Oracle® Financial Services Retail Customer Analytics

User Guide

Release 8

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Preface

Intended Audience

Welcome to Release 8 of the *Oracle Financial Services Retail Customer Analytics User Guide.*

See Related Information Sources on page viii for more Oracle product information.

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Structure

Business data commonly represents information as of a point in time (for example, a balance as of a point in time) or as of a particular span of time (for example, income for the month of March). Time dimension makes it possible to report the balances by Year, Quarter or Month using the rollup functionality of cubes. Cubes makes it possible to rollup the monthly balances to a quarter and then to a year level. For example, the monthly data for January, February and March gets rolled up to Quarter 1 and the Quarter 1, 2, 3 and 4 data get rolled up to, say Year 2011. The rollup of a particular

balance depending on their nature could be a simple additive rollup wherein the child member balances are added up to arrive at the parent node balance (for example, Ending Balance) or non additive rollups wherein a node formula is used to specify how to rollup the child member balances (for example, 3 month rolling average).

5 Exchange Rate History Population

6 Account Summary Population

Account Summary tables are loaded from the staging product processor tables using the Table to Table (T2T) component of Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) framework.

7 Customer Summary Population

This chapter explains the process flow for populating Fact Common Customer Summary table.

8 Fact Data Population

9 Predictive Modeling

10 Model Creation and Execution

11 Overview of OFSRCA Reports

A Sandbox Population

B How to Define a Batch

Related Information Sources

Oracle Financial Services Channel Analytics (OFSCA) User Guide

Oracle Financial Services Institutional Performance Analytics (OFSIPA) User Guide

Oracle Financial Services Retail Performance Analytics (OFSRPA) User Guide

1

Introduction

Overview of Oracle Financial Services Retail Customer Analytics (OFSRCA)

Oracle Financial Services Retail Customer Analytics (OFSRCA) is a complete end-to-end web-based Business Intelligence solution for Customer Analytics.

It provides tools for data integration and includes customizable, pre-built dashboards and reports, a reporting data model, and user friendly functional subject areas for ad-hoc reporting.

It enables you to actively plan, manage, and track marketing investments with pre-built reports, dashboards, and underlying data structures.

The OFSRCA solution is built using:

- OFSAA Infrastructure 7.3.3.3 for ETL and Data Integration
- OBIEE 11.1.1.7.1 for Dashboard and Reports activities

This manual deals with essential Oracle Financial Services Analytical Applications (OFSAA) Infrastructure required for OFSRCA activities, process flow for the data transformation and cube building processes, and functional details about the dash boards and reports. In addition, it includes subject areas which could be used for ad-hoc reporting using OBIEE Answers tool.

2

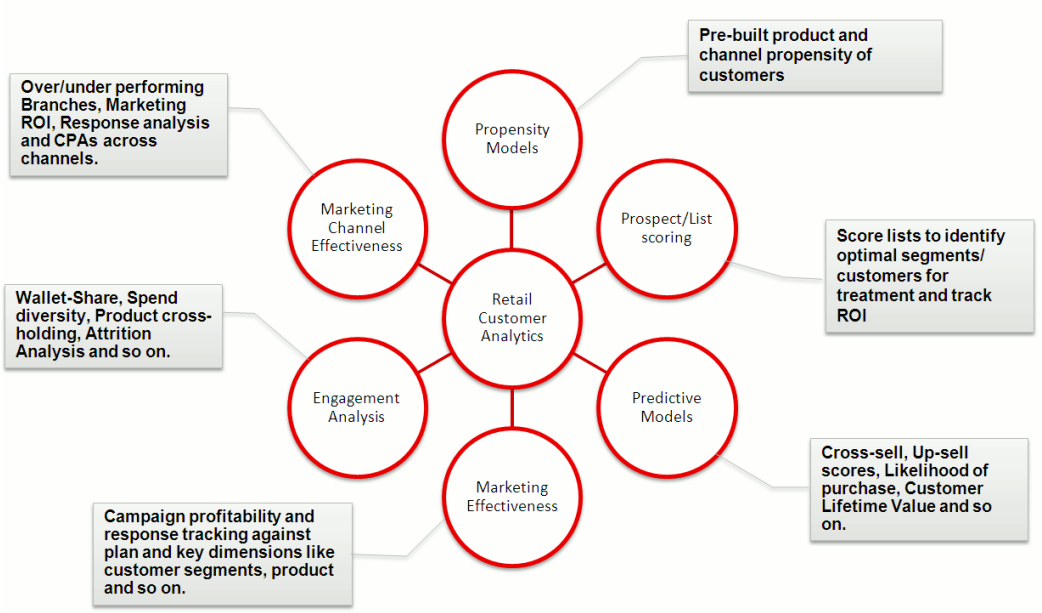
Overview of Process Flow

Introduction

Oracle Financial Services Retail Customer Analytics (OFSRCA) 6.0 utilizes OBIEE technology to present:

- Performance tracking of current campaigns across key measures like Sales, Asset and Liability balances, Fee-based product subscriptions and sustained performance over time, Credit score distribution of new accounts sourced, and early alerts on any negative skews.
- Predictive analysis to determine cross sell/up sell scores, product, and channel propensities leveraging transactional/behavioral data.
- Return On Investment (ROI) of campaigns over time (transaction performance needs to be measured for at least over 12 months for accurate Lifetime Value (LTV) predictions).
- Prospect/list scoring leveraging any internal/bureau information, cluster analysis, and projected Net Present Value (NPV).
- Customer Segmentation.
- Wallet Share (spend diversity, activation, and so on) and Attrition analysis.

