. To ensure consistent data load, change the data access for the table from automatic caching to “Live”.
7. Save the dataset. To reopen ii, navigate to Oracle analytics, select hamburger menu > data > datasets > click the three dots in the Actions menu corresponding to the custom dataset, and select open. Now, navigate to the edit definition window for the table to see section to configure **data access** on the right-hand side. Set it to **live**.
8. **Refresh the profile** by clicking on the Profile Refresh icon – (next to the Save button on top). Then press **Save**.
9. Adjust the data types manually, if needed. By default, every column is set to Text. Click the **metadata icon** at the top and change numeric measures - like End-of-Period Balance - from Text to Number. Change Treat As to Measure. This step allows Oracle Analytics to perform aggregations correctly. Perform this step for all numeric fields as needed.
10. Once required columns have been added and their Datatypes updated, click **Save** to store the dataset. This saved Custom Dataset can be used for data viewing and analysis by clicking **Create Workbook** in the top-right.
    There is also an **alternative approach to preparing data using Manual SQL Queries in the dataset.**

    After selecting the **relevant** schema, User can drag the Add Manual Query option onto the diagram pane, click edit definition, search for the required tables and columns to build manual query. While writing the query ensure, that you use Logical column name in double quotes, use schema name before entering table name. Table name is Logical table name with space replaced with underscore.

    > **Note**
    >
    > Anything inside double quotes is case-sensitive – and you must use the logical column names correctly.

11. Click **Refresh & Preview** to validate your results, then save the dataset. **Name the dataset on top left corner** and click **Save**.

To create visualizations using the dataset that has just been created:

From the Oracle Data Visualisation home page:

1. Click Create -> workbook
2. Select dataset, search for newly created custom dataset -> Add to workbook
3. In the workbook, drag and drop the required columns from the dataset to create the required visualizations. Change the chart type, based on your analytical need. Do calculations, if needed.

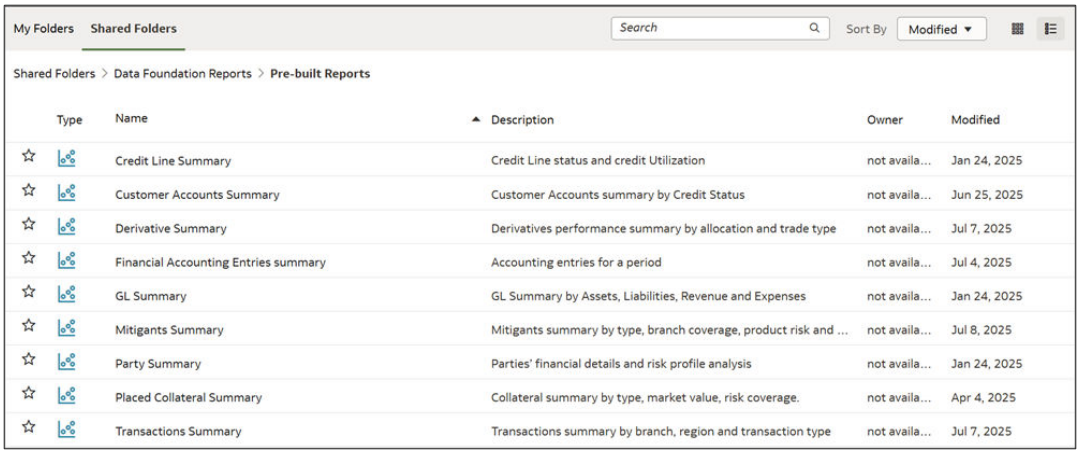
8.2.4 Pre-Built Reports

Most of the subject areas have a corresponding pre-built report for results data visualization. Pre-Built reports have pre-configured tabular data and data visualization dashboards from the entities within the subject area. You can view data for the pre-configured set of attributes in these dashboards. You will have Read-only access to these reports as they are configured out-of-the-box.

To access these reports, navigate through the following path:

1. Home → Catalog → Shared Folders → Data Foundation Reports.

Figure 8-38 Pre-built Reports

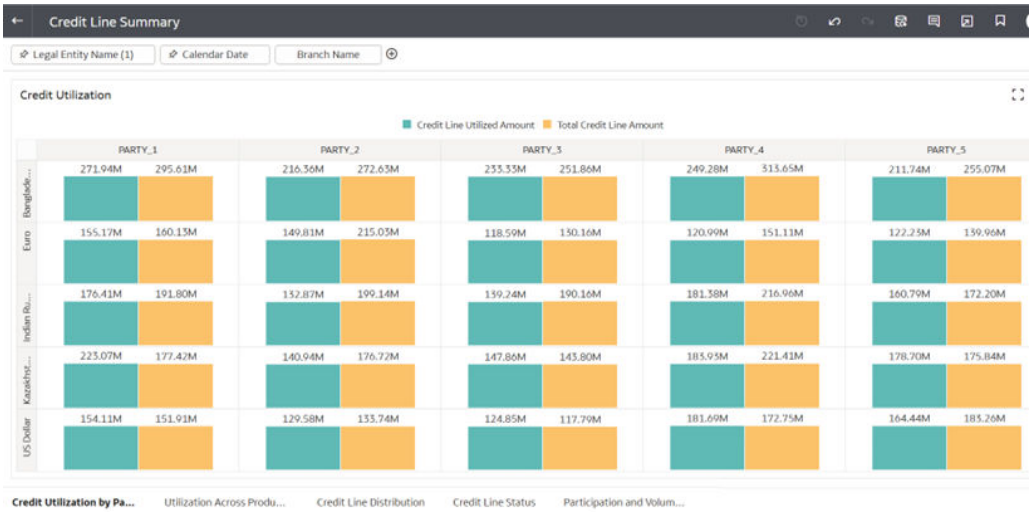


8.2.4.1 Credit Line Summary

This pre-built report is based on Credit Line subject area. The dashboard provides a visual representation of **Credit Utilization** across different parties and currencies.

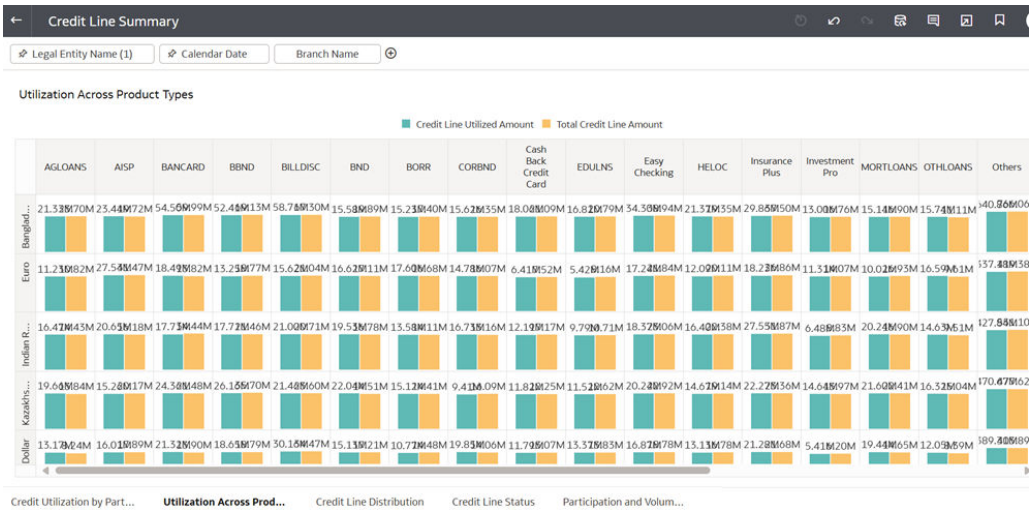
- **Credit Utilization by Parties:** This bar graph illustrates total credit line against the utilized amount, and helps bank quickly assess the overall credit utilization rate. This helps in identifying trends over time, such as increases in credit usage which might indicate economic stress among borrowers or a growing confidence and spending capability. The visualization helps user analyze credit utilization numbers for each party and currency as of date and analysis can be done at branch level.
  - **Objective** – To highlight the total credit line and utilized amount for various parties across different currencies as of given date for selected branch/branches.

Figure 8-39 Credit Utilization by Parties



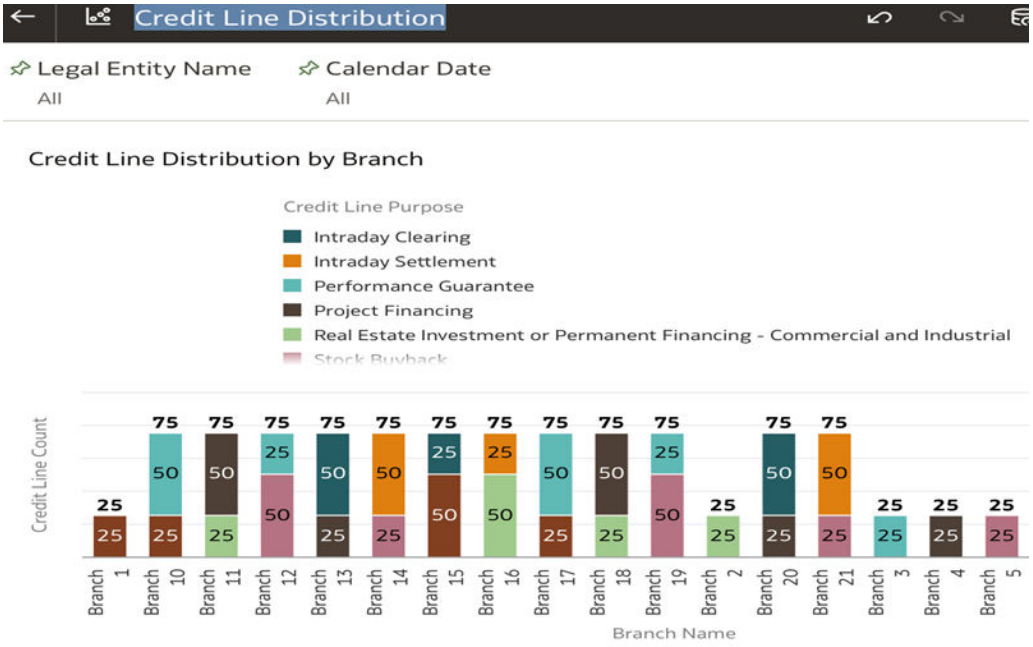
- **Utilization Across Product Types:** The visualization illustrates the total credit line commitment amounts and the utilized amounts across different products denoted in multiple currencies. This helps to analyze which products are most and least utilized, banks can identify successful features or gaps in their offerings. This information can drive the development of new products or adjustments to existing ones to better meet customer needs.
  - **Objective** – To highlight the total credit line amount and utilized amount by different product types for selected branch/branches.

Figure 8-40 Utilization Across Product Types



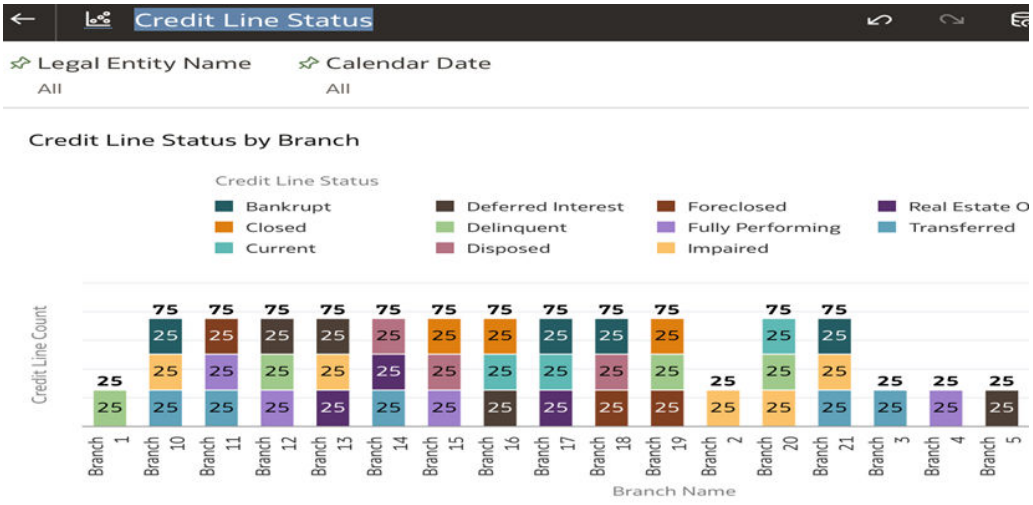
- **Credit Line Distribution:** The Visualization provides insight into the predominant credit line purposes at each branch allows a bank to tailor its products to better match local demand. This helps management to assess the commitment track to aid in performance review and Risk management.
  - **Objective** – To view number of credit lines by credit line purpose for each branch within the legal entity.

Figure 8-41 Credit Line Distribution



- **Credit Line Status**: The dashboard illustrates the segregation of credit lines into various credit status categories such as fully performing, delinquent and impaired. This helps Banks to quickly identify areas of concern, particularly the proportion of non performing or delinquent accounts. This allows for early intervention strategies to be deployed, such as reaching out to customers who are falling behind on payments to offer restructuring or support services that might prevent further delinquencies.
- **Activity - Results Data Browsing**
  - **Objective** – To view number of credit lines by credit line status like fully performing, delinquent, impaired for each branch within the legal entity.

Figure 8-42 Credit Line Status

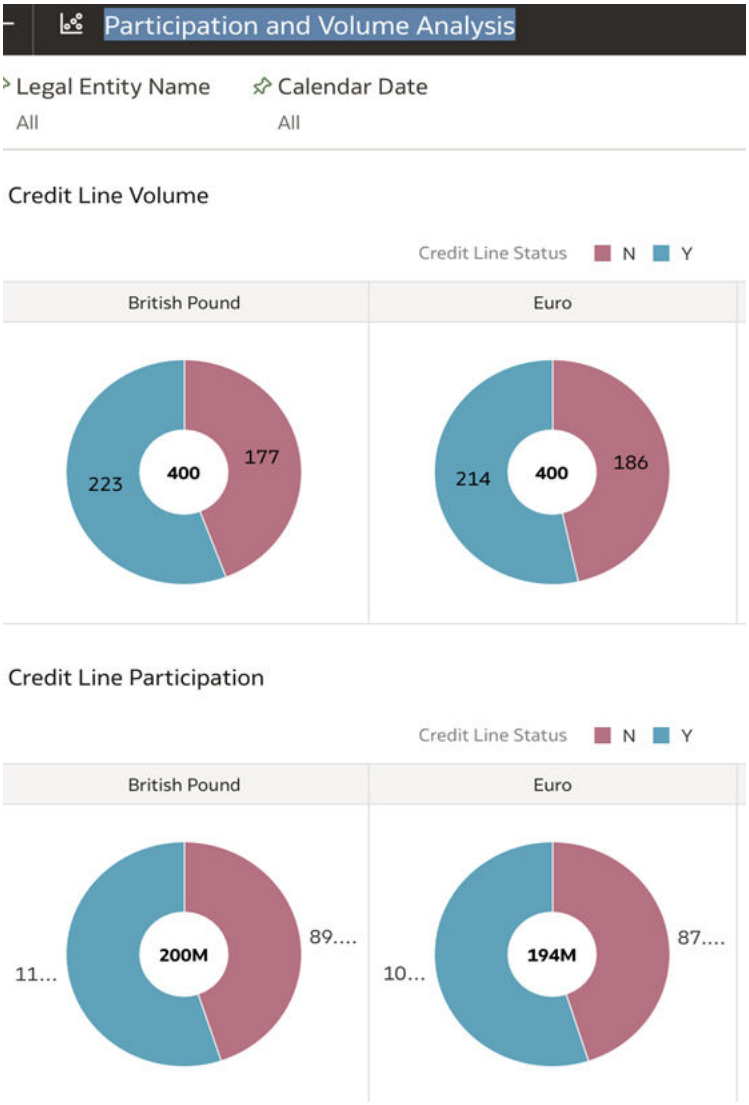


- **Participation and Volume Analysis:** The visualizations show the participation flag for credit lines alongside the sum of total credit line amounts tagged with that flag which helps

banks in analyzing how participation in specific credit programs impacts their overall credit portfolio. Participation flag indicates if the credit line facility is a part of the syndication.

– **Objective** – To highlight the total credit line amounts and Participation counts by Legal entity and Calendar date.

Figure 8-43 Participation and Volume Analysis



8.2.4.2 Accounts Summary

The **Accounts** dashboard displays two key options available:

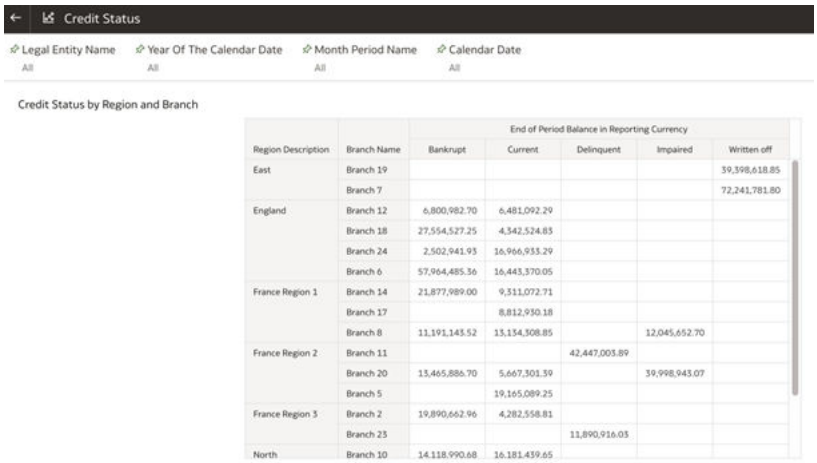
- Customer Accounts Summary
- Derivative Summary

8.2.4.2.1 Customer Account Summary

This pre-built report is based on Accounts subject area. It provides stakeholders with an overall summary of credit status of institution's assets such as loans as of the selected date.

Credit Status: This provides a view of end-of-period balance in the reporting currency by credit status across regions and branches. It enables stakeholders to assess the health of credit portfolios and identify areas requiring attention. This helps in monitoring regional and branch-level credit performance and risk exposure and helps identifying if any specific region or branch needs attention.

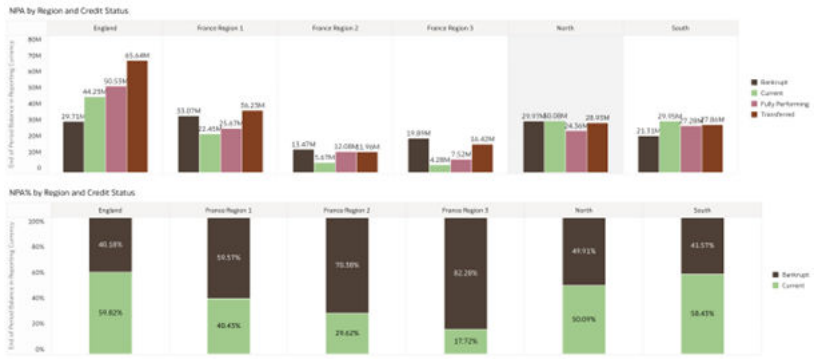
Figure 8-44 Credit Status



Region Description	Branch Name	End of Period Balance in Reporting Currency				
		Bankrupt	Current	Delinquent	Impaired	Written off
East	Branch 19					39,398,618.85
	Branch 7					72,241,781.80
England	Branch 12	6,800,982.70	6,481,092.29			
	Branch 18	27,554,527.25	4,342,524.83			
	Branch 24	2,502,941.93	16,966,933.29			
	Branch 6	57,964,485.36	16,443,370.05			
France Region 1	Branch 14	21,877,989.00	9,311,072.71			
	Branch 17		8,812,930.18			
	Branch 8	11,191,143.52	13,134,308.85		12,045,652.70	
France Region 2	Branch 11			42,447,003.89		
	Branch 20	13,465,886.70	5,667,301.39		39,998,943.07	
	Branch 5		19,165,089.25			
France Region 3	Branch 2	19,890,662.96	4,282,558.81			
	Branch 23			11,890,916.03		
North	Branch 10	14,118,990.68	16,181,439.65			

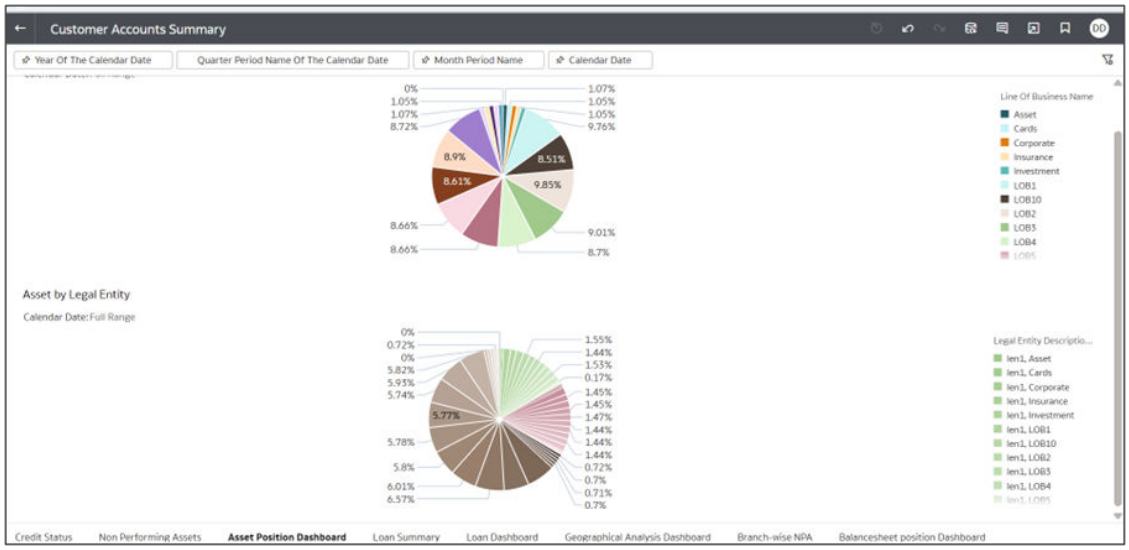
Non Performing Assets: Provides a visual representation of non performing assets (NPAs), where definition of non performing asset is as per jurisdictional regulator and user provides data marking accounts as NPA. This visualization is based on across regions using bar charts. It offers insights into the distribution and health of non-performing assets (NPAs) by region.

Figure 8-45 Non Performing Assets



Asset Position Dashboard - This dashboard provides a quick overview of how assets are diversified by both **business type** and **legal entity**, highlighting the differences across the institution. It can guide strategic focus, resource allocation, and risk assessment. The below pre-built report displays the following details.

Figure 8-46 Asset Position Dashboard



1. Asset by Business Type

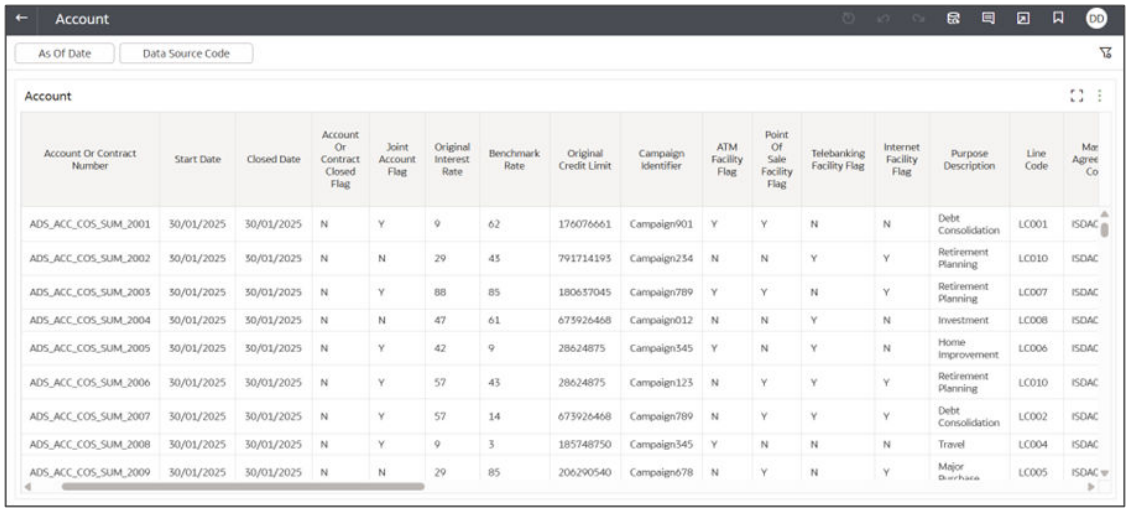
- Shows how assets are spread across various Lines of Business (LOB).

2. Asset by Legal Entity

- Displays asset allocation by **Legal Entities**.

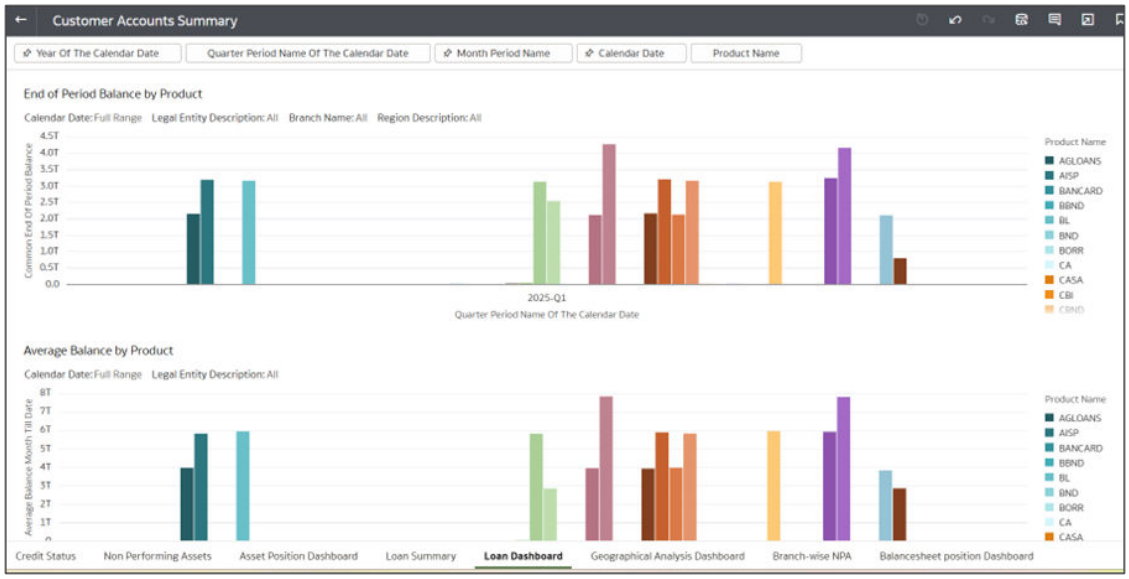
Loan Summary - This dashboard displays detailed information about various loan accounts as of date, including credit limits, loan types, statuses, and balance metrics.

Figure 8-47 Loan Summary



Loan Dashboard - This dashboard visualizes loan data by product for Q1 of the selected year, focusing on two key financial metrics: The below pre-built report displays the following details.

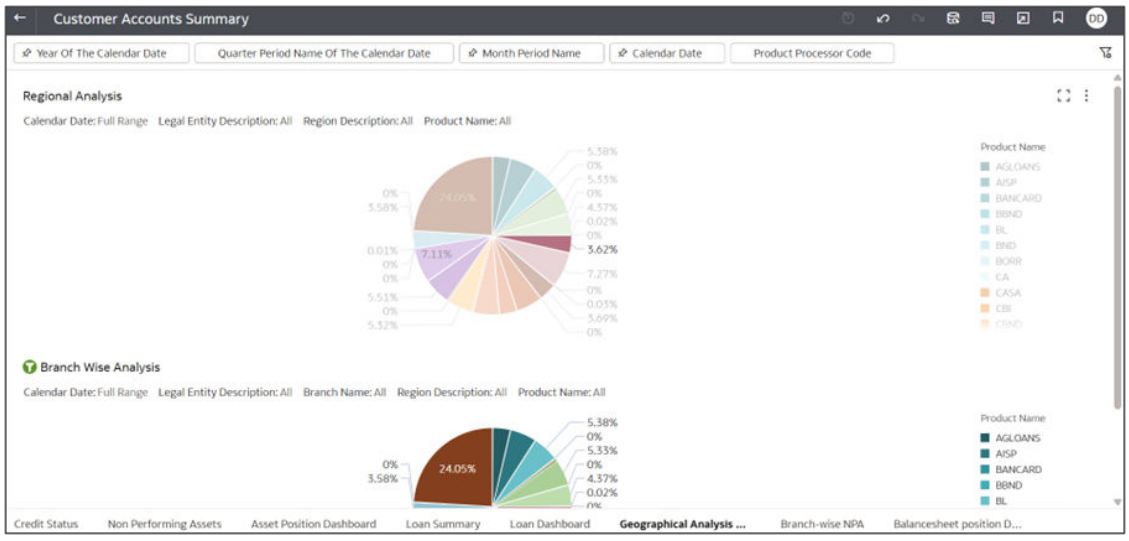
Figure 8-48 Loan Dashboard



- **1. End of Period Balance by Product**
  This chart shows the **outstanding loan balances** at the end of the quarter for each product.
- **2. Average Balance by Product**
  This chart shows the **average outstanding balance till date**:

Geographical Analysis Dashboard - The dashboard is split into sections based on different analyses:

Figure 8-49 Geographical Analysis Dashboard



- **Regional Analysis:** Analyzes the distribution of products or other variables across different regions.

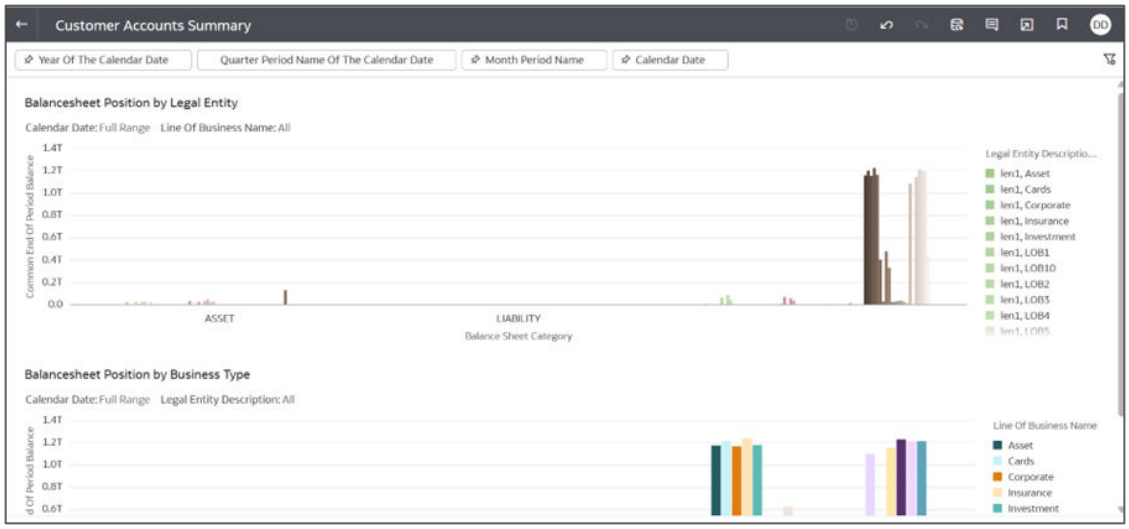
- **Branch Wise Analysis:** Focuses on breaking down data across various branches.
- **Other Analysis:** It also includes geographical, loan, and asset position analyses.
- At the top of the screen, you can apply filters to narrow down your analysis:
  - **Calendar Date (Full Range):** Allows you to view data over any chosen time frame (year, quarter, or month).
  - **Legal Entity Description:** Provides options for selecting the legal entities you want to focus on.
  - **Region Description:** Filter data by different regions.
  - **Product Name:** You can filter data based on product types.
  - Hovering over each slice of the pie chart will give you more detailed numerical data (percentages).

Branchwise NPA - This displays the distribution of non-performing assets (NPAs) across branches for a particular region, segmented into various credit status categories such as *Bankrupt*, *Impaired*, *Written Off*, and *Delinquent*. This chart provides a view of NPA composition for each branch, enabling stakeholders to quickly assess and compare the extent and type of financial risk across different branches of a given region. This is especially helpful if user sees unexpected data for a given region in previous visualization, and wants to view data spread across branches for that region.

Figure 8-50 Branchwise NPA

Balance Position Dashboard

Figure 8-51 Balance Sheet Position



1. Balance Sheet Position by Legal Entity:

- This section shows the **Common End of Period Balance** across various **Legal Entities**, broken down by balance sheet category by assets and liabilities.

2. Balance Sheet Position by Business Type:

- This section uses the **Line of Business (LOB)** breakdown to represent the balance sheet positions.
- **Balance Sheet Category (Asset vs. Liability)**: Similar to the first chart, you can see the split between assets and liabilities for each business type.

8.2.4.2.2 Accounts – Derivatives Summary

This **pre-built report**, based on the **Accounts subject area**, delivers a high-level snapshot of an institution's **derivative exposure portfolio** as of a specific date. It offers valuable insights into **notional values and market positions,** , enabling stakeholders to monitor portfolio positions of different types of derivatives effectively.

Tabular Data (Value by Product and Instrument Type)

This table provides a breakdown of derivative product types (Forwards, Future, Options, Swaps, Credit Derivatives) and displays their balance by instrument type of underlying product (Equity, Commodity, Forex, Interest rate, Credit). The values of derivative product type and underlying instrument type are not hard coded and will be displayed based on actual derivatives data loaded by the bank.

Table 8-4 Value by Product and Instrument Type

Instrument Type	Forwards	Future	Options	Swaps	Credit Derivative
Equity	1,944,377	3,119,470	1,223,422	1,682,143	1,765,732
Commodity	1,745,131	2,157,887	1,399,406	1,567,381	411,408
Forex	1,219,397	2,892,709	1,034,113	1,269,609	758,671
Interest Rate	682,596	2,134,086	1,225,732	1,155,755	807,296

Table 8-4 (Cont.) Value by Product and Instrument Type

Instrument Type	Forwards	Future	Options	Swaps	Credit Derivative
Credit	918,443	1,223,291	855,056	1,434,478	725,108

Table 8-5 Fair Value by product and Instrument Type

Instrument Type	Instrument Type Description	Forwards	Future	Options	Swaps	Credit Derivative
Equity	**Positive Fair Value**	1599271.3	966806.5	823363.2	786198.6	416055
Equity	**Negative Fair Value**	-14873.2	-30692.1	-15208.8	-11493.7	-253309
Commodity	**Positive Fair Value**	1491224.1	1528794.3	1759512.7	2025793	793067
Commodity	**Negative Fair Value**	-11835.9	-37570.2	-41187.1	-21249.5	-357225
Forex	**Positive Fair Value**	623486.6	847360.8	606367.3	824300.4	662408
Forex	**Negative Fair Value**	-33700.4	-13255.7	-11020.6	0	0
Interest Rate	**Positive Fair Value**	1126196.5	777706.6	1478005.8	803262.9	346157
Interest Rate	**Negative Fair Value**	-14886.7	-47041.4	-14092.5	0	-323767
Credit	**Positive Fair Value**	1276353.1	429605	704020.9	768750.4	315706
Credit	**Negative Fair Value**	-14886.7	-16610.2	0	0	0

Derivative Performance Tracker

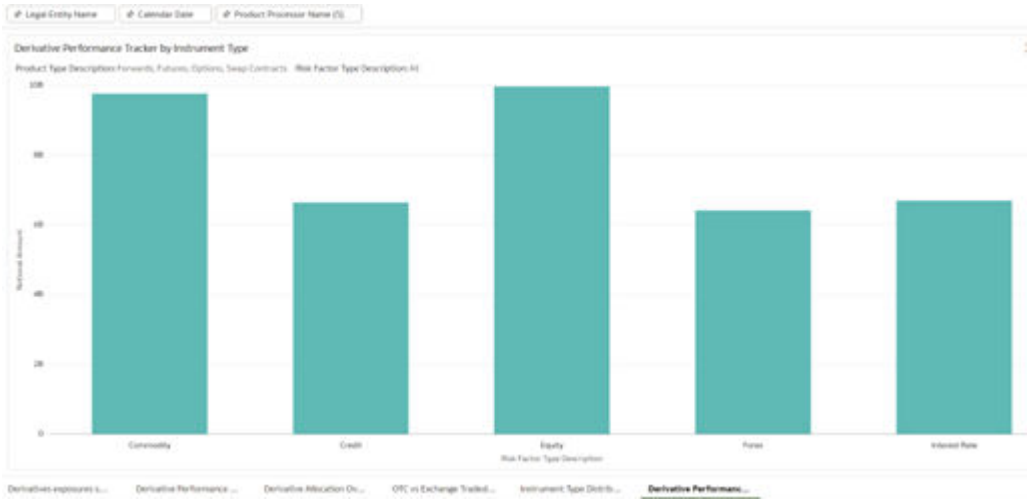
This shows a **Derivative Performance Tracker** visualized as a bar chart. It compares different derivative product types based on their notional amounts as of date.

Figure 8-52 Derivative Performance Tracker

Derivative Performance Tracker by Instrument Type

Purpose: Tracks overall derivative portfolio in graphical format based on Instrument type of underlying exposure.

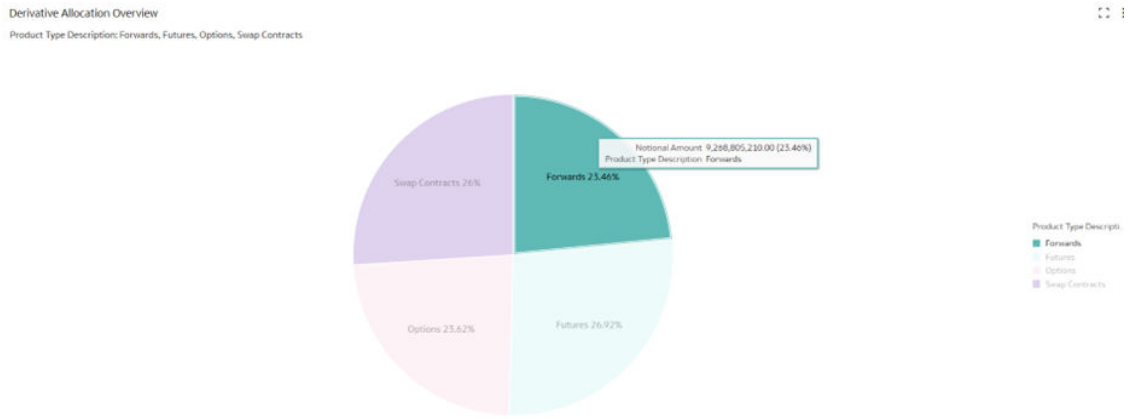
Figure 8-53 Derivative Performance Tracker by Instrument Type



Derivative Allocation Overview

Purpose: Displays portfolio distribution by various derivative types in the form of a pie chart.

Figure 8-54 Derivative Allocation Overview



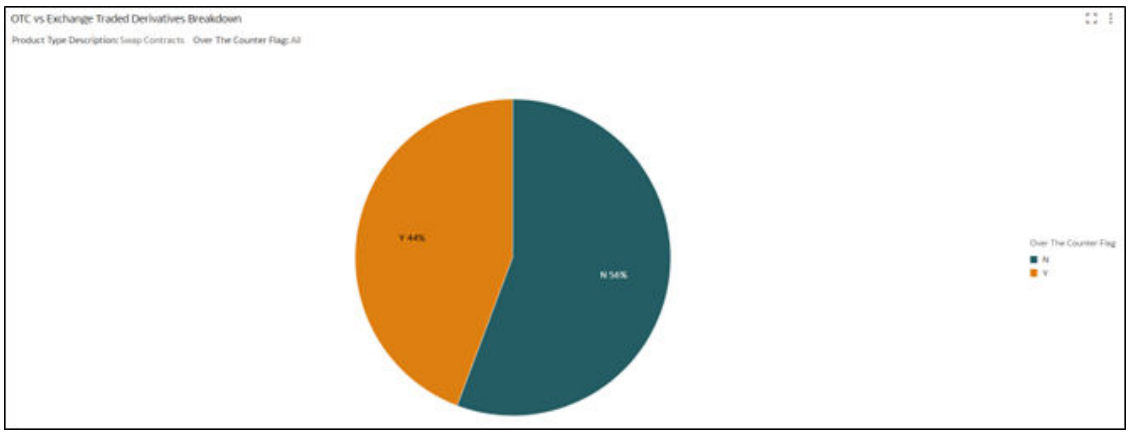
Insights Provided:

- Visual assessment of asset allocation
- Highlights concentration risks
- Supports diversification efforts

OTC vs. Exchange-Traded Derivatives Breakdown

Purpose: Compares notional exposure between OTC and exchange-traded contracts.

Figure 8-55 OTC vs Exchange Traded Derivatives Breakdown



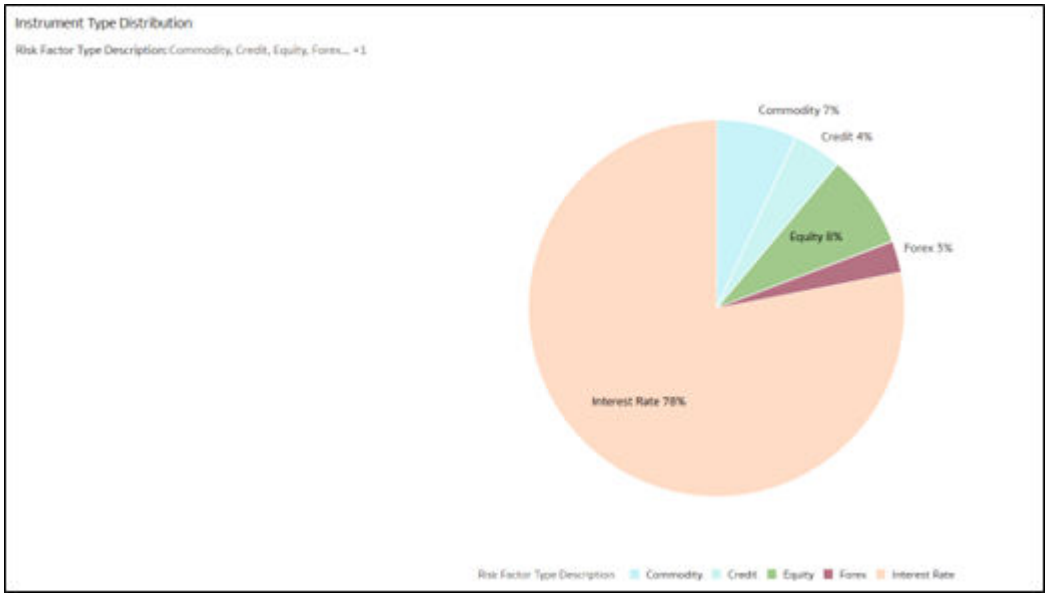
Insights Provided:

- Highlights potential credit and counterparty risks associated with OTC Derivatives
- Aids in assessing risk mitigation needs

Instrument Type Distribution

Purpose: Helps visualize proportion of each category of derivative based on underlying instrument type within the whole portfolio.

Figure 8-56 Instrument Type Distribution



Insights Provided:

- Detects over-concentration and potential risk hotspots
- Enables proactive rebalancing and enhanced risk control

8.2.4.3 General Ledger Analysis

Financial General Ledger pre-built report is based on subject area by the same name. It provides stakeholders with an overall summary of institutions' **Chart of Accounts (CoA)** as of the selected date.

General Ledger Analysis and GL Account Distribution

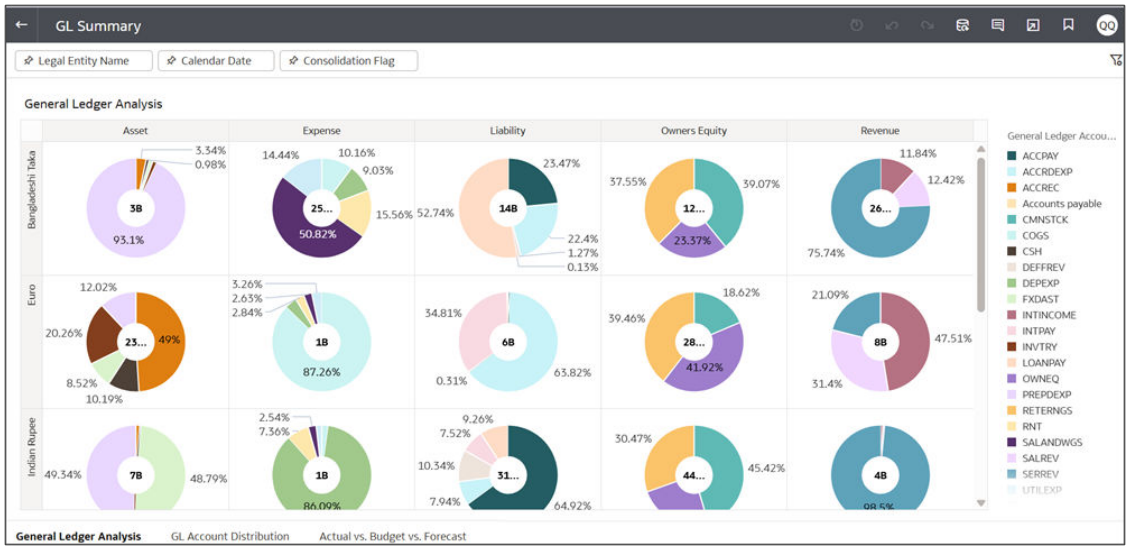
The first two dashboards feature a series of donut visualizations that display the 5 main CoA categories of **Assets**, **Expenses**, **Liabilities**, **Owner's Equity**, and **Revenue.** Each CoA category has separate donut view for every currency where bank has exposure. The donut shows breakdown for the CoA by the types of General Ledger (GL) data for each currency.

For example: For CoA of Assets, banks may have data spread across various currencies. Donut will show view for Assets spread across their natural currencies by various GL types (means asset types here) like Cash, Inventory, Fixed Assets, and so on.