Following explains the product objectives of OFSRCA 6.0:



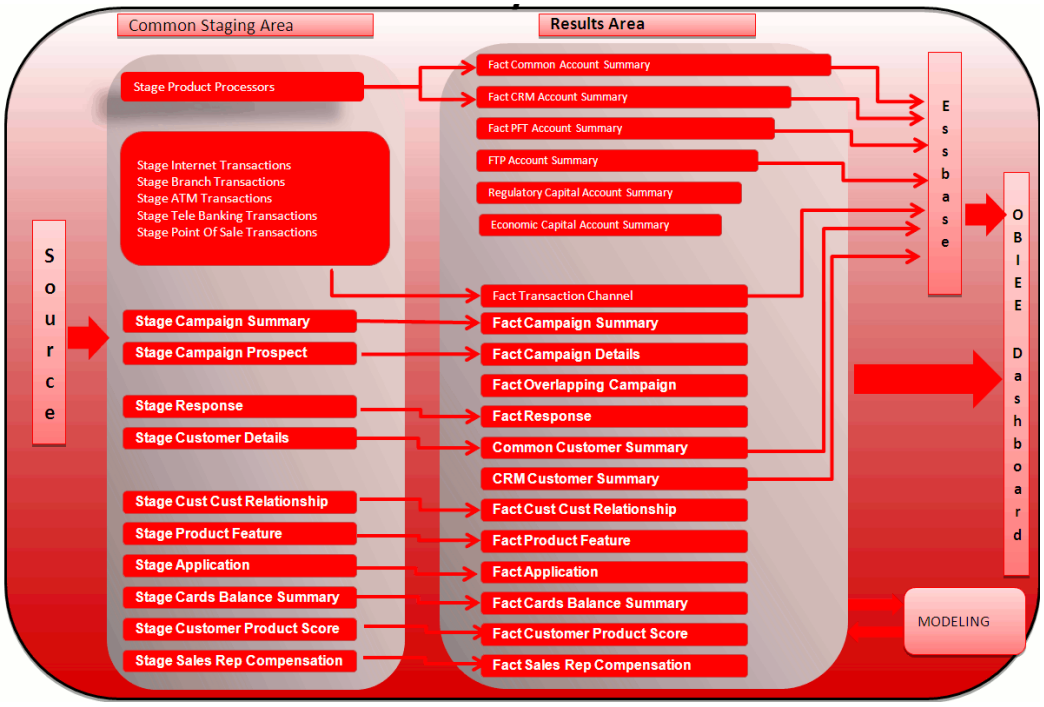
For details on OFSRCA reports and how OBIEE is being utilized, see Overview of OFSRCA Reports, page 11-1.

OFSRCA is designed for OBIEE reading data from relational database. The relational database comprises of various dimensions and facts in the BI data model.

OFSRCA 8.0 can be independently licensed and installed to work on top of the OFSAA 8.0 Infrastructure.

Data Flow

Retail Customer Analytics data model contains the staging tables from which data is loaded in to the dimensions and fact tables. Staging tables include the master staging tables, detail staging tables, staging product processor tables, etc. The user has to populate data into these staging tables.



Dimension Data Flow

Dimension data in OFSRCA application is loaded from staging master tables using the Slowly Changing Dimensions (SCD) process. Data from source systems can be loaded into staging through flat file or source system interfaces. SCD process tracks the changes in the dimensional attributes and loads data into dimension tables. Examples of dimension tables that follow the SCD process are Product, Customer Type, Customer, Campaign, and so on.

Some dimensions are static or maintained internally within the application and are not expected as a download from source system (for example, Reporting Line). These dimensions are maintained through the AMHM (Attribute Member Hierarchy Maintenance) component of OFSAAI or through other framework components like DEFI.

Following are the list of dimensions used in OFSRCA:

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Account Status Dimension	Stage Account Status Dimension	SCD
Campaign Source Type Dimension	Stage Campaign Source Type Dimension	SCD

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Campaign Status Dimension	Stage Campaign Status Dimension	SCD
Campaign Type	Stage Campaign Type	SCD
Card Type Dimension	Stage Card Type Dimension	SCD
Channel Transaction Dimension	Stage Channel Transaction Dimension	SCD
Contact Dimension	Stage Contact Dimension	SCD
Country Dimension	Stage Country Dimension	SCD
Credit Center Dimension	Stage Credit Center Dimension	SCD
Credit Officer Dimension	Stage Credit Officer Dimension	SCD
Application Reject Reasons Dimension	Stage Application Reject Reasons Dimension	SCD
Pool Identification Dimension	Stage Pool Identification Dimension	SCD
Prepayment Reason Dimension	Stage Prepayment Reason Dimension	SCD
Product Dimension	Stage Product Dimension	SCD
Channel Dimension	Stage Channel Dimension	SCD
Cards Dimension	Stage Cards Dimension	SCD
Social Media Dimension	Stage Social Media Dimension	SCD
Social Media Post Dimension	Stage Social Media Post Dimension	SCD
Location Dimension	Stage Location Dimension	SCD

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Request Type Dimension	Stage Request Type Dimension	SCD
Survey Dimension	Stage Survey Dimension	SCD
Service Rep Dimension	Stage Service Rep Dimension	SCD
Loan Product Category Dimension	Stage Loan Product Category Dimension	SCD
Product Feature Dimension	Stage Product Feature Dimension	SCD
Product Type Dimension	Stage Product Type Dimension	SCD
Prospect Dimension	Stage Prospect Dimension	SCD
Purchase Category Dimension	Stage Purchase Category Dimension	SCD
Rejection Reason Dimension	Stage Rejection Reason Dimension	SCD
Application Status Dimension	Stage Application Status Dimension	SCD
Retention Offer Type Dimension	Stage Retention Offer Type Dimension	SCD
Terminal Dimension	Stage Terminal Dimension	SCD
Terminal Type Dimension	Stage Terminal Type Dimension	SCD
Transaction Dimension	Stage Transaction Dimension	SCD
Treatment Dimension	Stage Treatment Dimension	SCD
Transaction Channel Dimension	Stage Transaction Channel Dimension	SCD

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Txn Failure Reason Dimension	Stage Txn Failure Reason Dimension	SCD
Transaction Status Dimension	Stage Transaction Status Dimension	SCD
Vendor Dimension	Stage Vendor Dimension	SCD
Application Type Dimension	Stage Application Type Dimension	SCD
Vintage Dimension	Stage Vintage Dimension	SCD
Wave Dimension	Stage Wave Dimension	SCD
Customer Type Dimension	Stage Customer Type Dimension	SCD
Decision Status Dimension	Stage Decision Status Dimension	SCD
Deviation Reasons Dimension	Stage Deviation Reasons Dimension	SCD
Education Dimension	Stage Education Dimension	SCD
Home Ownership Dimension	Stage Home Ownership Dimension	SCD
Household Dimension	Stage Household Dimension	SCD
Industry Dimension	Stage Industry Dimension	SCD
Legal Reporting	Stage Legal Reporting	SCD
Attrition Dimension	Stage Attrition Dimension	SCD
LoB Dimension	Stage LoB Dimension	SCD
Management Dimension	Stage Management Dimension	SCD
Market Cell	Stage Market Cell	SCD

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Merchant Dimension	Stage Merchant Dimension	SCD
Merchant Category Dimension	Stage Merchant Category Dimension	SCD
Migration Reasons Dimension	Stage Migration Reasons Dimension	SCD
Marketing Program Dimension	Stage Marketing Program Dimension	SCD
Offer Dimension	Stage Offer Dimension	SCD
Organization Structure Dimension	Stage Organization Structure Dimension	SCD
Authorization Decision Reasons Dimension	Stage Authorization Decision Reasons Dimension	SCD
Geography Dimension	Stage Geography Dimension	SCD
Response Type Dimension	Stage Response Type Dimension	SCD
Balance Category Dimension	Stage Balance Category Dimension	SCD
Campaign Dimension	Stage Campaign Dimension	SCD
Campaign Channel Dimension	Stage Campaign Channel Dimension	SCD
Account Dimension	Stage LC Contracts	SCD
Account Dimension	Stage Commitment Contracts	SCD
Party Dimension	Stage Party	SCD
Account Dimension	Stage Stage OD accounts	SCD
Account Dimension	Stage Stage TD contracts	SCD

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
Account Dimension	Stage Stage Trusts	SCD
Account Dimension	Stage Stage Loan Contracts	SCD
Account Dimension	Stage Stage Mutual Funds	SCD
Account Dimension	Stage Bills Contracts	SCD
Account Dimension	Stage CASA Accounts	SCD
Account Dimension	Stage Guarantees	SCD
Account Dimension	Stage Stage leases contracts	SCD
Account Dimension	Stage Stage mm contracts	SCD
Account Dimension	Stage Annuity Contracts	SCD
Account Dimension	Stage Borrowings	SCD
Account Dimension	Stage Card Accounts	SCD
Account Dimension	Stage Investments	SCD

Some of the stage data can also come from master data management interfaces. In such cases, data from interface is loaded into staging interface tables and SCD is run on the interface tables. Mapping of dimensional attributes to staging can be obtained by querying SYS_STG_JOIN_MASTER and SYS_TBL_MASTER tables in the atomic schema.