The graph displays a **General Ledger (GL) Account Distribution Overview** in a visual format, with data organized by different currencies and financial categories. Each row corresponds to a specific currency, and within each column, the financial distribution is shown across key categories: **Asset, Expense, Liability, Owners Equity, and Revenue**.

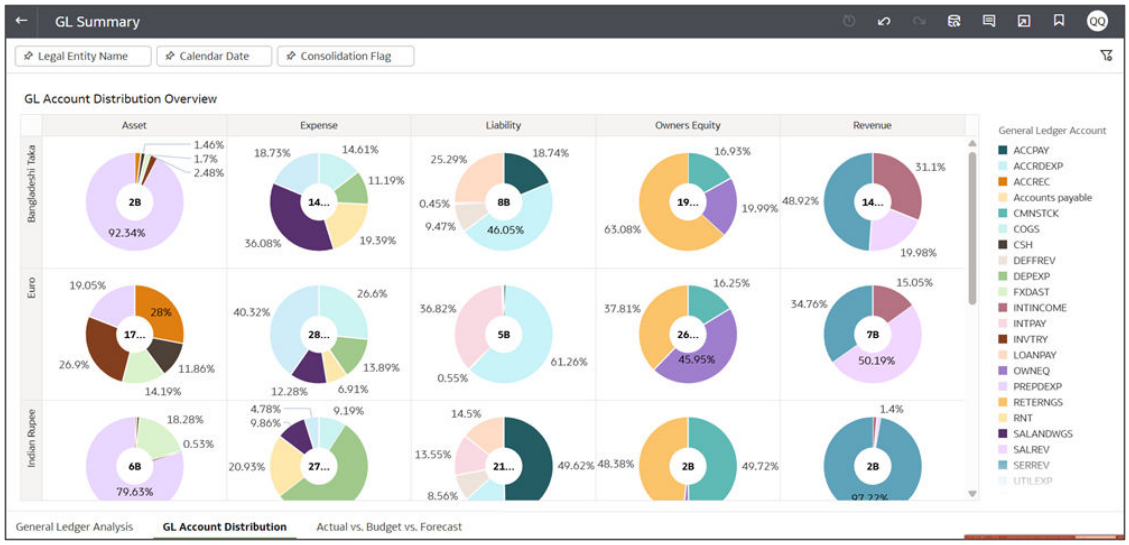
First dashboard shows the data in local currency, whereas second dashboard shows data in common accounting currency. Third dashboard shows data spread across various GL Accounts for Budgeted Vs Actual Vs Forecasted numbers.

Figure 8-57 General ledger Analysis



GL Account Distribution

Figure 8-58 GL Account Distribution

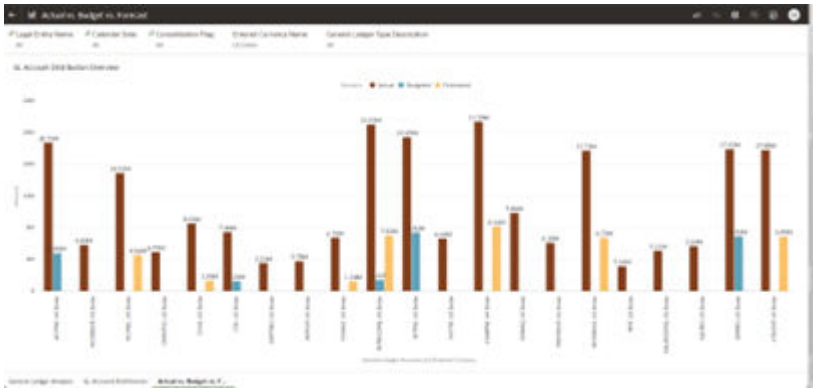


Actual vs Budget vs Forecast

The Actual vs. Budget vs. Forecast visualization provides a view of budgeted GL numbers and their comparison with actual numbers and forecasted numbers for future periods.

By visually depicting these differences, it enables banks to analyze the accuracy of their budgeting and pinpoint areas of over- or under-budget spending, assess alignment with financial goals, and refine future budgets to enhance accuracy and effectiveness in financial planning. Forecasted numbers can give a view into future projections vs current numbers.

Figure 8-59 Actual vs Budget vs Forecast



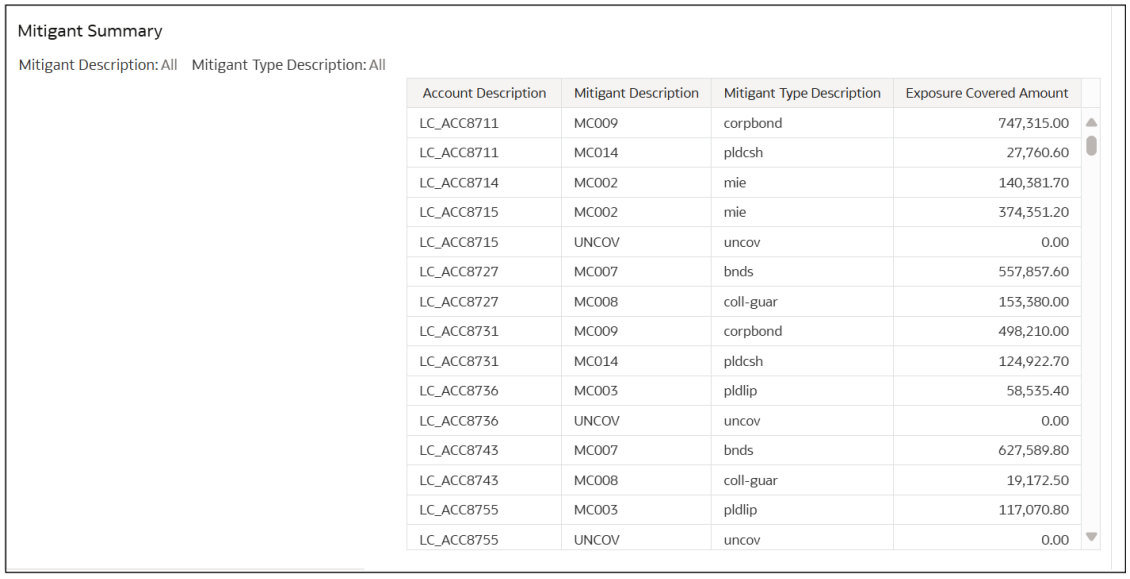
8.2.4.4 Mitigants Summary

This **pre-built report**, based on the **Mitigants subject area**, offers a comprehensive view of risk reduction strategies implemented across products, branches, and regions. It aids in evaluating the effectiveness of various mitigants, identifying exposure gaps, and enhancing risk management practices.

Mitigant Summary

A mitigant summary table displays various mitigating factors or actions designed to reduce risk or exposure. In financial contexts, this could refer to strategies or assets that reduce the risk associated with liabilities, investments, or other financial obligations.

Figure 8-60 Mitigant Summary


Mitigant Summary

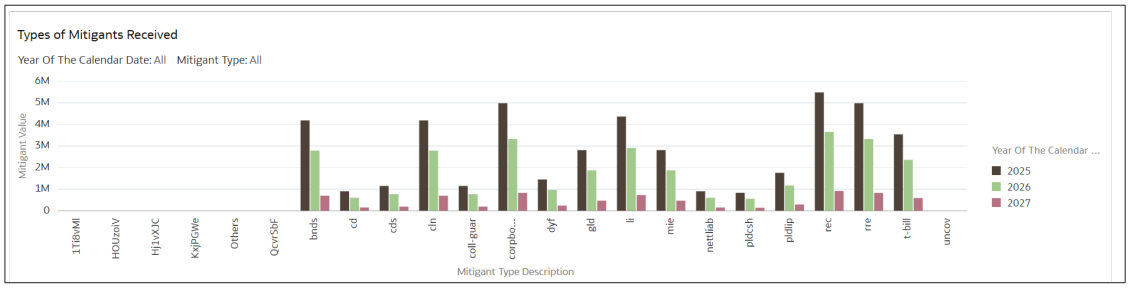
Mitigant Description: All Mitigant Type Description: All

Account Description	Mitigant Description	Mitigant Type Description	Exposure Covered Amount
LC_ACC8711	MC009	corpbond	747,315.00
LC_ACC8711	MC014	pldcsh	27,760.60
LC_ACC8714	MC002	mie	140,381.70
LC_ACC8715	MC002	mie	374,351.20
LC_ACC8715	UNCOV	uncov	0.00
LC_ACC8727	MC007	bnds	557,857.60
LC_ACC8727	MC008	coll-guar	153,380.00
LC_ACC8731	MC009	corpbond	498,210.00
LC_ACC8731	MC014	pldcsh	124,922.70
LC_ACC8736	MC003	pldlip	58,535.40
LC_ACC8736	UNCOV	uncov	0.00
LC_ACC8743	MC007	bnds	627,589.80
LC_ACC8743	MC008	coll-guar	19,172.50
LC_ACC8755	MC003	pldlip	117,070.80
LC_ACC8755	UNCOV	uncov	0.00

Mitigant and Risk Coverage

Purpose: Tracks the usage and value of different risk mitigants over time.

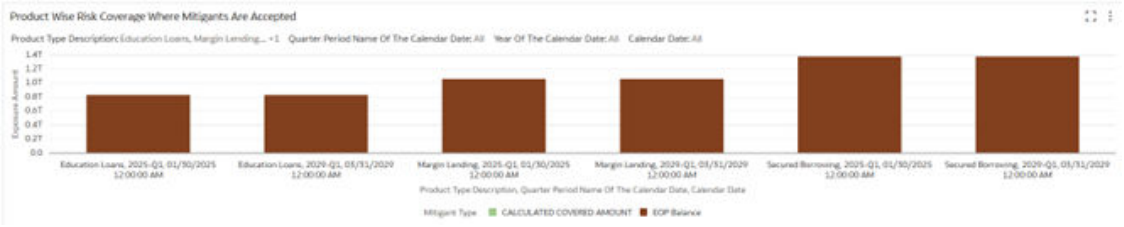
Figure 8-61 Types of Mitigants Received



Product Wise Risk Coverage Where Mitigants Are Accepted

Purpose: Provides the exposure amounts for various financial product types, segmented by whether risk mitigants (collateral or guarantees) are accepted.

Figure 8-62 Product Wise Risk Coverage Where Mitigants Are Accepted

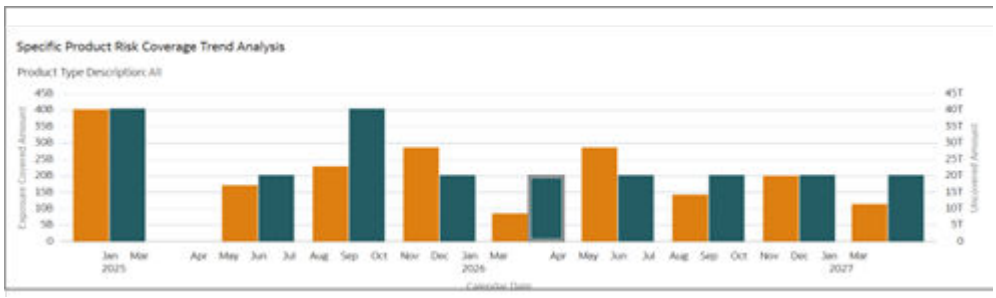


> **Note**
>
> Users have an option to filter for Uncovered as Mitigant type, as some banks capture Uncovered portion of exposure (with Mitigant type as Uncovered) in separate row in Entity Fact Account Mitigant Map.

Specific Product Risk Coverage – Trend Analysis

Purpose: Tracks historical trends in risk coverage across individual product types.

Figure 8-63 Specific Product Risk Coverage – Trend Analysis



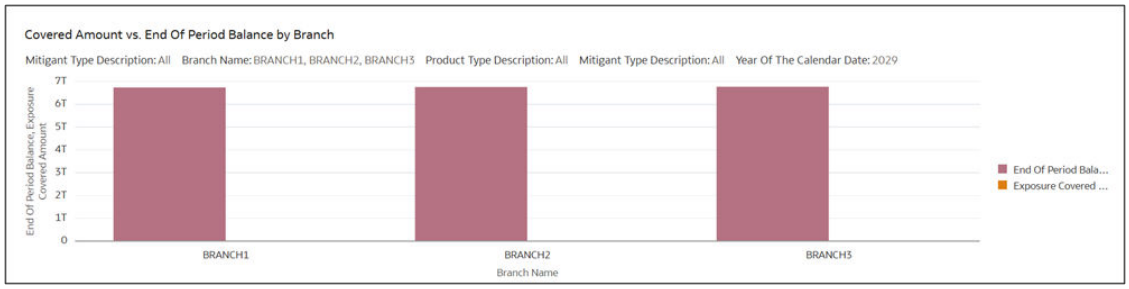
Insights Provided:

- Visibility into changes in product-level exposure
- Evaluation of mitigant impact over time
- Strategic input for improving product-specific risk handling

Covered Amount vs. End Of Period Balance by Branch

Purpose: Shows covered and end of period balance values across branches as of a given date.

Figure 8-64 Covered Amount vs. End Of Period Balance by Branch



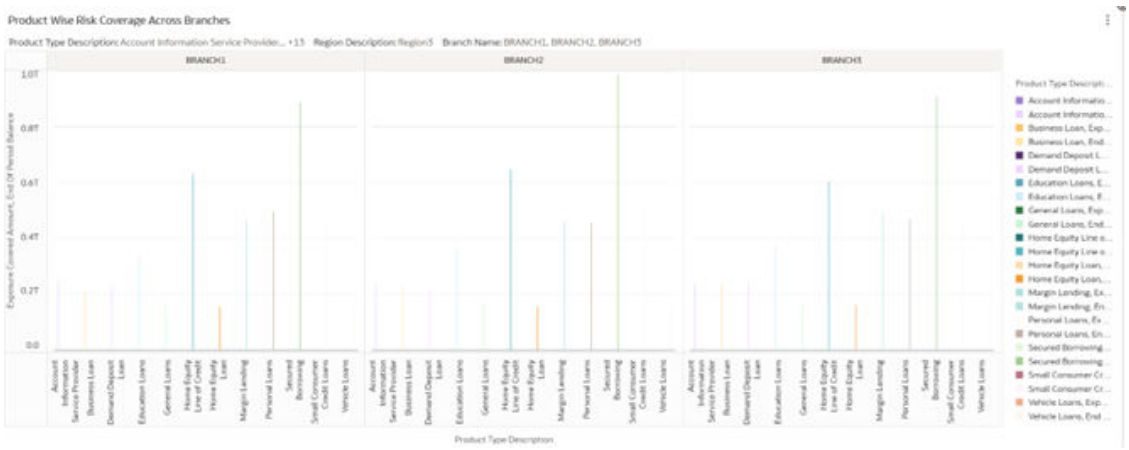
Insights Provided:

- Branch-level exposure visibility
- Effectiveness of mitigants at individual locations
- Identification of high-risk branches for further action

Product-wise Risk Coverage Across Branches

Purpose: Combines product and branch views to assess risk coverage at a granular level.

Figure 8-65 Product-wise Risk Coverage Across Branches



Insights Provided:

- Detailed branch-level performance by product type
- Coverage adequacy and gaps
- Data to support localized mitigation strategies

Regional Product Distribution Dashboard

Purpose: Offers a snapshot of how products are distributed across regions.

Figure 8-66 Regional Product Distribution Dashboard

Insights Provided:

- Product demand by geography
- Regional risk profiles
- Market segmentation and strategic planning inputs

8.2.4.5 Party Pre-Built Report

This report offers a set of dashboards that provide key insights into two main areas: customer data and employee information. These visualizations allow users to easily access important details about the organization's customers and employees, helping to improve strategic planning and decision-making.

Customer data dashboards provide stakeholders with an overall summary of parties to which bank has exposure. It gives view into parties and their related parties, along with the financial exposure numbers like total assets vs liabilities outstanding against all parties. It also gives view into parties' risk profile analysis based on their credit rating.

Employee related dashboards cover employee data, including tenure, remuneration, workforce distribution, and expenses. By analyzing these key metrics, the organization can assess its workforce composition, identify opportunities for greater efficiency, and make informed decisions about talent management and compensation strategies.

Below are important dashboards.

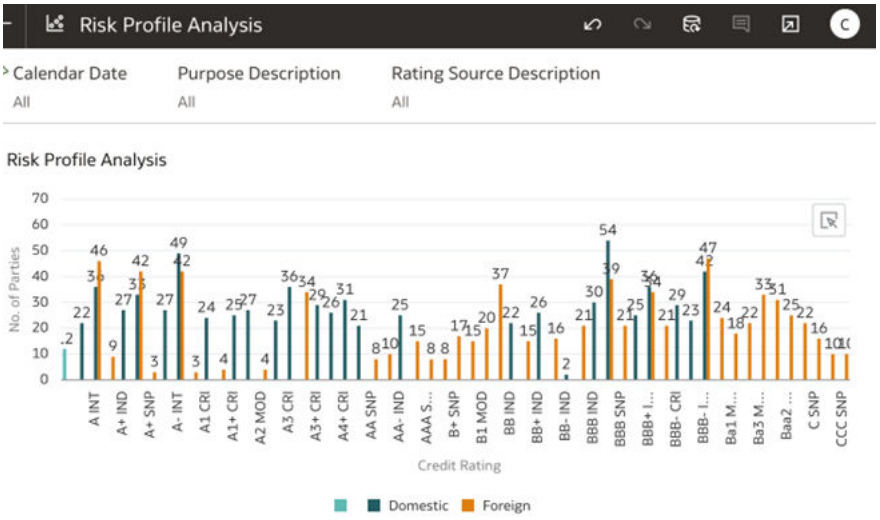
- **Risk Profile Analysis:** This visualization illustrates the risk profile of parties to which the bank has credit exposure, based on their credit ratings as of the selected date. The bar chart displays credit ratings along with the corresponding number of parties for each rating. Users can filter the data based on **Domestic vs. Foreign ratings** and **Rating Source Code (Rating Agency)** using the filter options provided at the top of the visualization. Each rating source code is shown alongside the count of party identifiers, offering a clear view of the risk rating distribution.

  This visualization helps assess the overall risk landscape of institutional assets, such as loans, enabling informed decision-making and effective risk management strategies.

  The dashboard includes several default filters, such as **Calendar Date, Purpose Description for Domestic/Foreign Currency Ratings, and Rating Source Description**, allowing users to tailor their view based on specific preferences or requirements.

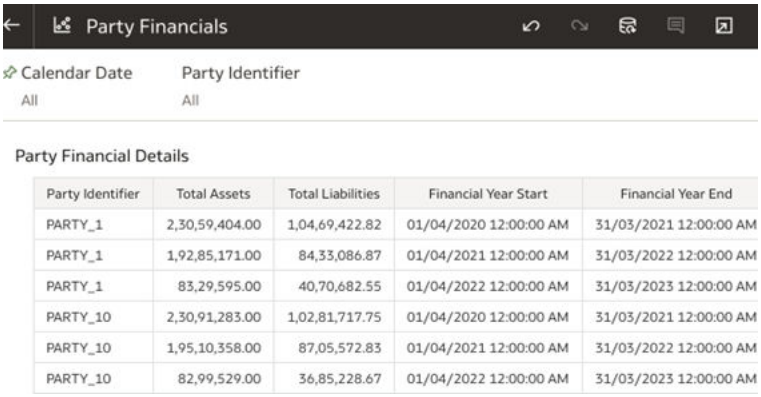
  – **Objective**: To highlight the number of parties for each credit rating by a specific Credit Agency and rating purpose.

Figure 8-67 Risk Profile Analysis



- **Party Financial Details:** The visualization displays the total assets and liabilities of the parties for the financial period as per selected Calendar date. Each party is listed with its corresponding asset and liability amount, highlighting their financial position/obligation for the selected calendar date. This analysis provides insights into the key contributors to the organization's asset/liability base, aiding in performance assessment. This analysis also facilitates insights into risk assessment and financial planning. User also has the option to select specific party name from filter attribute on top and get view for a specific party.
  - **Objective** – To highlight total amount of asset and liabilities against all parties or specific party as of specific date

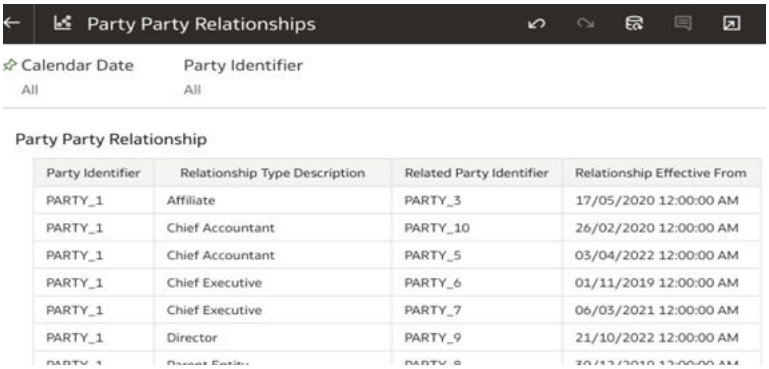
Figure 8-68 Party Financial Details



Party Identifier	Total Assets	Total Liabilities	Financial Year Start	Financial Year End
PARTY_1	2,30,59,404.00	1,04,69,422.82	01/04/2020 12:00:00 AM	31/03/2021 12:00:00 AM
PARTY_1	1,92,85,171.00	84,33,086.87	01/04/2021 12:00:00 AM	31/03/2022 12:00:00 AM
PARTY_1	83,29,595.00	40,70,682.55	01/04/2022 12:00:00 AM	31/03/2023 12:00:00 AM
PARTY_10	2,30,91,283.00	1,02,81,717.75	01/04/2020 12:00:00 AM	31/03/2021 12:00:00 AM
PARTY_10	1,95,10,358.00	87,05,572.83	01/04/2021 12:00:00 AM	31/03/2022 12:00:00 AM
PARTY_10	82,99,529.00	36,85,228.67	01/04/2022 12:00:00 AM	31/03/2023 12:00:00 AM

  - **Party Party Relationships** and **Party Party Account Relationship**: Party relationship visualizations provides a view of party relationships and their associated accounts details. Relationship between related party and primary party could be personal like spouse, parent, etc. of primary account holder or professional like CEO, Director of an organization that is bank's customer.
- **Party Party Relationships:**
  - **Objective** – To highlight the relationship between different parties and relationship effective date.

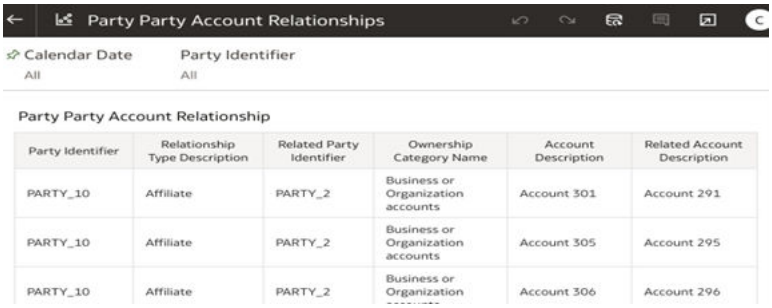
Figure 8-69 Party Party Relationships



Party Identifier	Relationship Type Description	Related Party Identifier	Relationship Effective From
PARTY_1	Affiliate	PARTY_3	17/05/2020 12:00:00 AM
PARTY_1	Chief Accountant	PARTY_10	26/02/2020 12:00:00 AM
PARTY_1	Chief Accountant	PARTY_5	03/04/2022 12:00:00 AM
PARTY_1	Chief Executive	PARTY_6	01/11/2019 12:00:00 AM
PARTY_1	Chief Executive	PARTY_7	06/03/2021 12:00:00 AM
PARTY_1	Director	PARTY_9	21/10/2022 12:00:00 AM

- **Party Party Account Relationship**:
  - **Objective** – The dashboard gives view of party relationships and their associated accounts.