Fact Data Flow

Most of the Fact tables are mapped to staging counterparts through Table to Table (T2T) mappings. Data from source systems can be loaded into staging through flat file or source system interfaces. T2T process then loads data to fact tables. Examples include Fact Common Account Summary, Fact CRM Account Summary, and so on.

Some of the Fact tables are loaded with processed fact information from other fact tables. Examples include Fact CRM Customer Summary, and so on.

Fact Entity Name	Source	Source Entities	Method of populating measures
Fact Common Account Summary	Stage	Stage Annuity Contracts	T2T
		Stage Bill Contracts	
		Stage Borrowings	
		Stage Cards	
		Stage CASA Accounts	
		Stage Guarantees	
		Stage Investments	
		Stage LC Contracts	
		Stage Leases Contracts	
		Stage Loan Contracts	
		Stage Money Market Contracts	
		Stage Over Draft Accounts	
		Stage Term Deposit Contracts	
		Stage Trusts	
Fact CRM Account Summary	Stage	Stage Commitment Contracts	T2T
		Stage Mutual Funds	

Fact Entity Name	Source	Source Entities	Method of populating measures
		Stage Annuity Contracts	
		Stage Bill Contracts,	
		Stage Borrowings	
		Stage Cards	
		Stage CASA Accounts	
		Stage Guarantees	
		Stage Investments	
		Stage LC Contracts	
		Stage Leases Contracts	
		Stage Loan Contracts	
		Stage Money Market Contracts	
		Stage Over Draft Accounts	

Fact Entity Name	Source	Source Entities	Method of populating measures
Fact PFT Account Summary	Instrument	Annuity Contracts Borrowings Checking and Savings Account Credit Cards Credit Lines Guarantees Investments and Leases Loan Contracts Mortgages Term Deposits Trusts	T2T
Fact FTP Account Summary	Instrument	Annuity Contracts Borrowings Checking and Savings Account Credit Cards Credit Lines Guarantees Investments Leases Loan Contracts Money Market Contracts Mortgages Term Deposits Trusts	T2T

Fact Entity Name	Source	Source Entities	Method of populating measures
Fact Common Customer Summary	Stage	Stage Commitment Contracts	T2T
		Stage Mutual Funds	
		Stage Customer Details	
		Stage Party Rating Details	
		Stage Party Financials	
Fact CRM Customer Summary	Stage and Fact	Stage Customer Master	T2T/DT
		Stage Customer Details	
		Fact Common Account Summary	
		Fact Transaction Channel	
Fact Application	Stage	Stage Applications	T2T
Fact Account Feature Map	Stage	Stage Account Feature Map	T2T
Fact Customer to Customer Relationship	Stage	Stage Customer to Customer Relationships	T2T
Fact Campaign Details	Stage	Stage Campaign Prospect	T2T
Fact Campaign Execution Summary	Stage	Fact Campaign Details	T2T

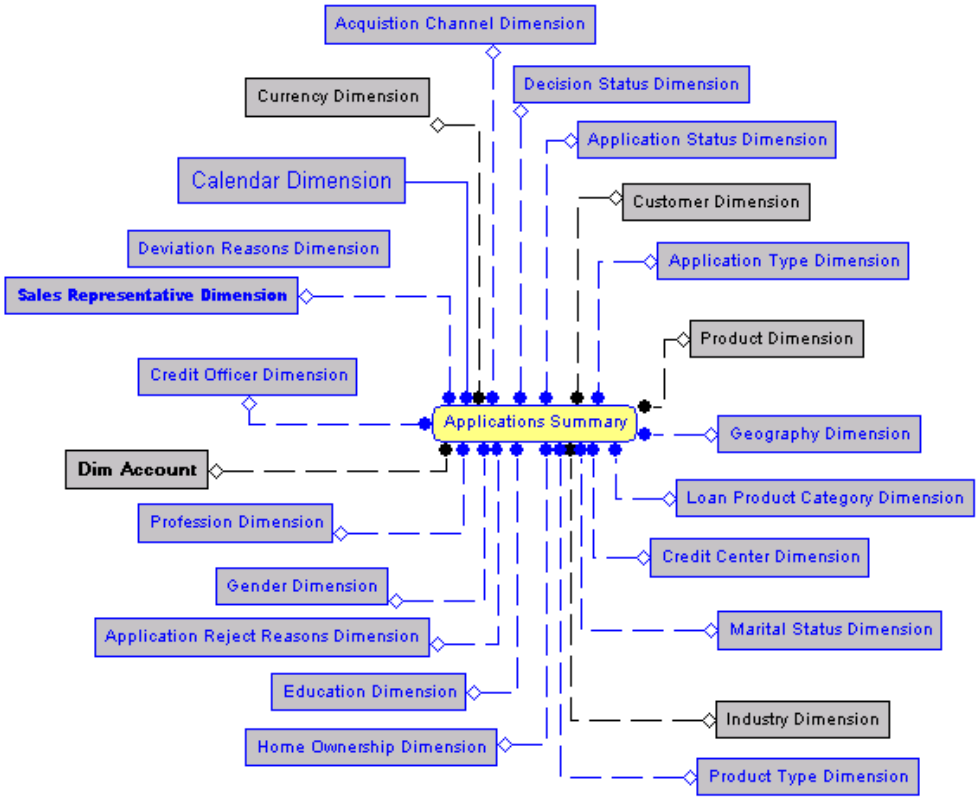
Fact Entity Name	Source	Source Entities	Method of populating measures
Campaign Summary Facts	Stage	Stage Campaign Summary	T2T
Fact Overlapping Campaign	Stage	Fact Campaign Detailst	T2T
Response Facts	Stage	Stage Responses	T2T
Fact Cross Sell Score	Fact	Fact Common Account Summary	T2T
Fact Account Profitability	Fact	Fact Common Account Summary, Fact FTP Account Summary, Fact PFT Account Summary	DT
Exchange Rate History	Stage	Stage Exchange Rates	T2T

BI Data Model

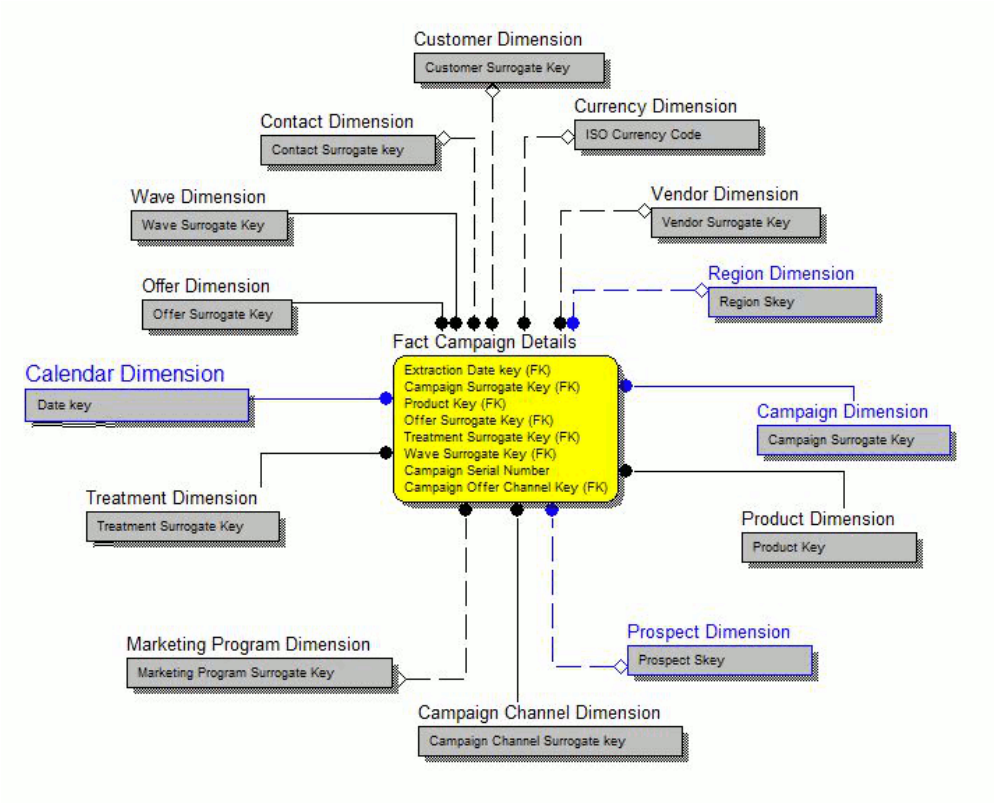
The BI data model is a star schema for the fact tables, FCT_COMMON_CUSTOMER_SUMMARY, FCT_CRM_CUSTOMER_SUMMARY, and FCT_<Application>_ACCOUNT_SUMMARY.

Following are the subject areas in ERwin data model:

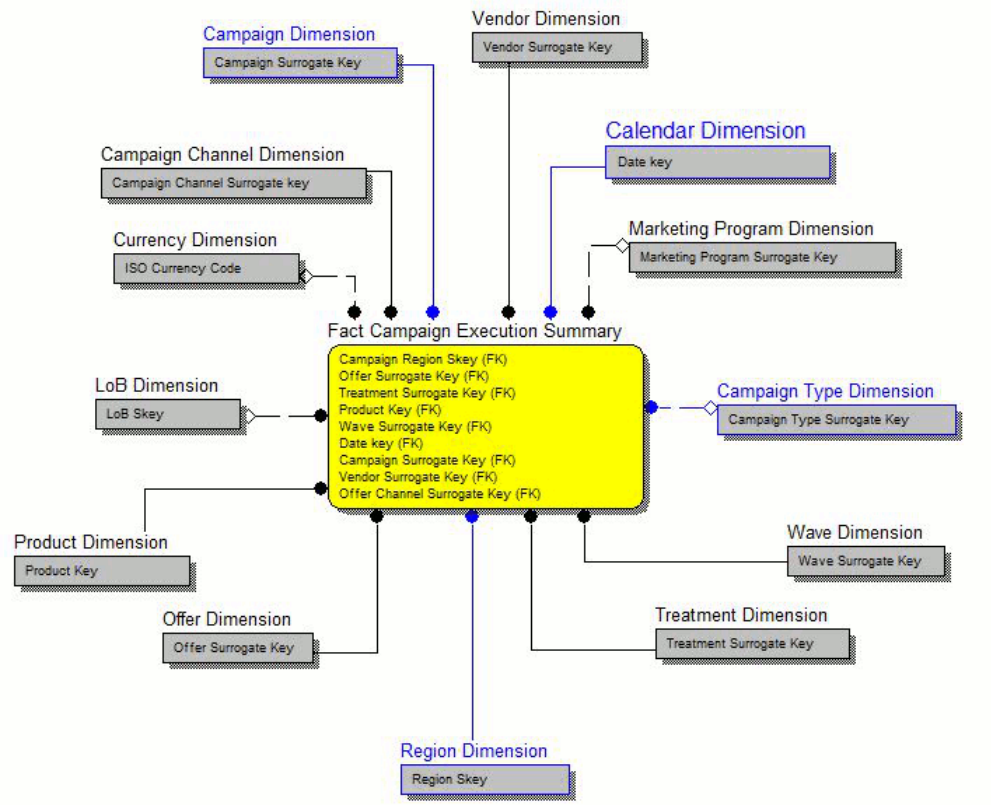
- Application



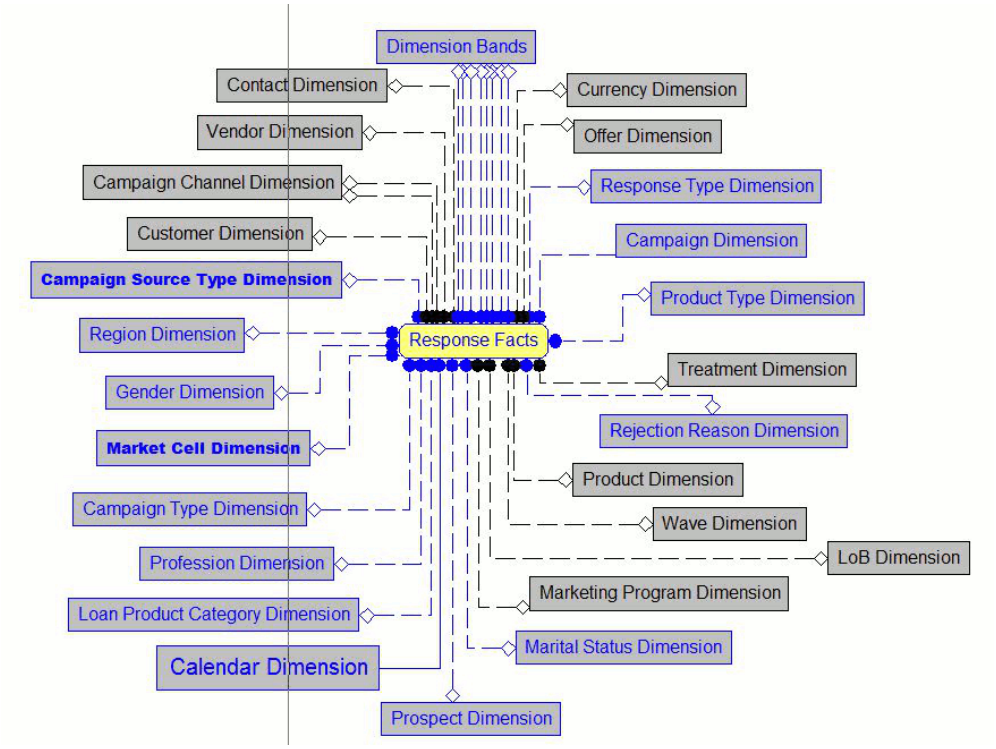
- Campaign Details



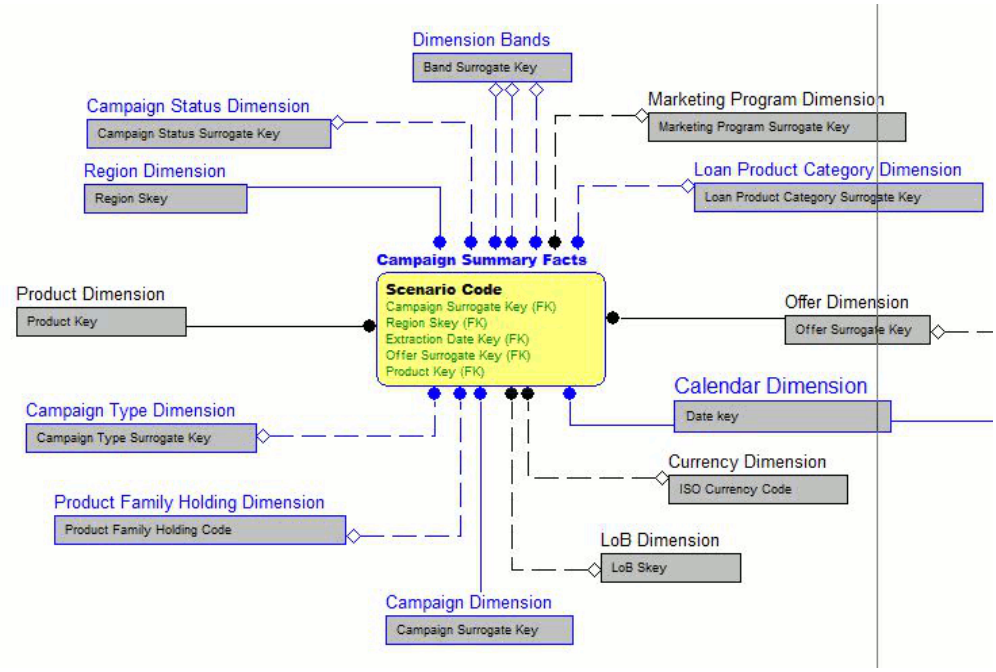
- Campaign Execution Summary