Figure 8-70 Party Party Account Relationship



Party Identifier	Relationship Type Description	Related Party Identifier	Ownership Category Name	Account Description	Related Account Description
PARTY_10	Affiliate	PARTY_2	Business or Organization accounts	Account 301	Account 291
PARTY_10	Affiliate	PARTY_2	Business or Organization accounts	Account 305	Account 295
PARTY_10	Affiliate	PARTY_2	Business or Organization	Account 306	Account 296

8.2.4.6 Placed Collateral Summary

This **pre-built report**, based on the **Placed Collateral subject area**, provides a comprehensive overview of **collateral posted** against exposures. It includes details about the **type, value, and distribution** of collateral placed across different products and regions, enabling effective **monitoring** of placed collaterals from within bank's asset portfolio.

> **Note**
>
> This report is about **collaterals placed** by the bank, and not collaterals received. "Mitgants Summary" pre-built report caters to **received collaterals**.

Types of Collateral Placed

Purpose: Shows the market value of different collateral types placed to secure liabilities, segmented by year.

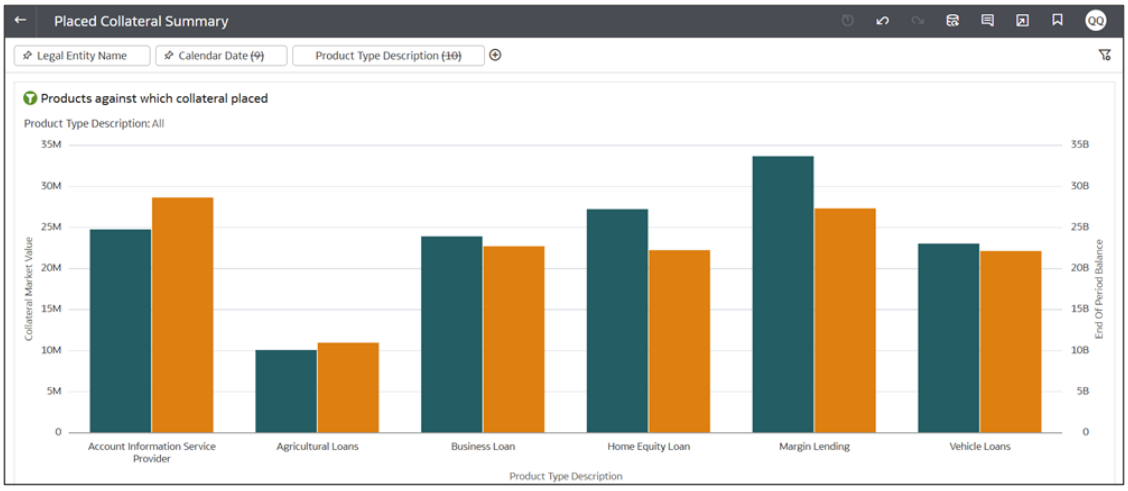
Figure 8-71 Types of Collateral Placed

- The **distribution and scale of collateral types** placed to mitigate borrowings.

Product against which collateral placed

Purpose: Assesses the portfolio of various product types against which collateral has been placed.

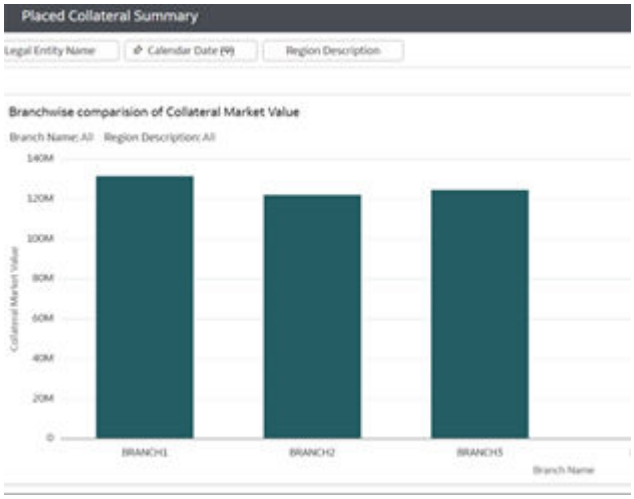
Figure 8-72 Product against which collateral placed



Branchwise comparison of Collateral Market Value

Purpose: Analyzes how placed collateral is distributed across different branches.

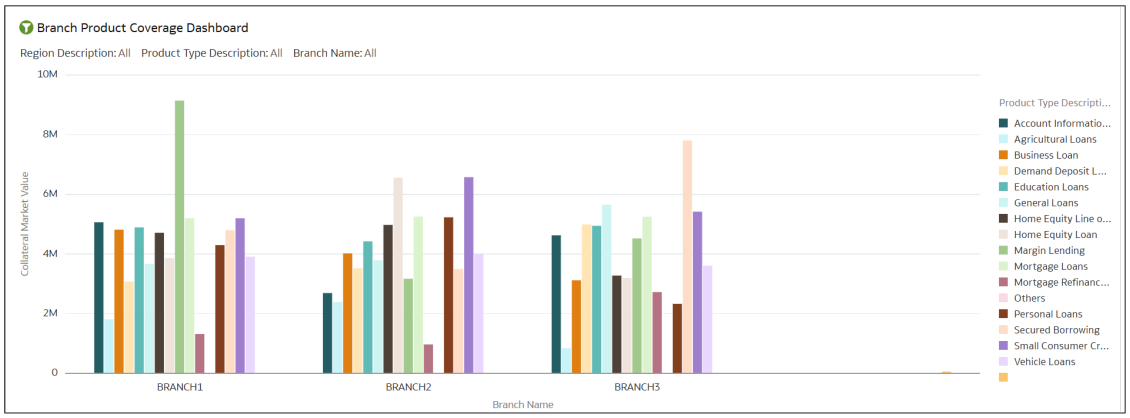
Figure 8-73 Branchwise comparison of Collateral Market Value



Branch Product Coverage Dashboard

Purpose: Displays product-wise placed collateral coverage at the branch level.

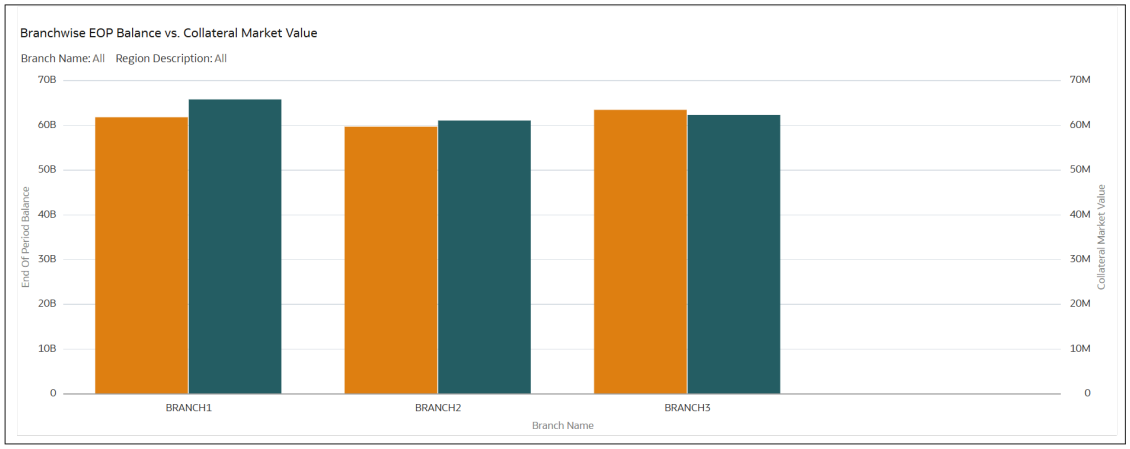
Figure 8-74 Branch Product Coverage Dashboard



Branch-wise EOP Balance vs. Collateral Market Value

Purpose: Compares **End-of-Period (EOP) balances** across branches to placed collateral market values at each branch.

Figure 8-75 Branch-wise EOP Balance vs. Collateral Market Value



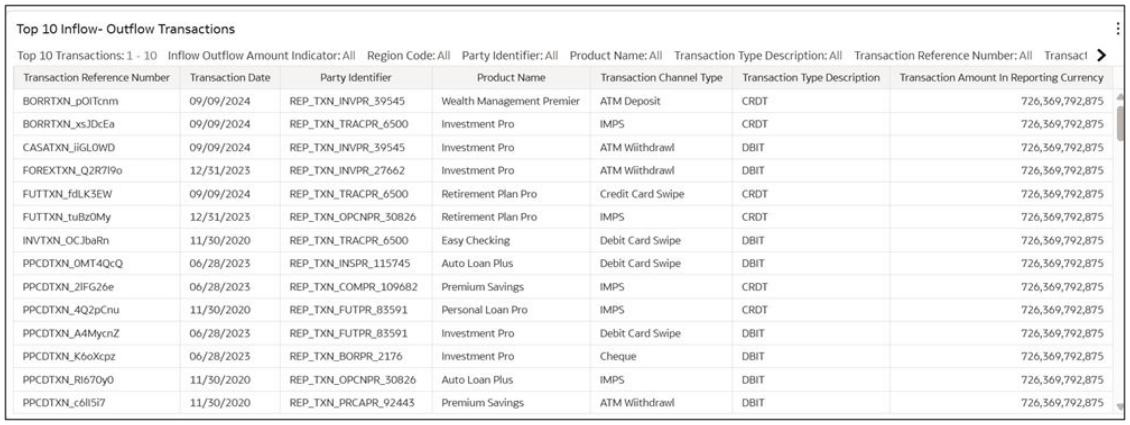
8.2.4.7 Transaction Summary

These pre-built interactive reports, based on the **Transactions subject area**, provide detailed insights into bank inflows and outflows. The reports support informed decision-making across liquidity management, customer behavior analysis, and operational strategy.

Top 10 Transactions

Purpose: Offers a quick snapshot of the top highest-value inflow or outflow transactions during a selected period.

Figure 8-76 Top 10 Inflow – Outflow Transactions



Top 10 Inflow- Outflow Transactions

Top 10 Transactions: 1 - 10 Inflow Outflow Amount Indicator: All Region Code: All Party Identifier: All Product Name: All Transaction Type Description: All Transaction Reference Number: All Transact

Transaction Reference Number	Transaction Date	Party Identifier	Product Name	Transaction Channel Type	Transaction Type Description	Transaction Amount In Reporting Currency
BORRTXN_pOITcnm	09/09/2024	REP_TXN_INVPR_39545	Wealth Management Premier	ATM Deposit	CRDT	726,369,792,875
BORRTXN_xsJDcEa	09/09/2024	REP_TXN_TRACPR_6500	Investment Pro	IMPS	CRDT	726,369,792,875
CASATXN_iiGL0WD	09/09/2024	REP_TXN_INVPR_39545	Investment Pro	ATM Wiithdrawl	DBIT	726,369,792,875
FOREXTXN_Q2R7l9o	12/31/2023	REP_TXN_INVPR_27662	Investment Pro	ATM Wiithdrawl	DBIT	726,369,792,875
FUTTXN_fdLK3EW	09/09/2024	REP_TXN_TRACPR_6500	Retirement Plan Pro	Credit Card Swipe	CRDT	726,369,792,875
FUTTXN_tuBz0My	12/31/2023	REP_TXN_OPCNPR_30826	Retirement Plan Pro	IMPS	CRDT	726,369,792,875
INVTXN_OCJbaRn	11/30/2020	REP_TXN_TRACPR_6500	Easy Checking	Debit Card Swipe	DBIT	726,369,792,875
PPCDTXN_0MT4QcQ	06/28/2023	REP_TXN_INSPR_115745	Auto Loan Plus	Debit Card Swipe	DBIT	726,369,792,875
PPCDTXN_2IFG26e	06/28/2023	REP_TXN_COMPR_109682	Premium Savings	IMPS	CRDT	726,369,792,875
PPCDTXN_4Q2pCnu	11/30/2020	REP_TXN_FUTPR_83591	Personal Loan Pro	IMPS	CRDT	726,369,792,875
PPCDTXN_A4MycnZ	06/28/2023	REP_TXN_FUTPR_83591	Investment Pro	Debit Card Swipe	DBIT	726,369,792,875
PPCDTXN_K6oXcpz	06/28/2023	REP_TXN_BORPR_2176	Investment Pro	Cheque	DBIT	726,369,792,875
PPCDTXN_Rl670y0	11/30/2020	REP_TXN_OPCNPR_30826	Auto Loan Plus	IMPS	DBIT	726,369,792,875
PPCDTXN_c6lISi7	11/30/2020	REP_TXN_PRCAPR_92443	Premium Savings	ATM Wiithdrawl	DBIT	726,369,792,875

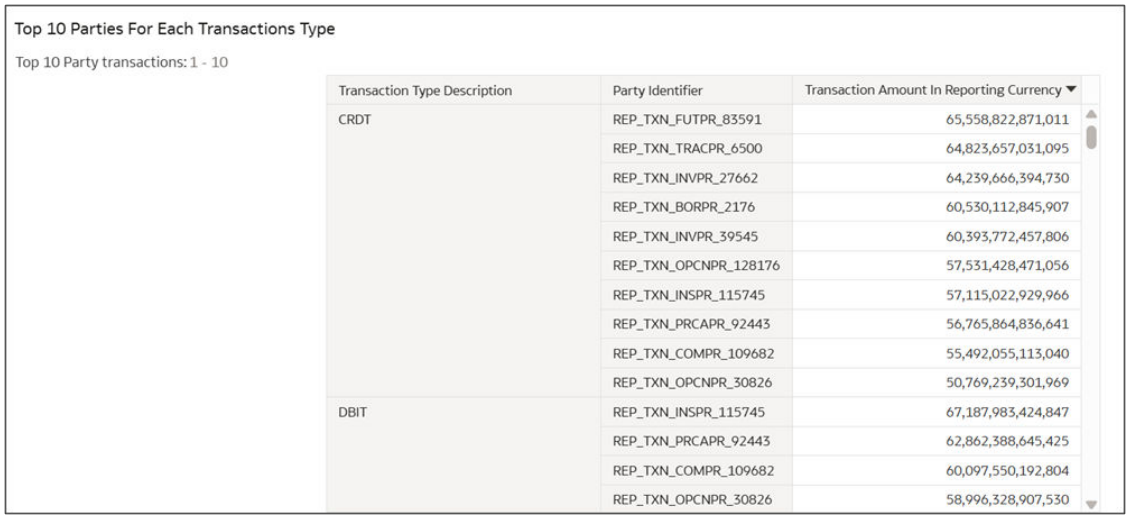
- **Features**:
  - Interactive filters for selecting **inflows** or **outflows**.
  - Useful for tracking major deposit sources or significant fund disbursements.
- **Insights Provided**:
  - Liquidity trends
  - High-value transaction impact

- Customer behavior

Top 10 Parties for each Transaction Type

Purpose: Shows the top 10 parties based on transaction volumes for each transaction type.

Figure 8-77 Parties by Transaction Type


Top 10 Parties For Each Transactions Type

Top 10 Party transactions: 1 - 10

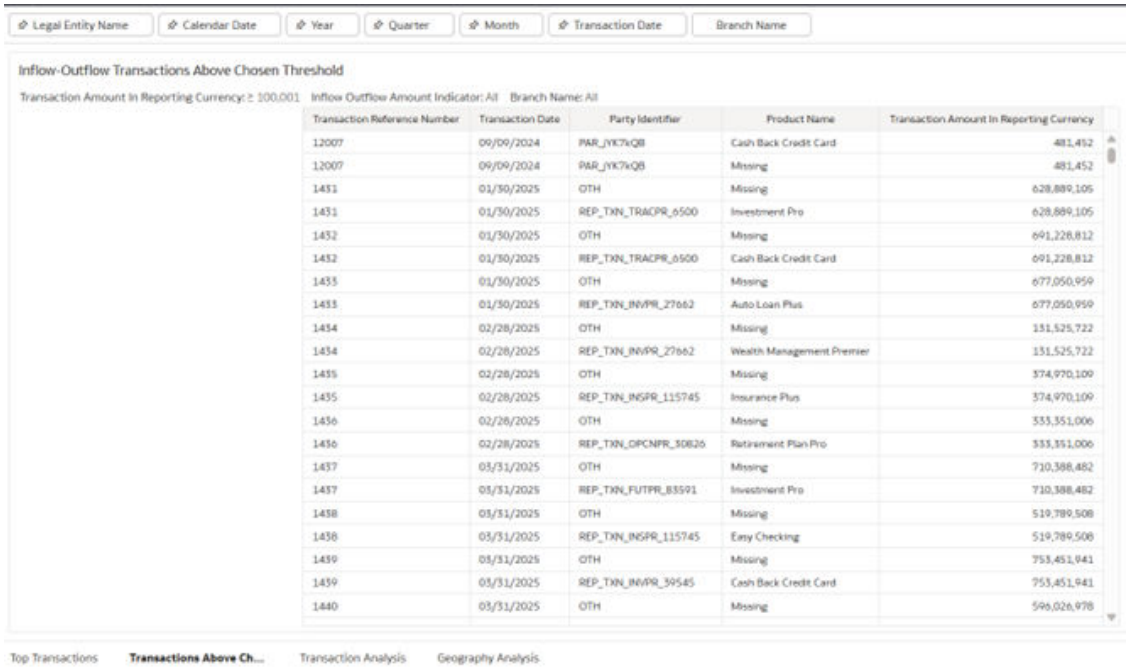
Transaction Type Description	Party Identifier	Transaction Amount In Reporting Currency
CRDT	REP_TXN_FUTPR_83591	65,558,822,871,011
	REP_TXN_TRACPR_6500	64,823,657,031,095
	REP_TXN_INVPR_27662	64,239,666,394,730
	REP_TXN_BORPR_2176	60,530,112,845,907
	REP_TXN_INVPR_39545	60,393,772,457,806
	REP_TXN_OPCNPR_128176	57,531,428,471,056
	REP_TXN_INSPR_115745	57,115,022,929,966
	REP_TXN_PRCAPR_92443	56,765,864,836,641
	REP_TXN_COMPR_109682	55,492,055,113,040
	REP_TXN_OPCNPR_30826	50,769,239,301,969
DBIT	REP_TXN_INSPR_115745	67,187,983,424,847
	REP_TXN_PRCAPR_92443	62,862,388,645,425
	REP_TXN_COMPR_109682	60,097,550,192,804
	REP_TXN_OPCNPR_30826	58,996,328,907,530

- **Features**:
  - Tabular visualization
  - Segregated by transaction category
- **Insights Provided**:
  - Identification of key customers or business partners
  - Behavioral patterns by transaction type

Transactions Above Chosen Threshold

Purpose: Focuses on transactions exceeding a user-defined monetary threshold.

Figure 8-78 Transactions Above Chosen Threshold

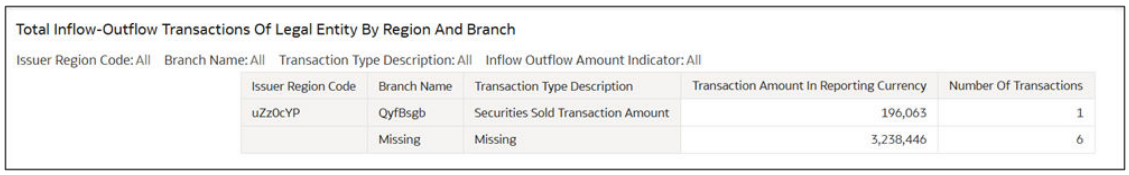


- **Features**:
  - Dynamic filters and sorting options
  - Supports filtering by inflow or outflow
- **Insights Provided**:
  - Identification of high-value activities
  - Risk and liquidity monitoring
  - Strategic cash management

Transaction Analysis

Purpose: Displays geographic transaction trends.

Figure 8-79 Total Inflow- Outflow Transactions of Legal Entity by Region and Branch



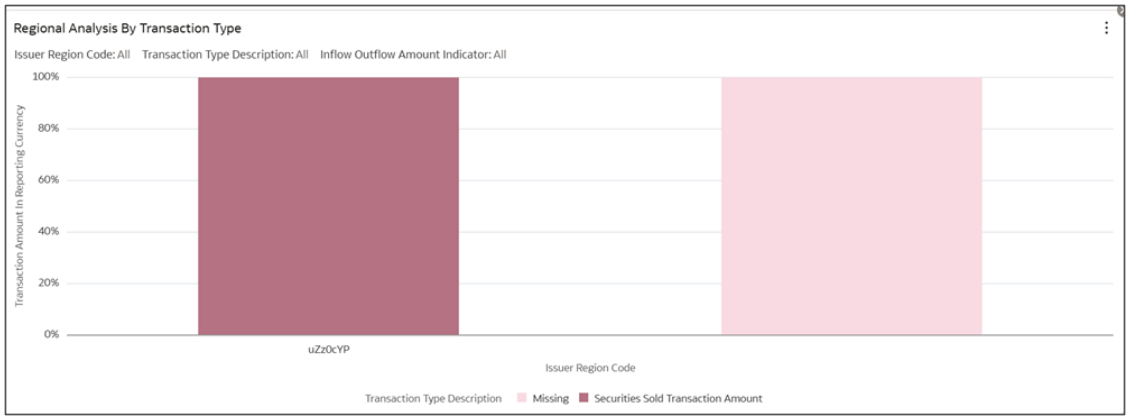
- **Features**:
  - Regional and branch-level breakdown
- **Insights Provided**:
  - Hotspots of activity

- Fraud detection opportunities
- Regional growth and service optimization

Regional Analysis by Transaction Type

Purpose: Displays how transaction types are distributed across different regions.

Figure 8-80 Regional Analysis by Transaction Type

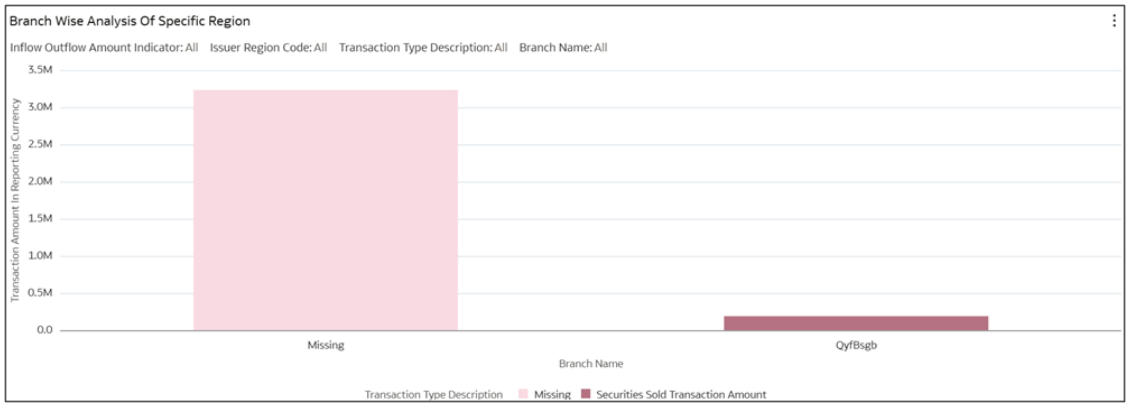


- **Features**:
  - Stacked bar charts
- **Insights Provided**:
  - Popular transaction types by geography
  - Regional customer preferences

Branch-Wise Analysis of Specific Region

Purpose: Compares branch performance within a selected region.