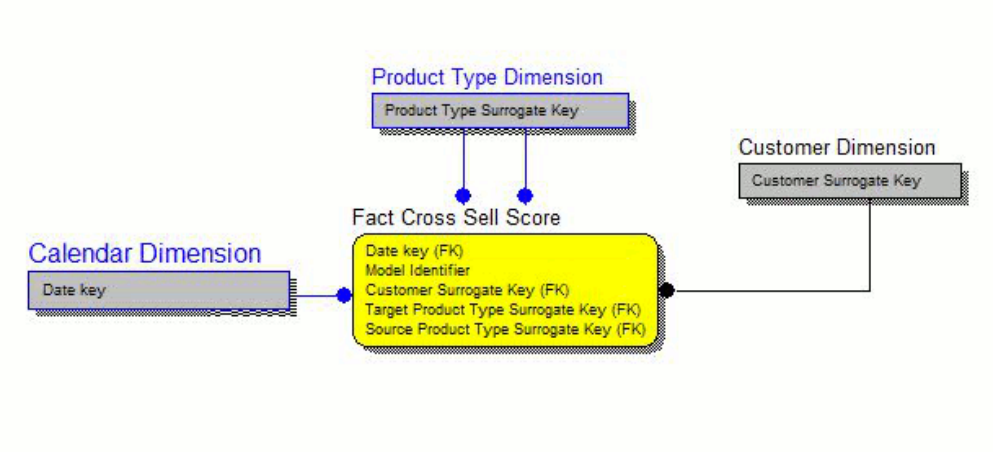
- Campaign Response



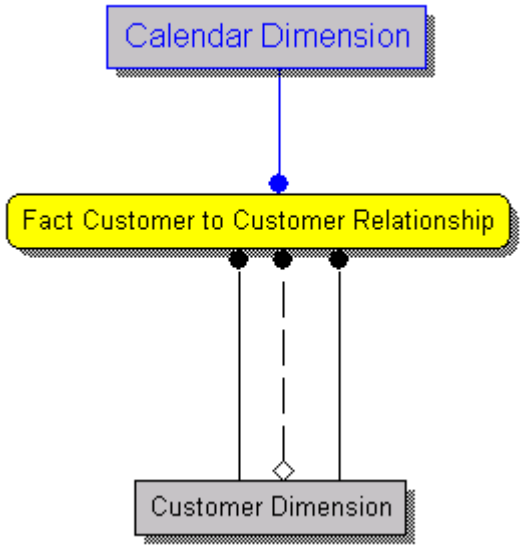
- Campaign Summary



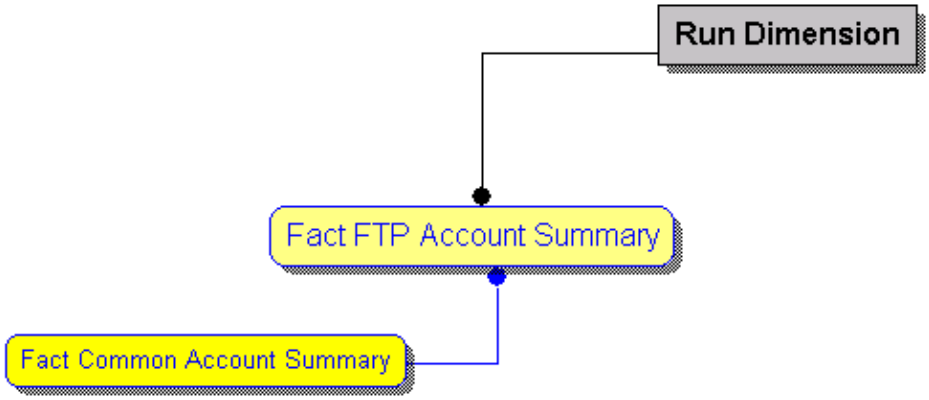
- Cross Sell Score