Figure 8-81 Branch-Wise Analysis of Specific Region



- **Features**:

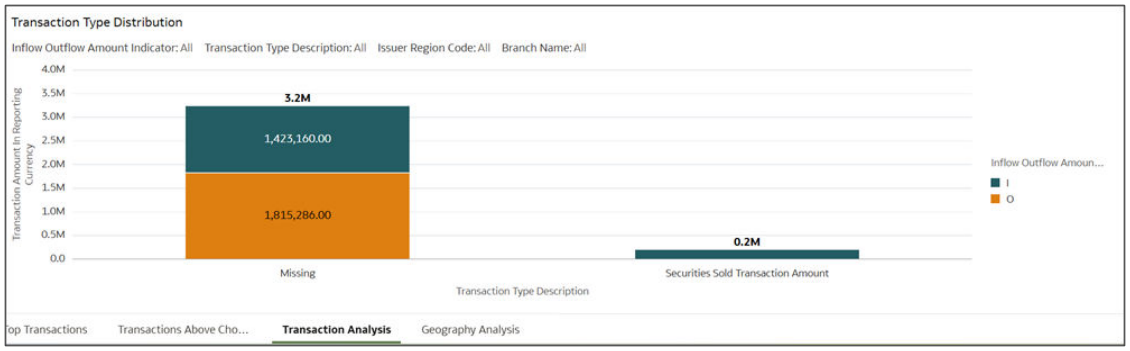
- Transaction volume visualization per branch

- **Insights Provided**
  - Performance benchmarking
  - Localized strategic planning

Transaction Type Distribution

Purpose: Offers a complete view of how funds move across different transaction types.

Figure 8-82 Transaction Type Distribution

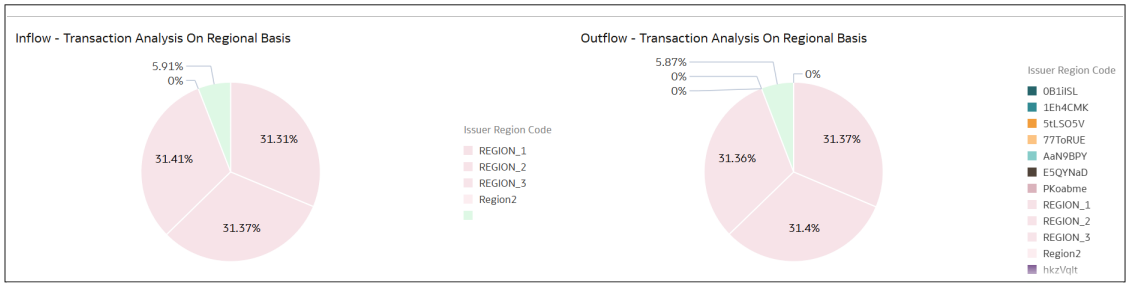


- **Features**:
  - Color-coded for inflow vs. outflow
- **Insights Provided**:
  - Most frequent transaction activities
  - Balanced view of cash flow behavior

Geographic Analysis - Regional Inflow Analysis

Purpose: Shows percentage contribution of each region to total inflows.

Figure 8-83 Regional Inflow Analysis



- **Features**:
  - Filters for specific transaction types
- **Insights Provided**:

- Regional deposit trends
- Customer deposit behavior

Regional Outflow Analysis

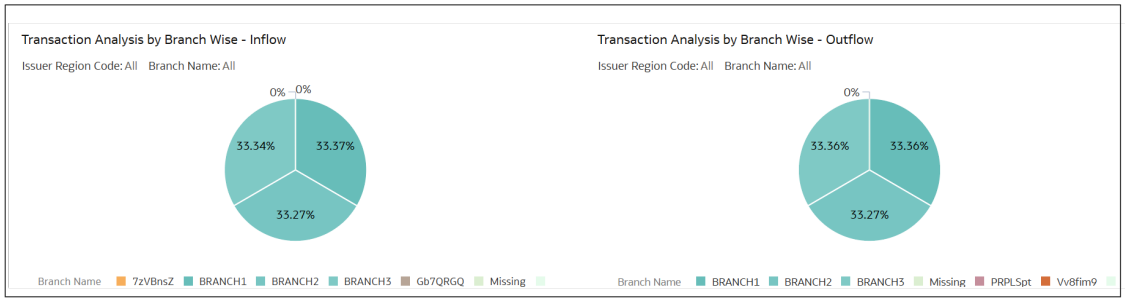
Purpose: Displays regional contributions to total outflows.

- **Features**:
  - Filters by transaction types
- **Insights Provided**:
  - Regional spending trends
  - Liquidity risk identification

Branch-Wise Inflow Analysis

Purpose: Breaks down inflow activity at the branch level.

Figure 8-84 Regional Inflow Analysis



- **Features**:
  - Filter by transaction types
- **Insights Provided**:
  - Top deposit-generating branches
  - Targeted deposit strategies

Branch-Wise Outflow Analysis

Purpose: Details outflow trends across branches.

- **Features**:
  - Filter by transaction types
- **Insights Provided**:
  - Lending/spending behavior
  - Branch-level financial insights

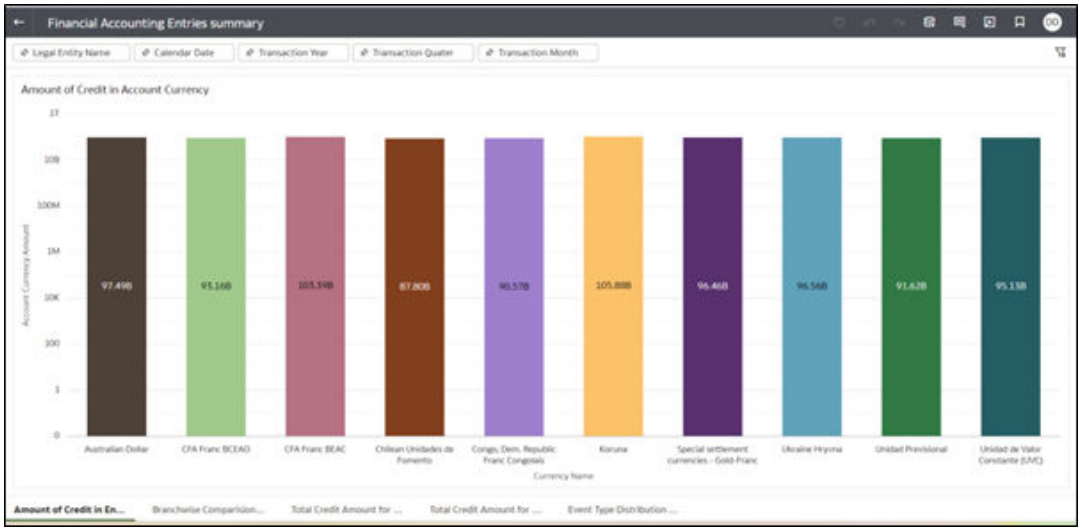
8.2.4.8 Financial Accounting Entries Summary

The Financial Accounting Entries Summary dashboard provides a comprehensive view of transactions across different currencies, branches, assets, liabilities, and event types. It is designed to support financial analysts and business users in monitoring and comparing credit

and debit values across multiple dimensions for a given transaction period. Users can choose appropriate filters for Transaction Year, Quarter or Month.

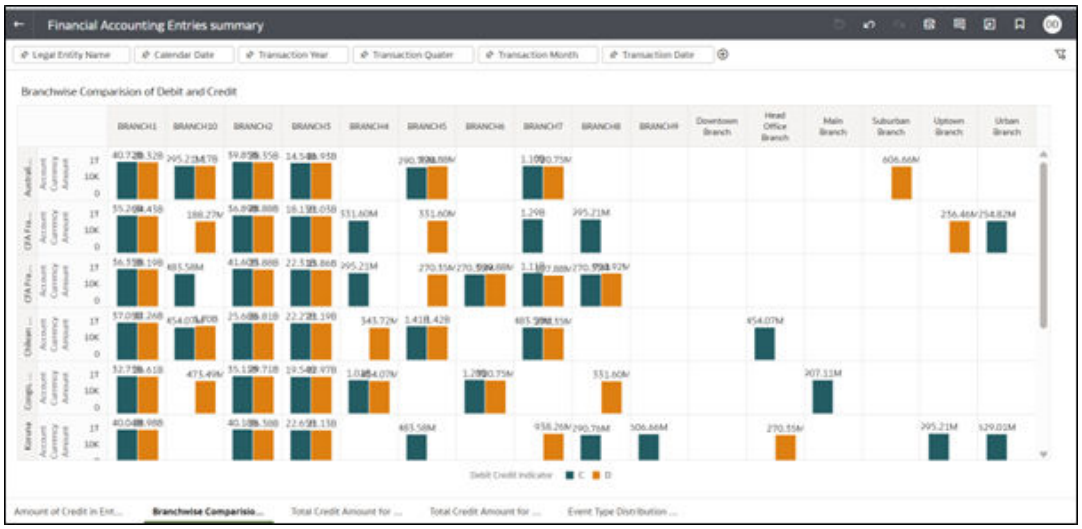
- **1. Amount of Credit in Account Currency**: This bar chart visualizes the **total credit amount** (in account currency) per currency type.

Figure 8-85 Amount of Credit in Account Currency



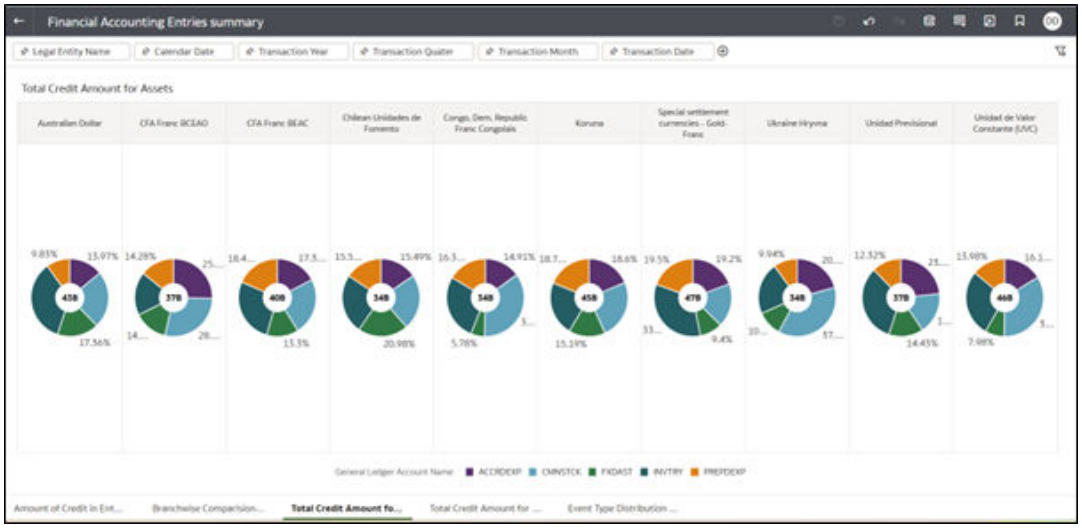
- **2. Branchwise Comparison of Debit and Credit**: This matrix chart compares **debit vs. credit** values across branches for each currency.

Figure 8-86 Branchwise Comparison of Debit and Credit



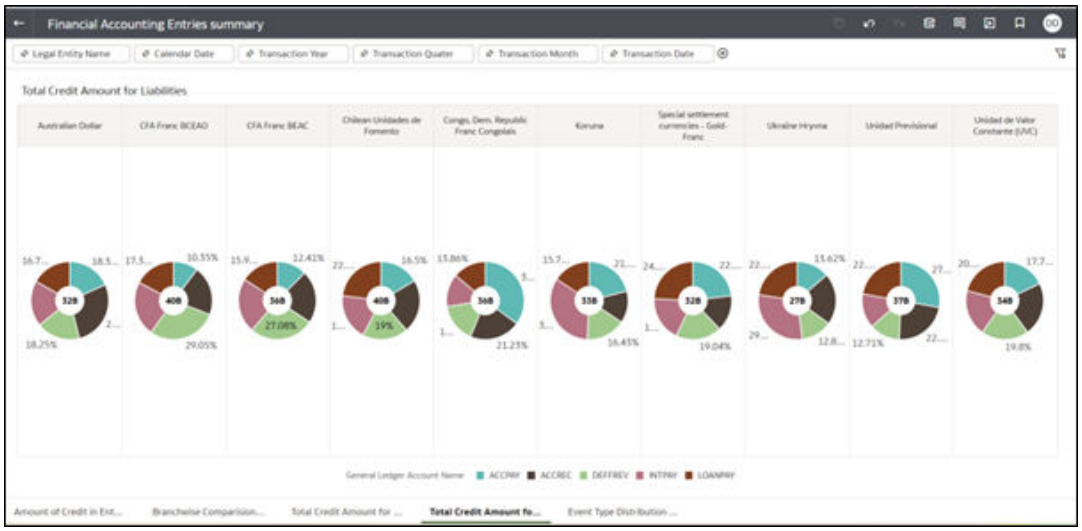
- **3. Total Credit Amount for Assets**: This donut chart breaks down the **total credit amount for assets** by general ledger account names.

Figure 8-87 Total Credit Amount for Assets



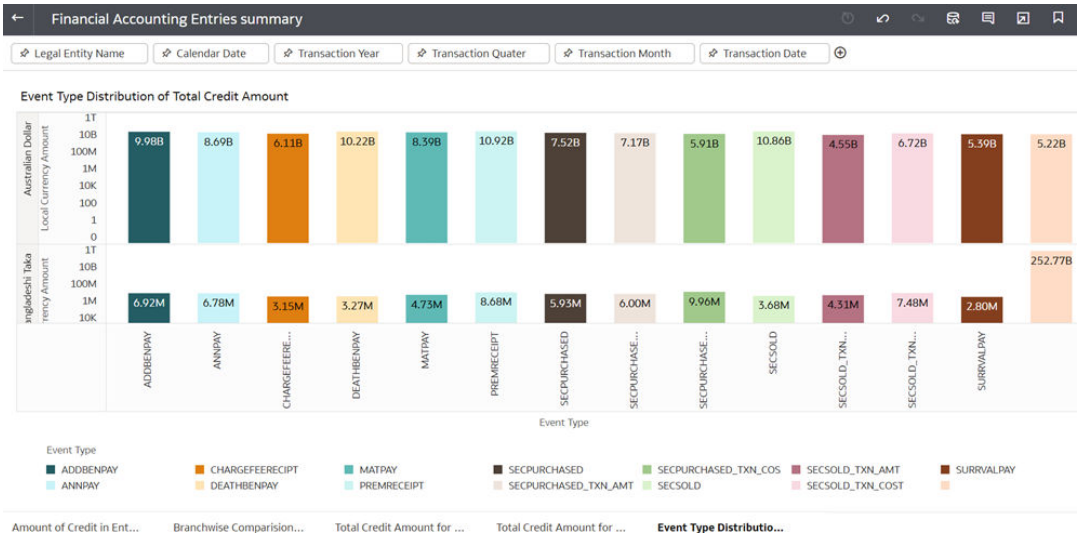
- **4. Total Credit Amount for Liabilities**: This donut chart presents **total credit amounts** for liabilities categorized by general ledger accounts.

Figure 8-88 Total Credit Amount for Liabilities



- **5. Event Type Distribution of Total Credit Amount**: This bar chart displays the **total credit amount** per event type, grouped by currency.

Figure 8-89 Event Type Distribution of Total Credit Amount



8.2.4.9 Drill through option

Drill-down functionality enables user to view data at the lowest granularity. The lowest granularity level at which the user is able to drill is specific to a given subject area (SA) on which visualization is based and attributes present in that subject area. For example: In Account subject area, the lowest level granularity would be accounts (account key in fact entities and account identifier in stage entities). Similarly for transaction subject area, lowest level granularity available for viewing via drill through will be transaction identifier.

The solution currently supports drill-through up to data in results entities, and not for stage entities.

Functionality is available for all pre-built reports for attributes that are contributing towards data for that pre-built report. Drill through can be done for all types of visualizations including but not limited to tabular, pivots, graphical, pie charts, time series, and so on.

Data viewed post drill-through pre-applies all the filters and shows user the specific granular data that user was viewing before drill through.

1. Go to chart where user needs to see specific data -> Right click -> Drill to attribute/ Hierarchy -> Select specific hierarchy for which user wants to view data.

Figure 8-90 Drill through option

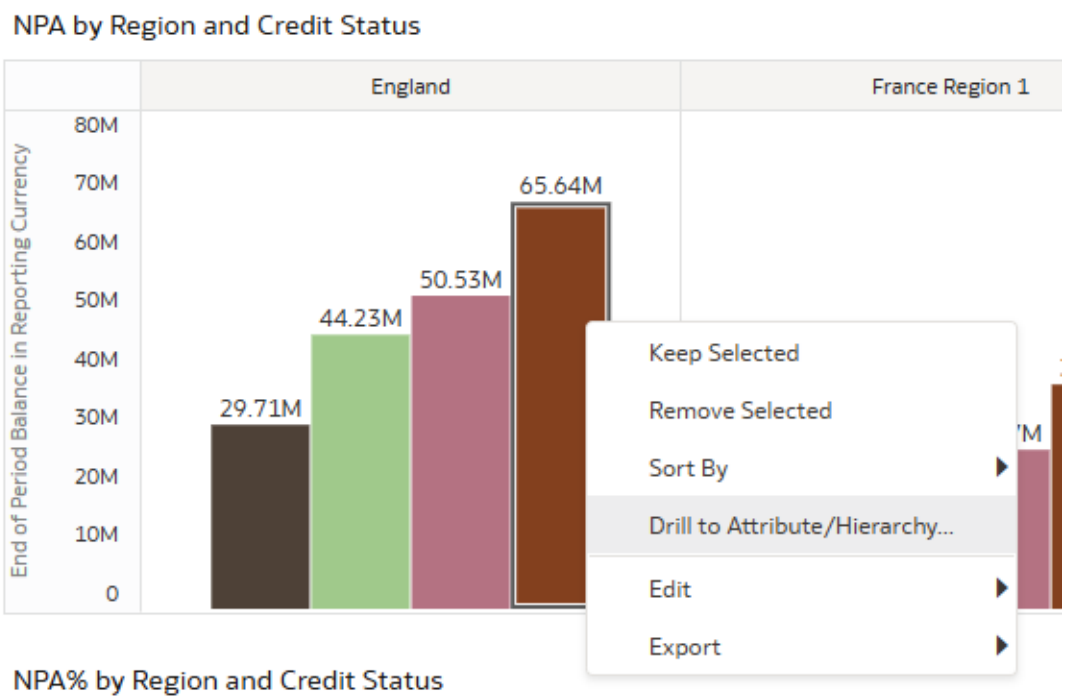
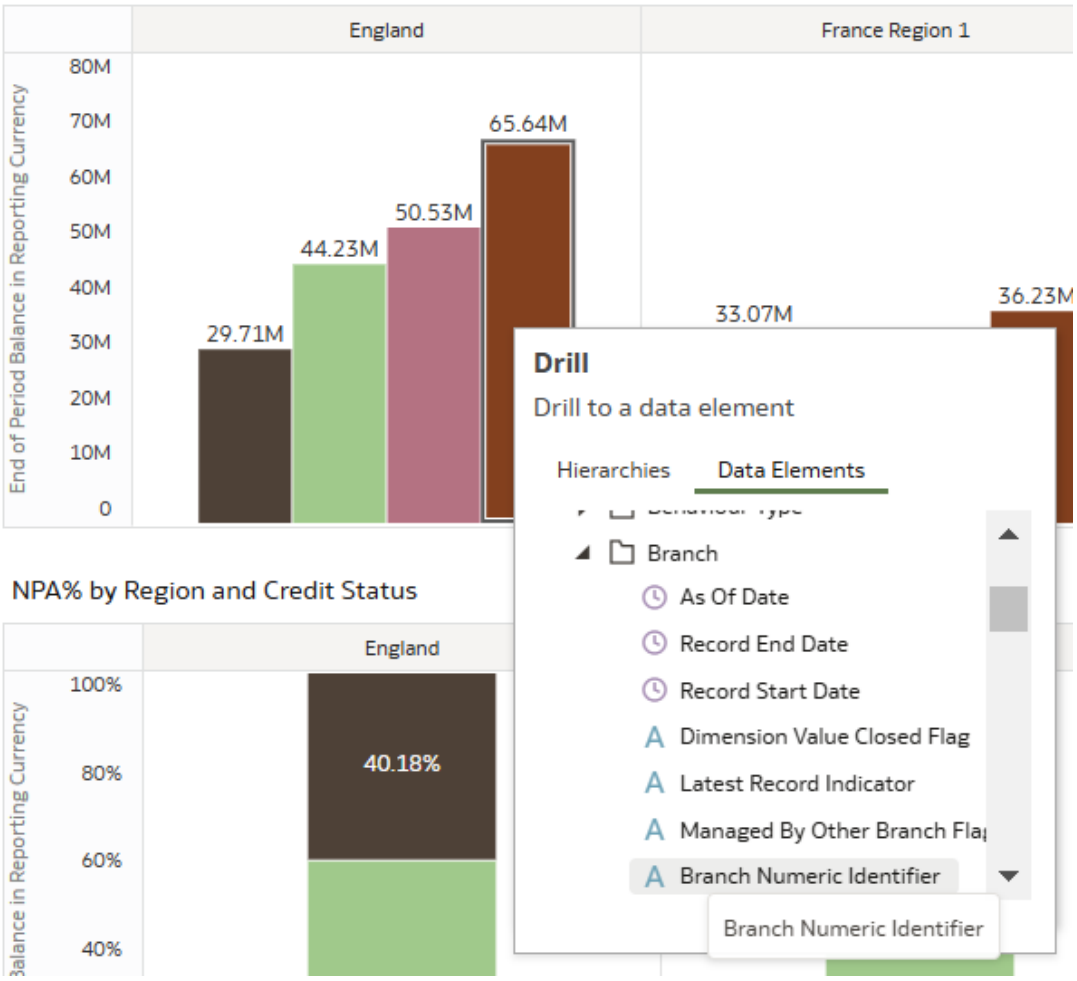


Figure 8-91 Drill through option Data Elements



8.2.4.10 Pre-built Key Performance Indicators (KPIs)

Key Performance Indicators (KPIs) are pre-calculated values in the solution that measure performance for a specific objective over time. KPIs provide measurable metrics for businesses to track over time and gauge their progress. They also help with insights that help FI business leaders to make data driven decisions, measure their performance and plan at a strategic level.
Some pre-built KPIs are packaged in out-of-the box product and can't be modified by the user. However, user has the flexibility to create their own KPIs.

The solution aims to cover most indicators used across the banking and FI industry.

Currently, the solution supports Account based KPIs for Loans and Deposits.

To access these visualizations, navigate through the following path:

1. **Home → Catalog → Shared Folders → Data Foundation Custom Reports→ Key Performance Indicators**.
2. The below results are displayed.
   - Balance Sheet
   - KPI Source Data

The dashboard has a default set of filters as shown below and further filters can be added by the user.

Figure 8-92 Pre-built Key Performance Indicators (KPIs)

3. Click on **Balance Sheet**. The below report is displayed.

Figure 8-93 Balance Sheet - Casa Ratio

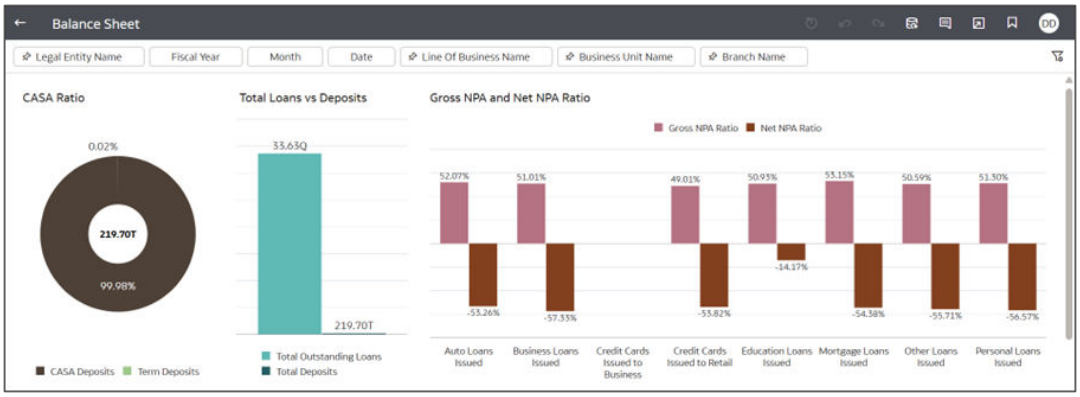
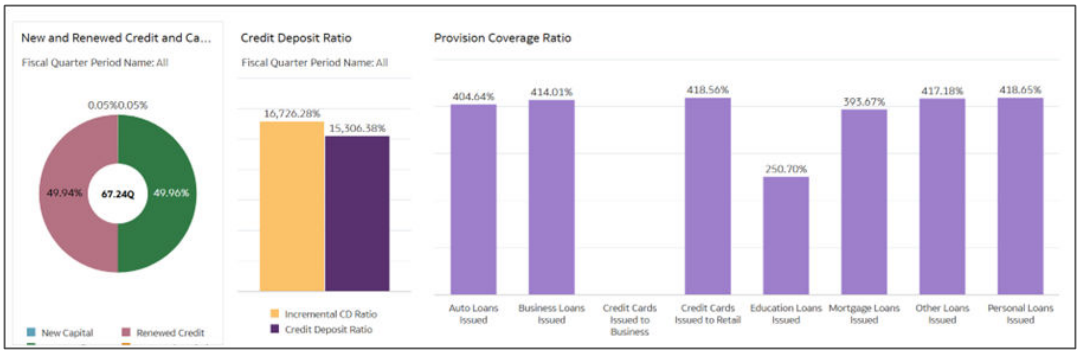


Figure 8-94 Coverage Ratio



4. Click on **KPI Source Data**. The list of reports summary is displayed.
   - Common Account Summary
   - Source Data - Cards
   - Source Data - Loan Contracts
   - Source Data - OD Accounts

8.2.4.10.1 Pre-built Loans and Deposits KPIs

KPIs related to Loans and Deposits KPIs are included as part of out of the box product. Users can create their own KPIs and visualizations for that for their custom requirements.

> **Note**
>
> This user guide does not explain individual visualization chart details, their calculation logic and their interpretation as that is included as part of KPI glossary.

8.2.4.10.1.1 End of Period

This report presents a comparative analysis of Total Loans and Total Deposits as of specific date, allowing users to examine the balance sheet dynamics and assess the relationship between lending activities and deposit mobilization. Please refer to KPI Glossary in solution for further details.

Users have options to choose values for pre-configured filter attributes or add their own filters.

Figure 8-95 End of Period

8.2.4.10.1.2 Time Series

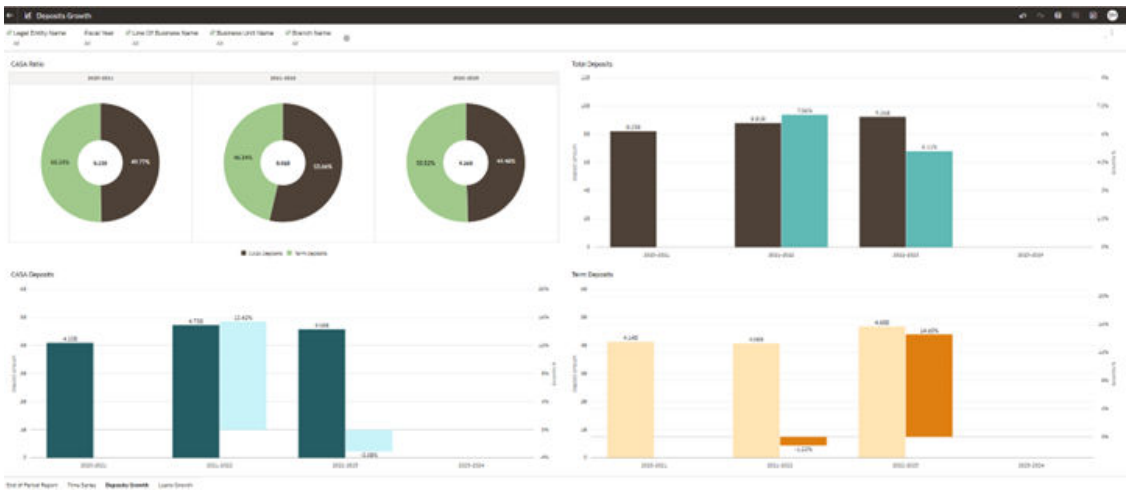
This report gives a view into trend analysis of total outstanding loans, deposits and investments over multiple time periods and how they have changed over time. It gives breakdown of deposit types accepted and loan types floated in the market. It also shows snapshot of Debt and Equity Investments over multiple time periods. Users have options to choose values for pre-configured filter attributes or add their own filters.

Figure 8-96 Time Series

8.2.4.10.1.3 Deposit Growth

The Deposit Growth Visualization provides an insightful analysis of a financial institution's deposit portfolio, focusing on key deposit categories of Current or check-in Account and Savings Accounts and their movement over time periods. By offering detailed insights into CASA ratio, total deposits, CASA deposits, and term deposits, users can effectively track and analyze growth trends across different deposit categories.

Figure 8-97 Deposit Growth



8.2.4.10.1.4 Loans Growth

The Loans Growth Report offers a detailed analysis of loan, credit cards and overdraft performance, highlighting both the total outstanding amounts and growth percentages for each category. It enables users to evaluate lending trends across segments such as personal, business, and auto loans, as well as credit card usage in retail and business domains.

The charts display the total outstanding loan balances across all types of loans and their corresponding growth percentages. It provides an overall view of the organization's lending portfolio and its growth trends over time.

Figure 8-98 Loans Growth Report

8.2.4.10.1.5 Drill through for KPIs

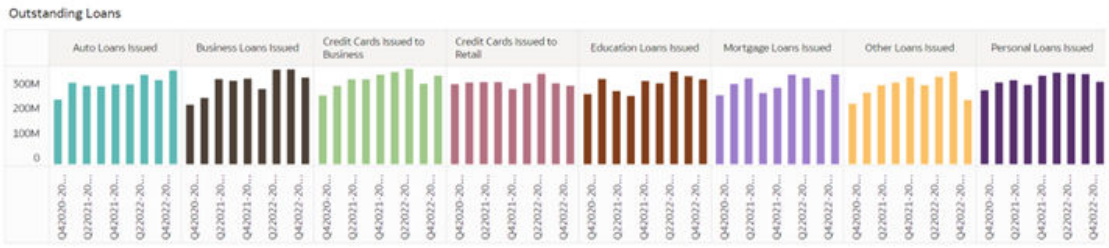
Drill-down functionality enables user to view KPI data at the lowest granularity.

User starts pre-built report **visualization from results** (fact entities based) -> drill down to **more granular results** (multiple levels of drill down in fact entities) -> View data at **lowest granularity**.

Example:

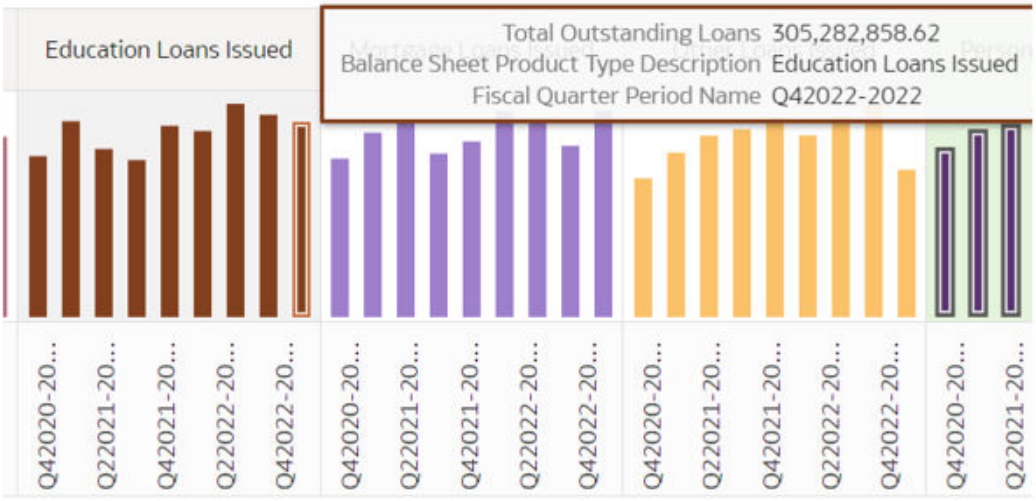
Time Series report -> Education Loans KPI -> Country name drill down -> Party type (or party name) drill down -> Account skey in fact common account summary -> Stage Loan Contracts

Figure 8-99 Drill through for KPIs



Hover over education loans as shown below to look at overall numbers:

Figure 8-100 Balance Sheet KPIs



Right click and select Country name from drill down option as below:

Figure 8-101 Drill

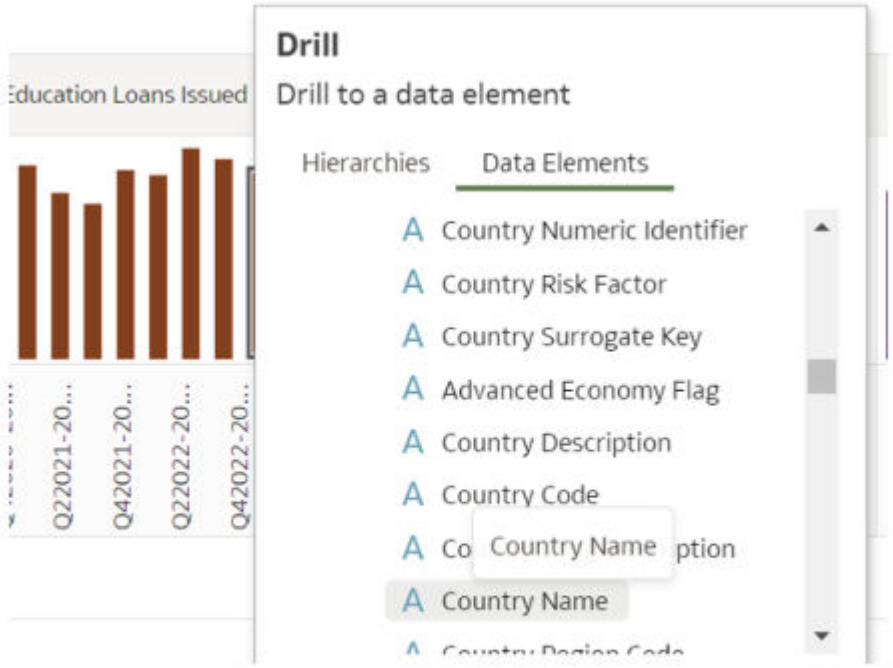


Figure 8-102 Drilldown at Country

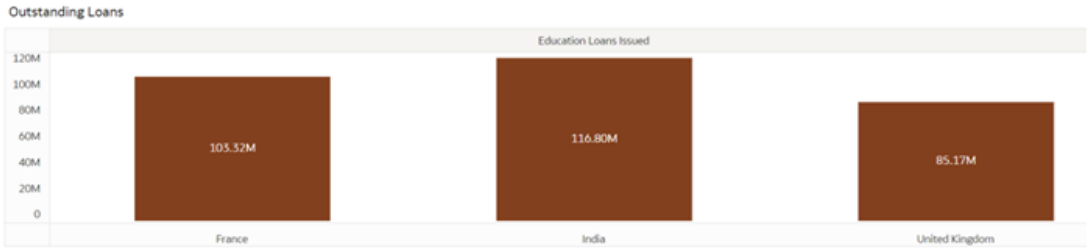


Figure 8-103 Drill down to Party Name

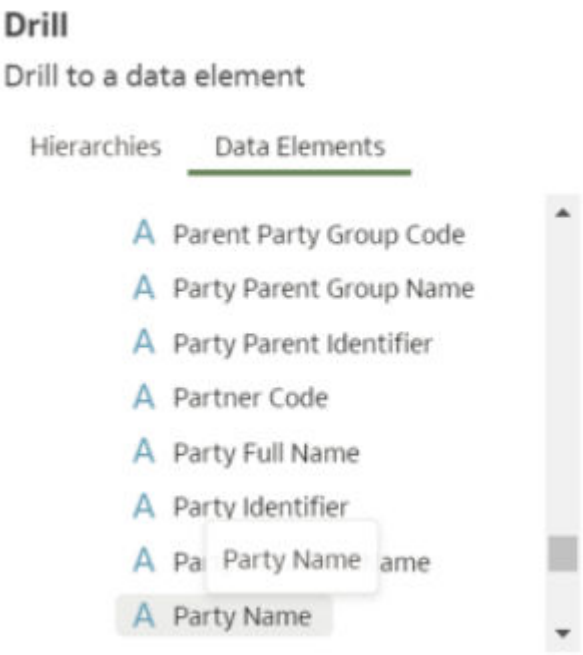


Figure 8-104 Party Name Drill down

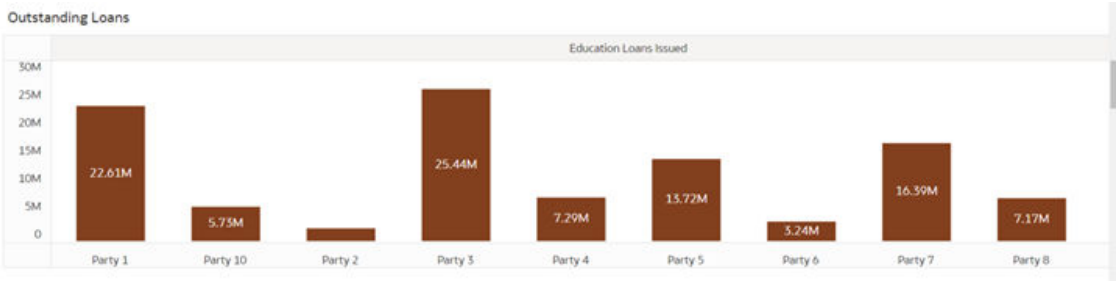


Figure 8-105 Drill down for account level

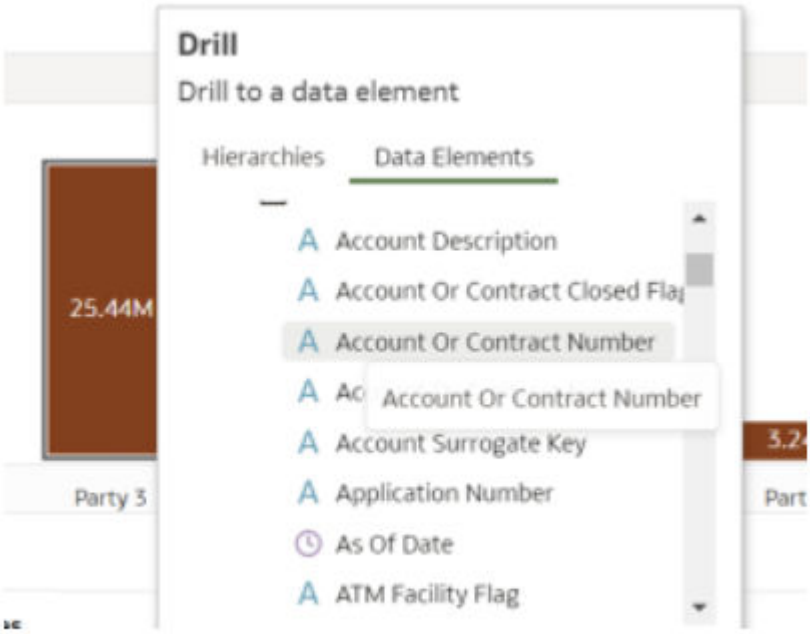
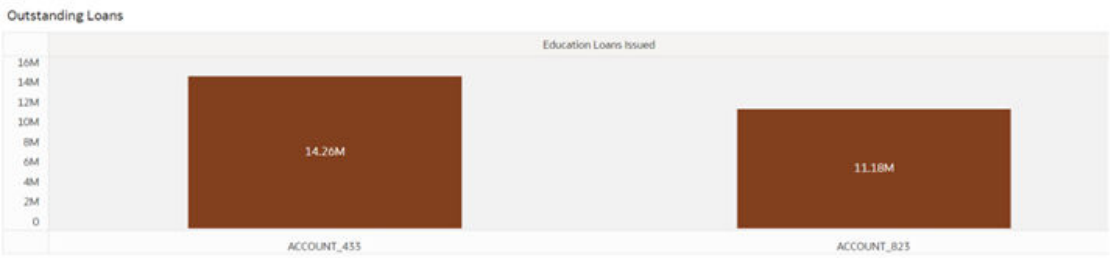


Figure 8-106 Account drilldown



8.2.5 Data Quality Visualizations

The **Data Quality Visualization** provides critical insights into data quality issues detected after executing **Data Quality (DQ) rules** within the **DFCS** solution. The **DFCS** solution runs predefined **DQ rules** and publishes the results in interactive dashboards. The dashboards present a comprehensive view of error records associated with specific **entities**, helping users identify data inconsistencies.

To access DQ dashboards, follow the below path:

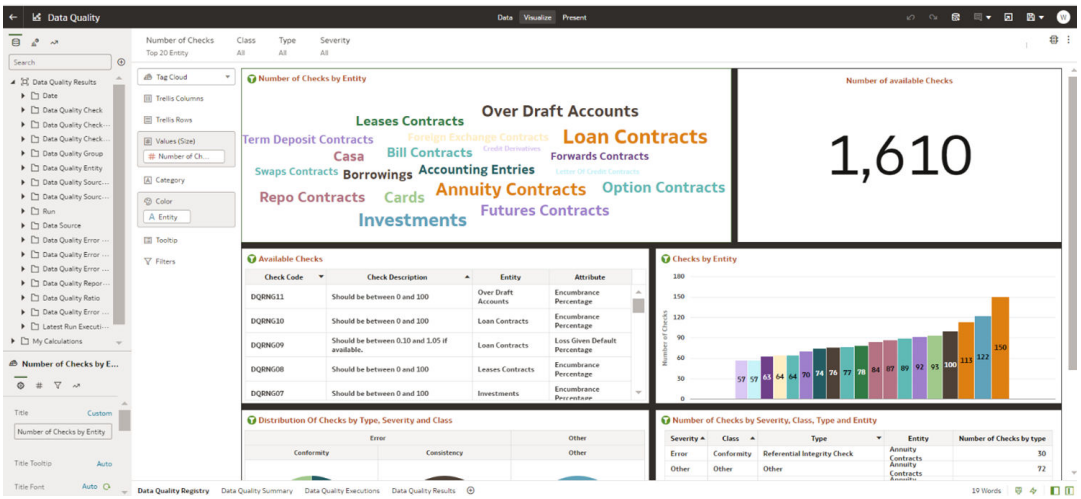
Data Quality Dashboard > **Catalog** > **Shared folders** > **Data Quality Visualizations** > **Data Quality**.

This section provides information on the Data Quality results for Data Visualization reports.

To access the Data Quality for Data Visualization Reports in DFCS, complete the following steps:

- On the Home page, click **Catalog**, and under the **Shared Folders** tab, select **Data Quality Visualization** and then **select data Quality Reports** to view the details of the Data Quality results.
- Data Quality Results for Data Visualization Reports page
  You can navigate among the following canvases in the Data Visualization report:
  - Data Quality Registry
  - Data Quality Summary
  - Data Quality Executions
  - Data Quality Results

Figure 8-107 Data Quality Registry



Controls and Filters

- Hover over any entity in the word cloud to view a tooltip showing:
  - **Number of Checks**
  - **Entity Name**
- **Number of Checks** – Filter data by the number of checks.
- **Class** – Apply filters based on data class (e.g., contracts, accounts).
- **Type** – Filter checks by type (e.g., financial instruments).
- **Severity** – Filter by severity level of issues.
- Click the **three dots** (menu icon) in the top-right corner of the chart area.
- Hover over **Sort By** to reveal options:
  - **Number of Checks** →
    - Low to High
    - High to Low

    - None
  - **Entity** → Sort alphabetically
- From the same menu (three dots), hover over **Edit**.
- Click **Copy Data** to copy the dataset underlying the visualization for external use (e.g., Excel, analysis tools).
  From the menu, go to **Export**, then select your preferred method:
  - **File** – Download the chart/data as a file (likely CSV or image).
  - **Print** – Send the visualization directly to a printer.
  - **Slack** – Share directly to Slack (if integrated).
- **Drill to Attribute / Hierarchy**
  1. Select **Drill to Attribute/Hierarchy**.
  2. In the pop-up panel, choose from available **Attributes** or **Hierarchies**.

  Drillable Attributes Include:
  - **Date** – View checks across time.
  - **Data Quality Check** – Get detailed check names.
  - **Data Quality Check Severity** – Break down checks by severity (e.g., High, Medium, Low).
  - **Data Quality Check Type** – See types of checks (e.g., Consistency, Completeness).
  - **Data Quality Group** – Group-level analysis.
  - **Data Quality Entity** – Deeper entity-specific view.

  > **Note**
  >
  > Use the **Search bar** to quickly locate specific attributes.

  - **Filter Values:** Choose specific values to include.
  - **Clear All Filter Selections:** Unchecks all selected filters.
  - **Remove All Filters:** Resets the dashboard to its unfiltered state.
  - **Create Expression Filter:** Create custom logic filters using expressions.
  - **Auto-Apply Filters:** Toggle whether filters apply changes instantly or only after confirming.
  - **Reset Column Sizes:** Restores column widths to default in table views.

Figure 8-108 Data Quality Summary

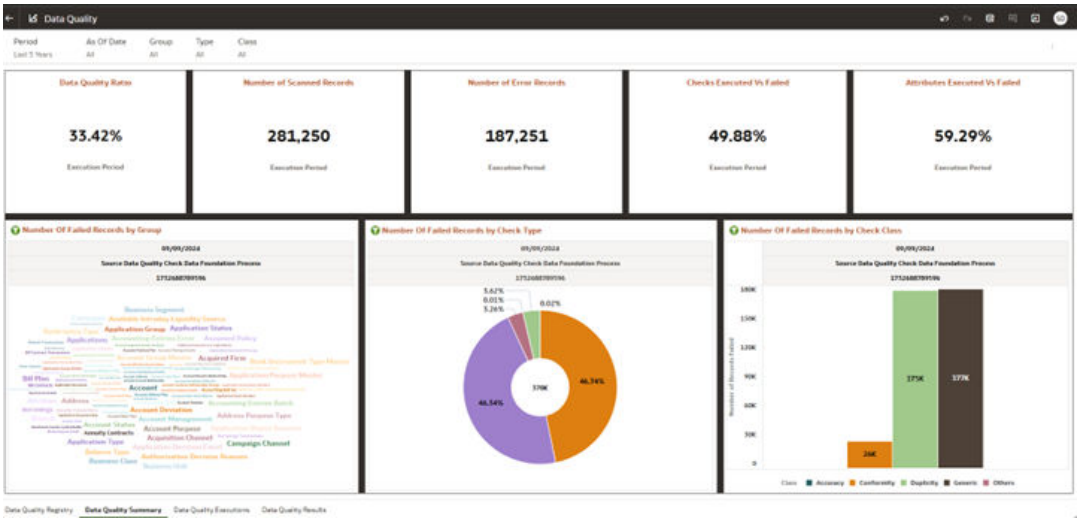


Figure 8-109 Data Quality Execution

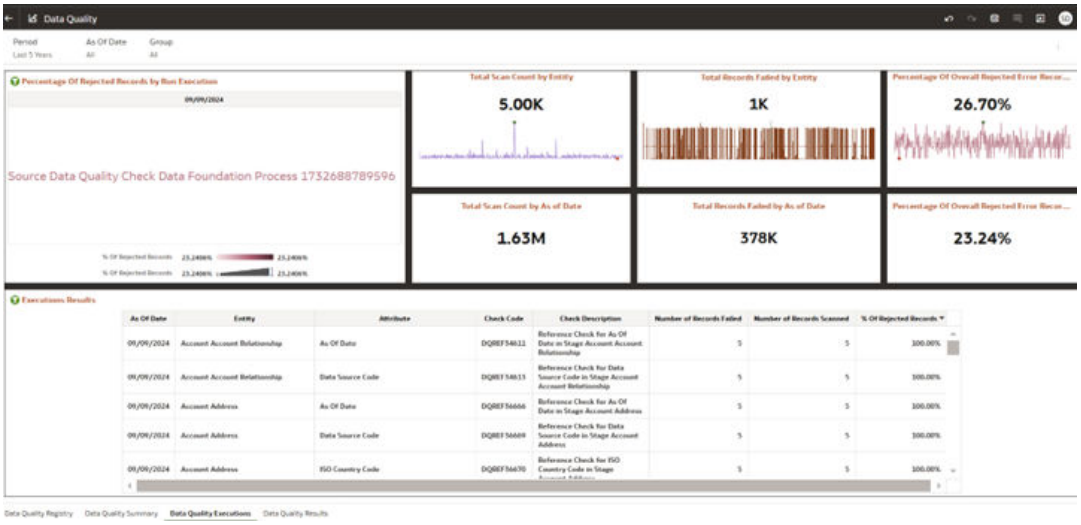
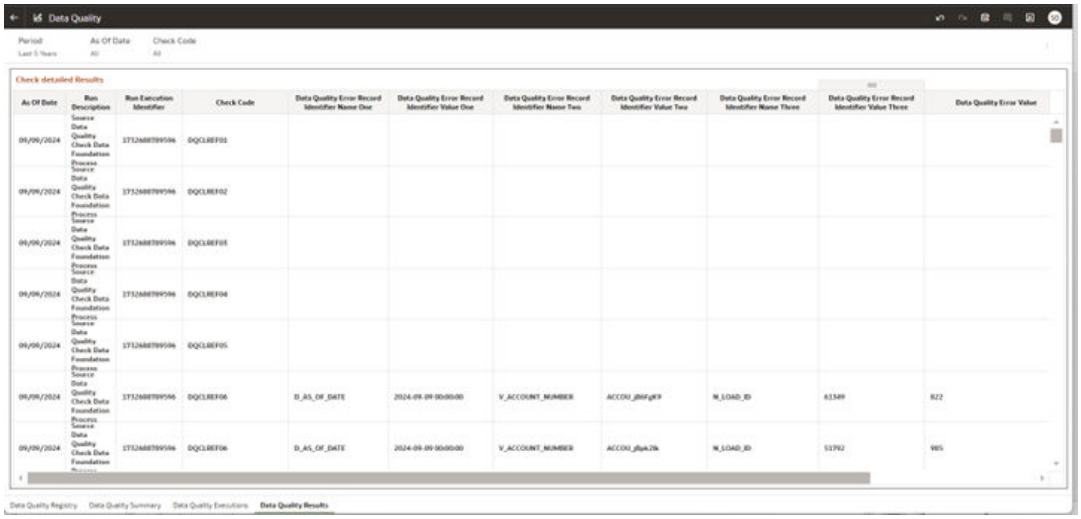


Figure 8-110 Data Quality Results



8.2.5.1 Data Load Dashboard

The Data Load Dashboard provides insights into the status and quality of data loads. It ensures that the data loaded into DFCS is consistent with the source data by tracking key control measures.

Note: The effectiveness of the Data Load Dashboard relies on the initial setup of the Data Source Template, which provides the control information needed to run these validations and checks.

- Before using the Data Load Dashboard, the Control Settings must be configured in the EDD setup for data file reconciliation.
- These settings ensure that the data loaded into the system (DFCS) matches the source data.
- Control settings manage the reconciliation process, comparing record counts or amounts between the source data and the data loaded into DFCS.
- This reconciliation can be based on a threshold value defined as an absolute number or percentage.
- Validation thresholds are applied to ensure that the data is accurate. These can be set as absolute values or as percentage-based checks to flag any discrepancies.
- Control settings also manage whether the control file (which contains the validation rules) is included within the same file as the data or stored separately.

For more information, see Control Information Management.

To view Data Load Dashboard:

1. Go to **Shared Folders → Data Load Dashboard**.
2. Select **Data Load Dashboard**.
3. Open the **Data Load Dashboard** report from the available list.

Below is the list of some of the important attributes displayed in Data Load Dashboard. Attributes are listed only when there is data available.

- **Start Time / End Time**: Timestamp marking the beginning and end of the data load process.

- **Derived Entity Code**: A unique code representing the derived data entity based on EDD.
- **Control Name**: Name for control defined in EDD.
- **Aggregation Method**: The method used to aggregate data (e.g., COUNT, SUM, Average).
- **Aggregation Column Name**: The specific column where aggregation is applied.
- **Connector Name**: The identifier of the connector used for the loading process.
- **Target Table Name**: The database table receiving the loaded data.
- **Task Name**: The name of the specific data load task.
- **Control Value**: Expected value related to the defined control for validation or tracking.
- **Actual Value**: Actual Value of defined Control. This is available post data load is complete.

Filter Options

1. Click the three dots (ellipsis) in the upper right corner of the dashboard.
2. The following options are displayed.
    - Keep Selected: Retain only the selected data rows for focused analysis.
    - Remove Selected: Exclude selected rows from the view.
    - Sort By: Organize data based on column values in ascending or descending order.
    - Drill to Attribute/Hierarchy: Dive deeper into specific attributes or hierarchical data structures.
    - Edit: Modify dashboard or column settings.
    - Export: Export the dashboard data to a file format like CSV or Excel.
    - Show Subtotal: Display subtotal values for numeric columns.

8.2.6 Balance Reconciliation Visualizations

The **GL Reconciliation** process ensures that balances from a bank's operational systems (typically standard product processor entities) are reconciled with the **General Ledger (GL) balances**.

GL Reconciliation Visualizations: The dashboards provide insights into reconciliation differences detected after executing the reconciliation process. Key components include:

- Reconciliation Dashboard
    - **Reconciliation Execution Summary** – Displays the execution summary of the specified criteria.
    - **Reconciliation Differences** – Highlights discrepancies between operational balances and GL balances.
    - **Adjustments Summary** – Displays adjustments made to correct discrepancies.
- Threshold Breach
    - **Threshold Breach Summary** – Identifies instances where reconciliation variances exceed predefined thresholds.
    - **Global Threshold Breach Summary** - The **Global Threshold Breach Summary** provides a consolidated view of data quality issues where checks have exceeded pre-defined acceptable limits (thresholds).
    - **Threshold Definition Summary** - The **Threshold Definition Summary** outlines the rules and acceptable limits set for data quality checks. These thresholds determine

whether a particular check **passes** or **fails**, based on predefined business or regulatory standards.

- Map Filter Report
  - **Reconciliation Source Filters** help users narrow down data quality checks to specific **source systems** involved in reconciliation.
  - **Reconciliation Target Filters** allow users to refine data quality results based on the **target system or dataset** involved in reconciliation. These filters help identify where mismatches or data quality issues occur **on the receiving side** of a reconciliation process.
  - **Reconciliation Dimensions** define the **key attributes** used to match and compare data between source and target systems. These dimensions determine how records are grouped, aligned, and validated during reconciliation processes.

Steps to Access GL Reconciliation in DFCS:

1. On the **Home page**, navigate to the **Data Visualization > GL Reconciliation Dashboard**. The **Reconciliation Framework Analytics** screen is displayed.
2. Click on **Dashboards** to view **GL reconciliation results**.

Accessing GL Reconciliation Dashboards

To view the **GL Reconciliation Dashboards**, follow these steps:

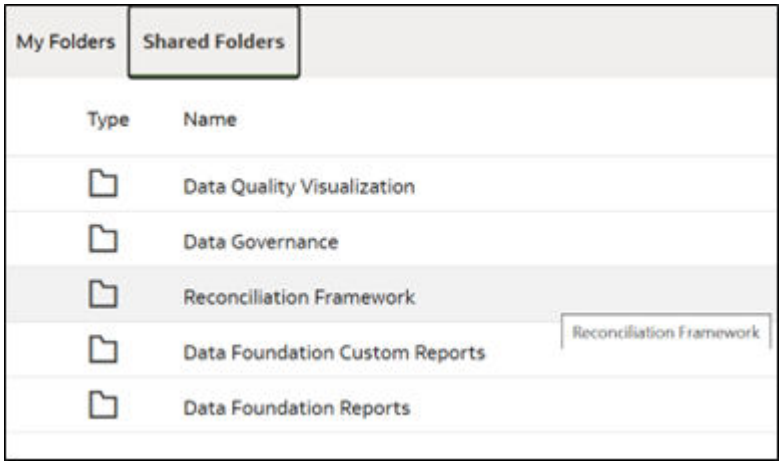
1. Navigate to **Shared Folders**.
2. Select **Reconciliation Framework**.
3. Click on **Dashboards** to access the reconciliation results.

GL Reconciliation Results – Data Visualization Reports:

Within the **Data Visualization Reports**, users can navigate through the following canvases:

- **Home** – Overview of reconciliation results.
- **Threshold Breach** – Displays instances where reconciliation variances exceed predefined limits.
- **Map Filter Report** – Provides a detailed view of reconciliation mappings and applied filters.

Figure 8-111 Access GL Reconciliation in DFCS



For further details on using dashboards, refer to the Oracle® Financial Services Data Foundation Cloud Service for Banking Data Controls User Guide.

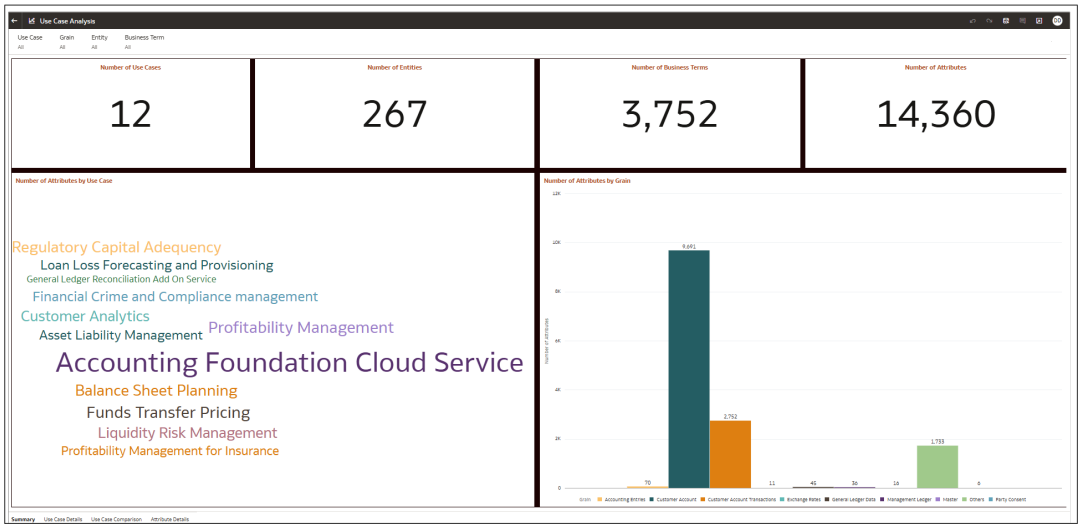
8.2.7 Use Case Analysis

The **Use Case Analysis** is a pre-built, out-of-the-box report designed to support customers who choose to onboard multiple applications in a sequence. In this context, each application represents a distinct use case. The report provides customers with a clear view of how many additional data elements would be required to onboard subsequent applications after starting with one. It also highlights the total number of data attributes used by each application, the number of common attributes shared across applications, and the additional attributes unique to each application. This helps customers plan and manage their data onboarding process more efficiently.
To access DQ dashboards:

1. Navigate to the **Catalog** menu from the Oracle Analytics home page, and click on the **Shared Folders** tab.
2. Navigate to **Data Foundation Reports**.
3. Locate the **Use Case Analysis** folder in the list and click **Use Case Analysis**.
4. Inside the folder, open the **Use Case Analysis** report.

   The Use Case Analysis > Visualize window appears.

Figure 8-112 Visualize Window



Use Case Analysis Window

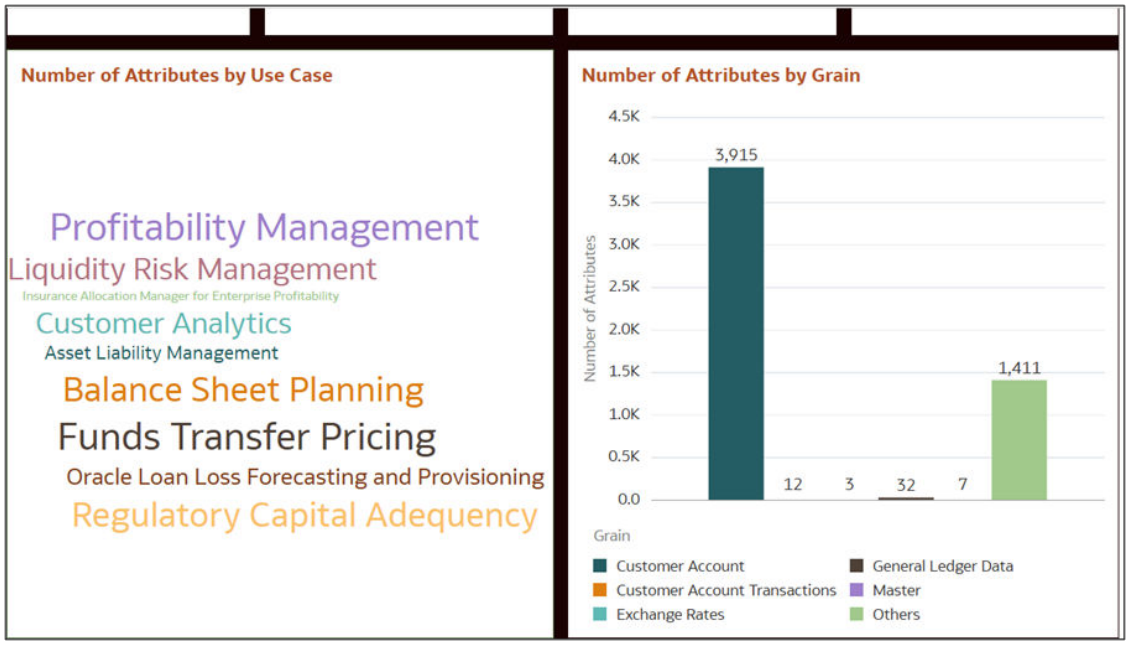
Here's a breakdown of the main items available in the **Use Case Analysis** window. On the Visualize window, the following canvas are available in the Use Case Analysis report:

- **Summary** – Overview of all use cases and attributes.
- **Use Case Details** – In-depth details for each use case.
- **Use Case Comparison** – Side-by-side comparison of use cases.
- **Attribute Details** – Breakdown of attributes within each use case.

Summary

The Summary section provides an overview of how to use the tool effectively, including how to assess additional elements required for integration with other financial products.

Figure 8-113 Summary Window

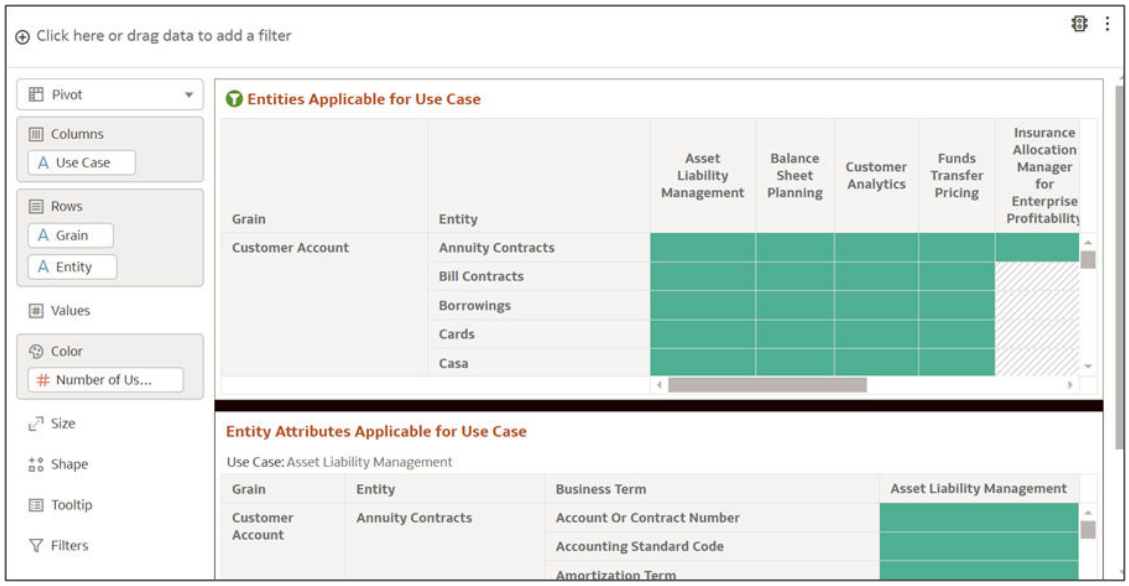


- Determine the impact of additional financial products.
- Identify missing elements needed for full integration.
- Understand table relationships between different applications.
- Percentage-Wise Requirement AnalysisIdentifies percentage gaps (e.g., a customer needs to bring in the remaining 25%).
- Helps determine which additional datasets, calculations, or reports are necessary for complete functionality.
- Balance Sheet & Customer Data IntegrationEvaluates which balance sheet elements must be incorporated.
- Assesses customer data integration requirements for analytics and compliance.

Use Case Details

The Use Case Details section provides an overview on how to analyze entity usage across various use cases in financial or business management.

Figure 8-114 Use Case Details

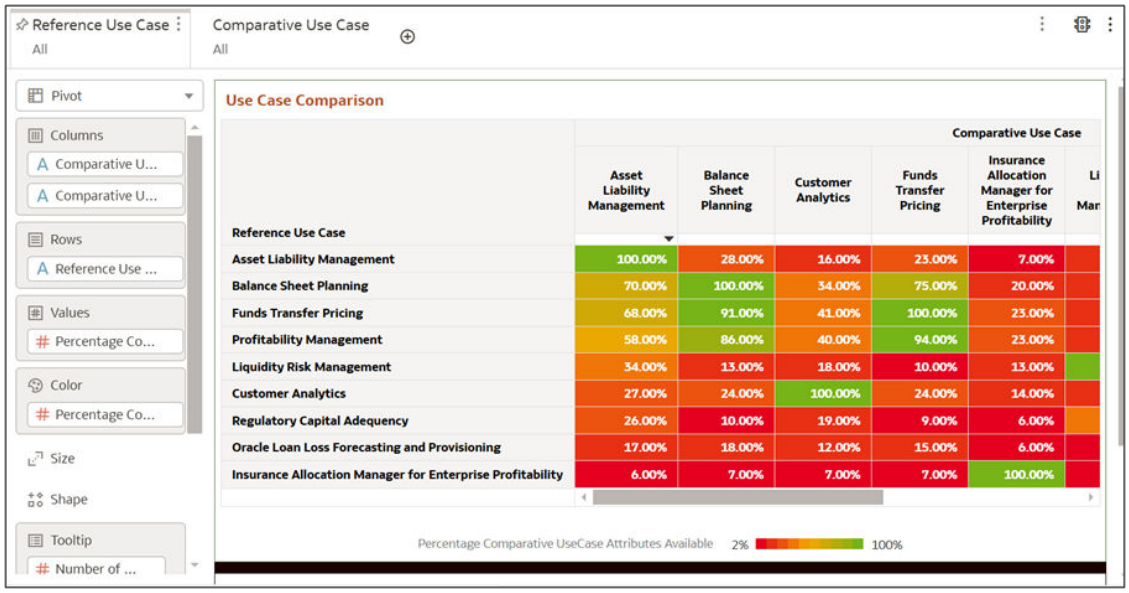


- Check the percentage indicator to see what portion of the required data is already available.
- Review the missing components and determine what additional elements must be integrated.

Use Case Comparison

This section provides an overview on how to compare attributes across different financial/ business use cases. It displays percentage coverage of attributes between the reference use case and comparative use case.

Figure 8-115 Use Case Comparison



- **Reference Use Case**: Acts as a benchmark for evaluating other use cases.
- **Comparative Use Case**: The use case that is directly compared to the Reference Use Case.
- **Number of Common Attributes**: The count of shared Entity.Attributes between the Reference and Comparative Use Cases.
- **Number of Additional Attributes Required**: The count of extra Entity.Attributes needed for the Comparative Use Case that are not included in the Reference Use Case.
- **% of Comparative Use Case Attributes Available in Reference**: The percentage of attributes from the Comparative Use Case that are present in the Reference Use Case.

Example

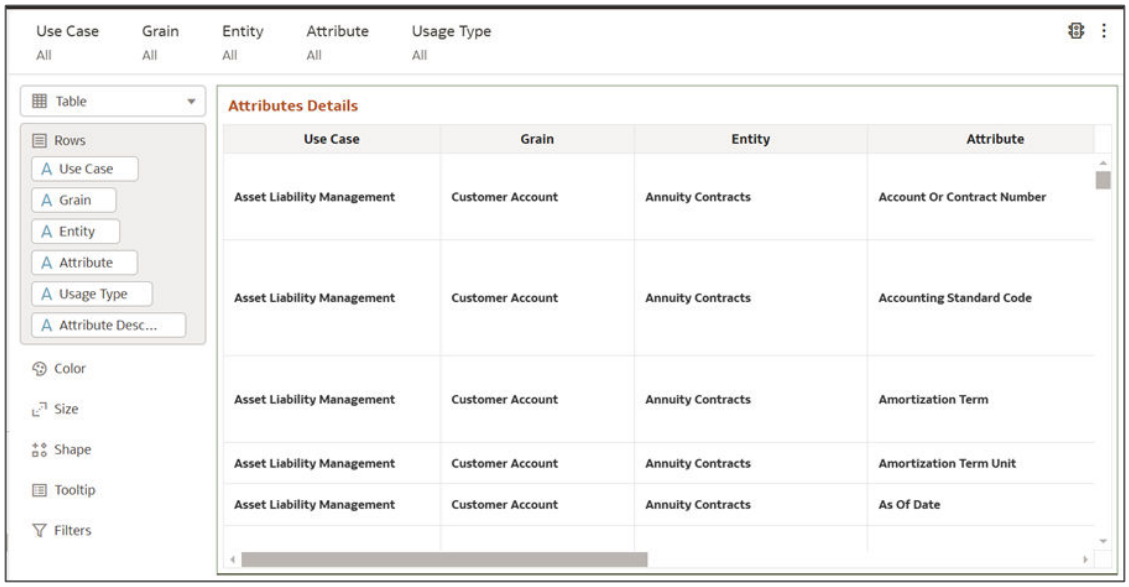
The pop-up tooltip (hovered over any entity) provides:

- Number of attributes in the Reference Use Case (1,210).
- Number of attributes in the Comparative Use Case (1,881).
- Number of Common Attributes (194).
- Number of Additional Attributes Required (1,687).
- Percentage of Comparative Use Case Attributes available in the Reference Use Case (10%).
- Insights:
  - High percentages (green areas) indicate a strong overlap of attributes between reference and comparative use cases.
  - Low percentages (red areas) suggest gaps or differences between the datasets.
  - Some cells show 100% coverage (e.g., "Funds Transfer Pricing"), meaning the attributes completely match between the two use cases.

Attribute Details

Attributes Details report within a Use Case Analysis dashboard is structured as a data table showing attributes related to financial or business processes.

Figure 8-116 Attribute Details



The interface consists of two main sections:

Data Table (Attributes Details) – Displays key dataset details:

- **Use Case** – Business process or scenario
- **Grain** – Level of data detail
- **Entity** – Business data objects
- **Attribute** – Specific data fields (e.g., "Account or Contract Number")
- **Usage Type** – Classification of attributes (e.g., "Mandatory" means required)

8.2.8 Right To Forget

The **Right to Forget (RTF)** feature ensures that businesses protect sensitive Personally Identifiable Information (PII) related to party data. This functionality is available in **Data Foundation Cloud Service (DFCS)** and involves randomizing party data when it is no longer needed in the system.

RTF Process Overview

- The **RTF process** is executed as a **PMF job**.
- It is **user-driven**, requiring customers to input **Party Identifiers** that need to be forgotten.
- Users must provide **Party Identifiers** through a **PMF input**, with multiple IDs entered as comma-separated values.
- Before executing the RTF process, users must invoke the SCD process (DIM Incremental Process) to update the **Party Dimension**.
- Only Party IDs present in the **Party Dimension** will be considered for randomization.

RTF Execution Details

- For each **RTF request**, the service checks if the user has **sensitive PII-related party data** in any entity.

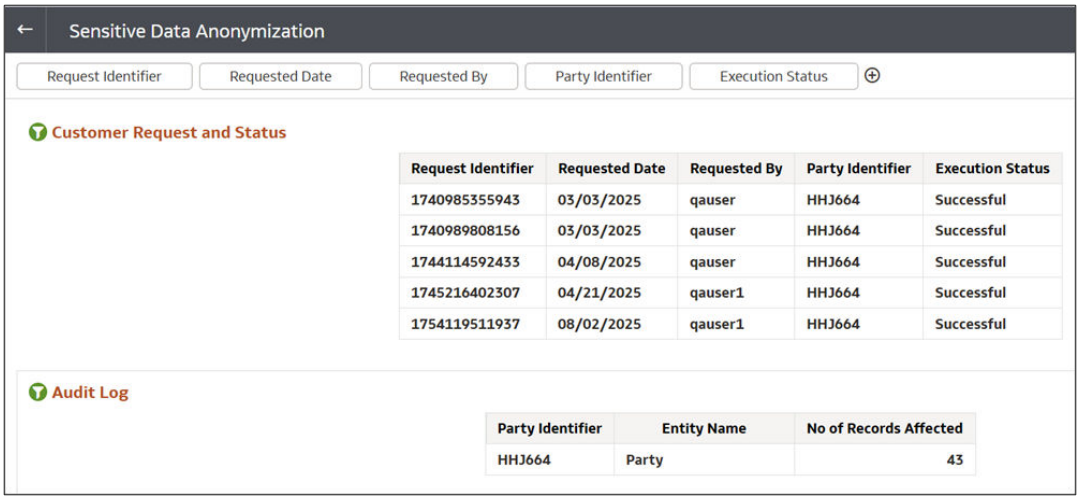
- If such data exists, the system fetches the list of affected entities and **mask/ hide** the PII-related data.
- The **RTF Metadata Registration Table** is preconfigured with **Party Identifier (Business Term - BTO3899)** for executing the RTF functionality.

RTF Data Visualization Reports

The following RTF-related information can be viewed in **Data Visualization (DV) reports**:

1. Navigate to the **Catalog** menu, and open the Catalog application.
2. Click on the **Shared Folders** tab.
3. Navigate to **Data Foundation Reports**.
4. Locate the **Right To Forget** folder in the list and click **Sensitive Data Anonymization**. For more information, see Pre-Built Reports.
5. **Dashboard Sections**:

Figure 8-117 Right to Forget Dashboard



   - **Customer Request and Status** – Displays request details.
   - **Audit Log** – Tracks affected records for accountability.
6. **RTF Customer Request Table** – Stores details of each RTF request, including:
   - **Request Identifier** – Unique request number.
   - **Requested Date** – Date of submission.
   - **Requested By** – Username of requester.
   - **Party Identifier** – Entity involved.
   - **Execution Status** – Indicates success or failure.
7. **Reviewing the Audit Log**:
   - **Party Identifier** – Matches request ID.
   - **Entity Name** – Type of entity affected.
   - **Records Affected** – Number of modified records.

8. **Filtering and Searching Requests:**
    - Use filters (e.g., Date, Requested By, Status) to narrow results.
    - Select a request to view details in the Audit Log.
9. **Verifying Execution Status & Impact**:
    - If successful, check affected records.
    - If failed, troubleshoot using system logs.
10. **RTF Execution Status** – Once the **RTF Engine PMF process** completes, the system logs the execution status:
    - If the Party ID is not found, the system updates the status as **Not Available** and exits.
11. **RTF Audit Log** – Maintains execution records at the **Entity Level**, including:
    - **Date of execution**
    - **Number of records affected**

Post-Execution Considerations

- Once an RTF request is successfully processed, the party data is randomized and secured.
- To maintain data integrity, users must ensure that the forgotten Party IDs do not re-enter the system during data loads from multiple sources into DFCS.

8.2.9 Visualization for Catalog Extensions

DFCS supports catalog extensions to support new or client-specific business use cases via:

1. Addition of new custom attribute to existing entity, or
2. Creation of new custom entity.

For detailed list of Enabled Data Model Extensions in Catalog and process to extend, please refer to Oracle® Data Foundation Cloud Service Data Catalog.

Once catalog extensions are published and available in the data model, the corresponding data will be accessible through SCD or connectors.

DFCS also supports the visualization of newly added data points using two methods:

1. **Reports Configuration in Subject Areas**
    - This method involves mapping newly created attributes and dimensions to placeholders in pre-built Subject Areas.
    - Applicable only for visualizing results data.
2. **Creating Custom Datasets**
    - This method is suitable for all types of visualizations.

8.2.9.1 Reports Configuration

The DFCS solution provides pre-packaged **Subject Areas** that allow you to easily view data related to fact entities and their corresponding dimensions at a specific grain. If you add a new attribute or entity to a subject area, you can use the **Reporting Configuration window** to map the newly created attributes to the corresponding placeholders within that subject area to reflect the latest data and ensure the reports stay accurate and up-to-date.

The DFCS solution includes placeholders for the following subject areas:

- Accounts
- Transactions
- Financial Accounting Entries

These contain placeholders for several pre-defined attributes added to fact entities within these grain, and associated dimension entities. It also has provision for custom dimension entities.

In the current release, you can define custom attributes based on the following data types:

Table 8-6 Presentation Entity Name Table

Presentation Entity Name	Numeric Attributes	Varchar Attributes	Date Attributes
Fact Account Grain Extension	8	30	88
Fact Account Transactions Grain Extension	8	30	88
Fact Accounting Entries Grain Extension	8	30	88
Account Dimension	8	10	59
Acquisition Channel Dimension	5	20	45
Branch Dimension	5	20	45
Business Unit Dimension	5	20	45
Data Source Dimension	5	20	45
General Ledger Dimension	5	55	170
Instruments Contracts Dimension	5	20	45
Ledger Dimension	5	20	45
Legal Entity Dimension	5	20	45
Location Dimension	5	20	45
Organization Unit Dimension	5	55	170
Party Dimension	5	20	45
Product Dimension	5	20	45
Project Dimension	5	20	45
Dimension 1	20	20	60
Dimension 2	20	20	60
Dimension 3	20	20	60
Dimension 4	20	20	60
Dimension 5	20	20	60
Dimension 6	20	20	60
Dimension 7	20	20	60
Dimension 8	20	20	60
Dimension 9	20	20	60
Dimension 10	20	20	60
Dimension 11	20	20	60
Dimension 12	20	20	60

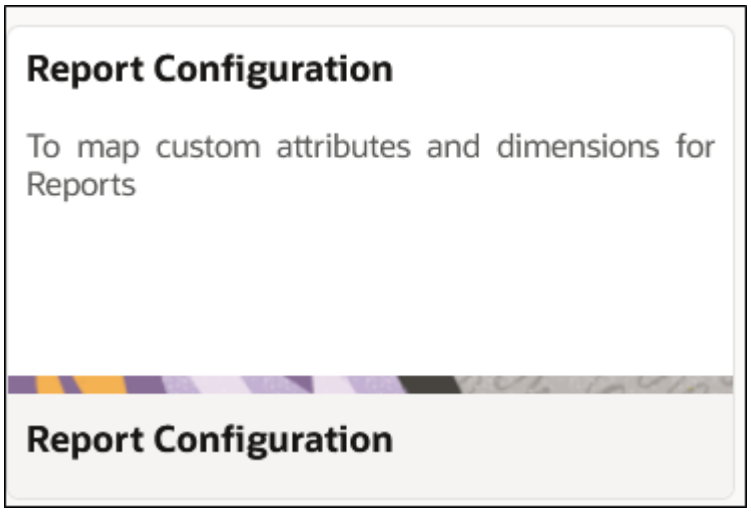
Table 8-6 (Cont.) Presentation Entity Name Table

Presentation Entity Name	Numeric Attributes	Varchar Attributes	Date Attributes
Dimension 13	20	20	60
Dimension 14	20	20	60
Dimension 15	20	20	60

Steps to map custom attributes in OOB subject areas via Reporting Configuration window:

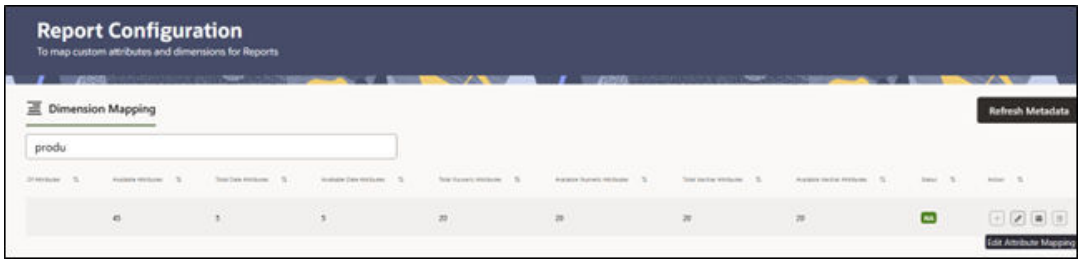
1. On the **DFCS Home** page, click the **User** menu and select **Administration**.

Figure 8-118 Report Configuration



2. Click **Report Configuration** to select the relevant table and click on the **Edit** icon.

Figure 8-119 Report Configuration Mapping



3. In the **Attribute Mapping** window, choose the appropriate attribute based on its data type (e.g., **Date**, **Numeric**, or **String**).
4. Click **Edit** in the Attribute mapping window.
5. Select the Attribute name from the dropdown list and click **Save**.

> **Note**
>
> The dropdown will only include custom attributes that were defined and published previously.

6. Click on **Refresh Metadata** to add the mapped custom attribute to the subject area.
7. To delete a custom attribute, select the attribute and click **Delete**.

> **Note**
>
> - **OOTB Dimensions**: You cannot edit or delete Out-of-the-Box (OOTB) dimensions. These will display with an **NA** flag in the **Dimension Mapping** window.
> - **Custom Attribute Flags**: In the **Attribute Mapping** window, the **Available** and **Mapped** flags will show the current status of custom attributes and their availability.
>
> For more detailed instructions on catalog extensions, refer to the Oracle® Data Foundation Cloud Service Data Platform guide.

8.2.9.2 Custom dataset creation

In order to view the extended custom attributes or entities in a staging or results table and view their logical names, user can create a Dataset and generate reports in the Data Visualization using Oracle Analytics interface using **Create Dataset Option** available on top right. But before that user will need to **Refresh Views** first.

Steps to Refresh the views for newly created catalog extensions via Reporting Object Publish window:

1. On the DFCS Home page, click the **My Profile** icon and select **Administration**.
2. Click **Reporting Object Publish.**
3. You will see the history of reporting objects publish.
4. Click Refresh Catalog Extensions which will refresh the reporting objects as per the catalog extension changes.
   (Button will be enabled only when there is catalog extension post last reporting object creation executed time. No of objects created, modified and total no of objects will be also be shown.)

Steps to create a dataset and view the custom attributes in staging tables in the Data Visualization canvas in DFCS, complete the following steps:

1. On the Home page, click the **Create** icon and then click **Dataset**.
2. The Dataset page is displayed.
   a. Click Create and select Dataset from the available list.
   The Create Dataset window is displayed with the list of available connections.
   b. Double click on the **DS Connection** and the New Dataset page is displayed.
   c. From the LHS menu, double click on the **Manual Query**, the Manual Query button is displayed.

d. Double click on the **Manual Query** button, and enter the SQL query under the **Statement** window.

e. Click **Get Preview Data** to preview the data of the entered query.

f. Click **Save** and the **Save Dataset As** window is displayed.

g. Enter the **Name** and **Description** of the dataset and click **OK**.

You can view the list of extended columns in the staging table.

> **Note**
>
> Refer to “Data Visualization via Custom Dataset” section of this user guide , for further details about New Dataset creation.

9

Key Terms and FAQs

- **Adjustment Entry**
  An entry passed in the Product Processor (PP) to reconcile it with the associated GL for the amount equivalent to the difference and an entry in the Contra GL Account with the opposite sign for the same amount.
- **Adjustment Entry Floor**
  If the difference between Source and Target is less than the Adjustment Entry Floor specified in the definition, the calculated difference is not eligible for adjustment, and the entry will not be logged in the Adjustment Entry Table.
- **Attributed Dimension**
  A dimension whose members can have other properties or qualifiers known as Dimension Attributes.
- **Dataset**
  A dimension used for segregating data into different sets according to its use or its source. For example, to separate actuals data, budget data, and encumbrances data. Other uses include separating test data from production data and creating separate data sets for What-if Analysis.
- **Dimension**
  A structure that can be used to categorize business data. A dimension contains members; it can be hierarchical (you can organize the members into one or more hierarchies), or non- hierarchical.
- **Dimension Attributes**
  A property or qualifier that further describes a dimension member. An attribute can be a date, a number, or a character string. For example, the Geography dimension can have an attribute - Population, that designates how many people live in that area. Each member of the Geography dimension, therefore, has an associated Population.
- **Hierarchy**
  A structure of dimension members organized by parent-child relationships.
- **Global Threshold**
  Global Threshold is applied at an execution level where all the reconciliation differences for execution are added and checked across the absolute sum of source balance.
- **Inherit to Child**
  This feature is used to find child legal entities under the hierarchy node of a Legal Entity that is selected at the definition level. If used while defining the GL Reconciliation rule, all child nodes will participate in the reconciliation process.
- **Reconciliation**
  Reconciliation is the process of comparing information from one data source to another. An Account Reconciliation is for a specific period. Reconciliations consist of account balances (obtained from the Source System for the period) and account properties.
- **Reconciliation Difference**
  Reconciliation difference is the difference in the balance between the Source and the Target.
- **Threshold**

A tolerance level you must set in terms of either the maximum difference allowed in any single Product Processor and its corresponding GL or the maximum number of Product Processors having differences in the GL Reconciliation.

- **Positive Threshold**
  These values are used to identify the breach types categorized as Not Breached (NB). The Breach Type is identified at run time during the reconciliation process, and Audit Trail entries are posted with this information.
- **Negative Threshold**
  These values are used to identify the breach types categorized as: Negative Percentage Threshold (NPT), Positive Percentage Threshold (PPT), Negative Absolute Threshold (NAT), Positive Absolute Threshold (PAT), and Not Breached (NB). The Breach Type is identified at runtime during the reconciliation process, and Audit Trail entries are posted with this information.
- **Threshold Breached Type**
  The different types of threshold breaches are listed here.
  - PAT - Positive Absolute Threshold
  - NAT - Negative Absolute Threshold
  - PPT - Positive Percentage Threshold
  - NPT - Negative Percentage Threshold
  - G - Global
  - NB - Notbreached
- **General Ledger to Product Processor**
  General Ledger to Product Processor Reconciliation identifies the difference between GL system and Product Processor data. It nullifies the difference by posting the adjustment entries up to the amount of difference.
- **General Ledger to Product Management Ledger**
  In General Ledger to Management Ledger (GL to ML) reconciliation, the difference between two sources of the Ledger for the same Legal Entity and the Consolidation Type is identified. This difference is identified at the granularity of the GL code for the selected hierarchy, the mandatory dimensions, and the selected optional dimensions. Adjustments are not passed in General Ledger to Management Ledger reconciliation.
- **Consolidation Type**
  Two consolidation types are supported:
  - **Solo**
    When a legal entity is selected with consolidation type as Solo, all the exposures of that particular legal entity are selected for processing. Manual reconciliation definition can process solo legal entity data.
  - **Consolidated**
    When a parent legal entity is selected as Consolidated, all the exposures of that legal entity and exposure of each level (or levels) of descendant child legal entities (without intra-group exposures) are selected for processing. In intra-group exposures, the counterparty is a child descendant of any level. For an intra-group scenario (where the GL Structure has specific intra-group GL Code in addition to regular GL Codes), intra GL Codes are considered only from the GL side for processing. Non-Intra is a scenario where no GL Codes are present for reconciliation definition.
  - **Inherit to Child**
    This feature is used to find child legal entities under the hierarchy node of a Legal Entity that is selected at the definition level. If used when defining the GL Reconciliation rule, all child nodes will participate in the Reconciliation Process.

- **Manual Reconciliation Definition**
  In manual reconciliation definition, user input is sought on the GL side and PP side to determine the course of reconciliation. This is applicable to both GL level and map level reconciliation. In GL level reconciliation, unique GL codes are identified from the GL code mapping. At the map level, GL codes do not form a part of the reconciliation definition. A manual reconciliation definition can be used for a solo or consolidated legal entity. The reconciliation definition for a consolidated GL, having an intra-group GL structure, is computed from GL Data and not from PP Data. Therefore, any account present in the PP but unavailable in GL is not captured in the reconciliation definition.
- **GL Level Reconciliation**
  In GL level reconciliation, the difference between GL system and Product Processors Systems at each reconciliation dimension node level within a GL Code is identified. For manual reconciliation definition, unique GL codes are identified from the GL side. If it is at the solo level, exposures originating in the legal entity are selected. If it is at the consolidated level, exposures originating in the selected legal entity and its Child Entities (with or without intra- group exposures depending on GL Structure) are selected.

  The adjustment entry allocation depends on the reconciliation type selected. In GL level reconciliation, after a definition is executed, the differences that emerge as a part of the reconciliation definition (GL–PP level reconciliation) are reported in the Adjustment Entry Table. This table shows all the entries of an executed map that requires adjustment. The difference in amount can either be posted to Product Processors or an external table. For more information on the external table, see the Data Requirement section.
- **Map Level Reconciliation**
  In map level reconciliation, the difference between GL Data and PP Data at each reconciliation dimension node level across all PPs is identified. Unlike GL level reconciliation, map level reconciliation is computed at an aggregate level of the reconciliation definition; by ignoring the GL code and by considering reconciliation dimensions. Map level reconciliation is applied at the legal entity level - either solo or consolidated. If it is at the solo level, then exposures originating in a particular legal entity are selected. If it is at the consolidated level, then exposures originating in the selected legal entity and its child entities (excluding intra-group exposure depending on GL structure) are selected.

  The adjustment entry allocation depends on the reconciliation type selected. In map level reconciliation, after a definition has been executed the differences that emerge as a part of the reconciliation (General Ledger–Product Processor Level Reconciliation) are reported in the Adjustment Entry Table. This table shows all the entries of an executed map that requires adjustment. The difference in amount can either be posted to Product Processors or an external table. The adjustment allocation can be either automatic or manual.

9.1 Frequently Asked Questions

You can refer to the Frequently Asked Questions, which is developed with the interest to help you resolve some of the DFCS Installation and Configuration Issues. This intends to share the knowledge of problem resolution to a few of the Known Issues. This is not an official support document and just attempts to share the knowledge of problem resolution to a few of the Known Issues.

1. What happens when users try to log in during a maintenance period?
   When the instance is under maintenance, a “Maintenance Page” is displayed.

2. What happens for the users that are logged in?
   If users are already logged in, all further actions are blocked. On refresh, users are directed to the Maintenance Page.
3. Can APIs be invoked during maintenance period? No. The API requests are blocked.
   No. The API requests are blocked.
4. What happens to ongoing batches?
   Batches will continue, however, it is recommended to ensure all processes are completed before maintenance begins.