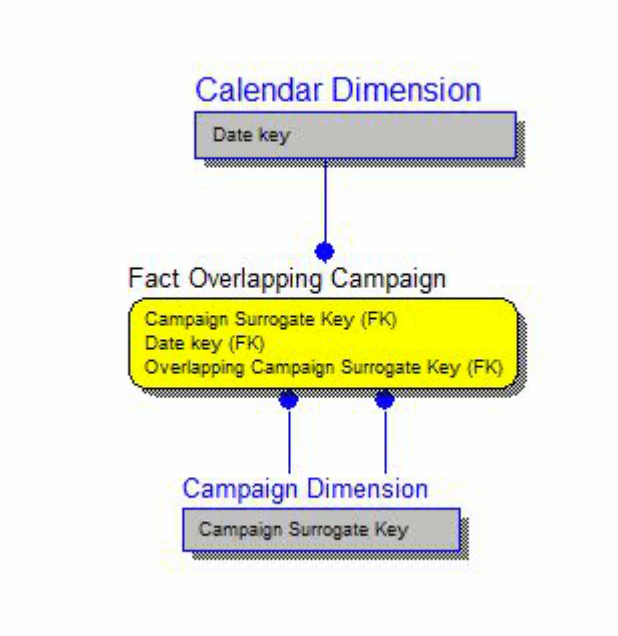
- Customer to Customer Relationship



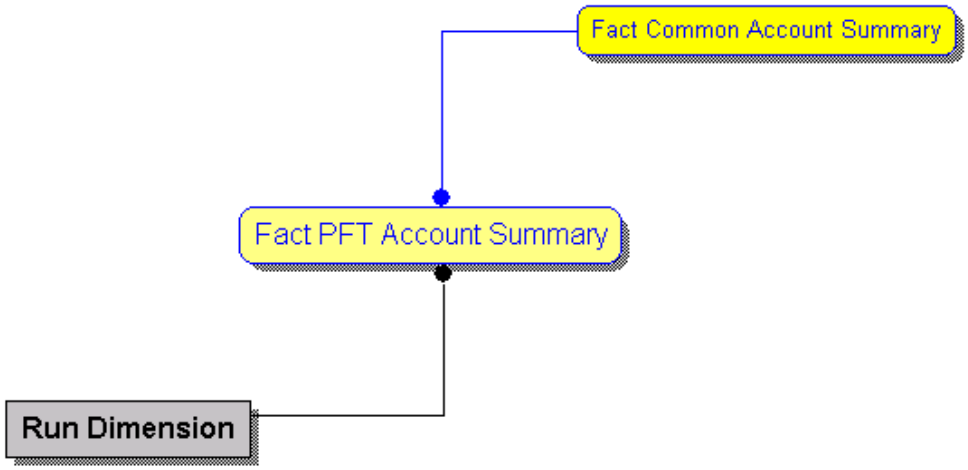
- FTP Account Summary



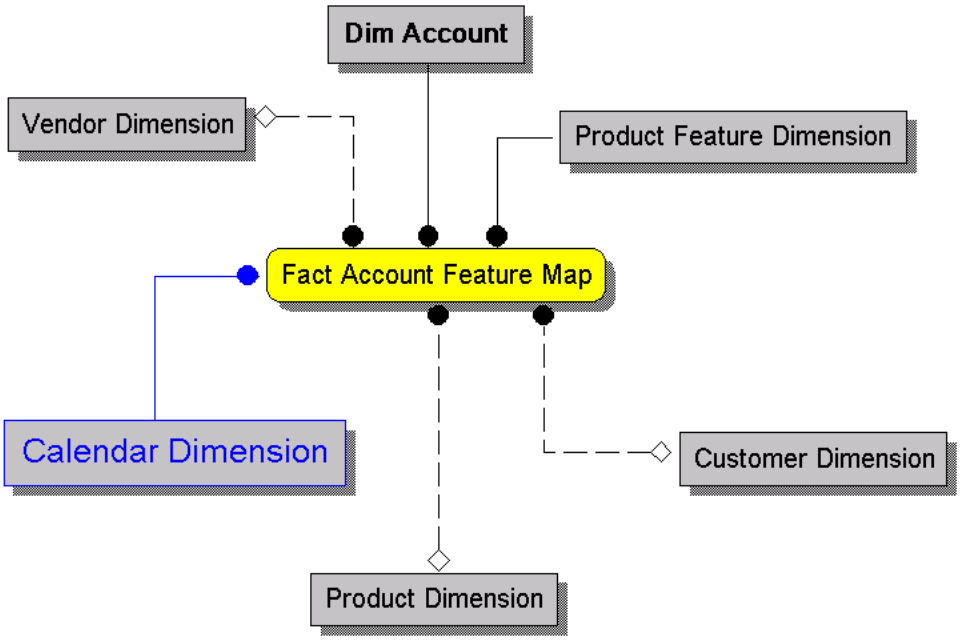
- Overlapping Campaign



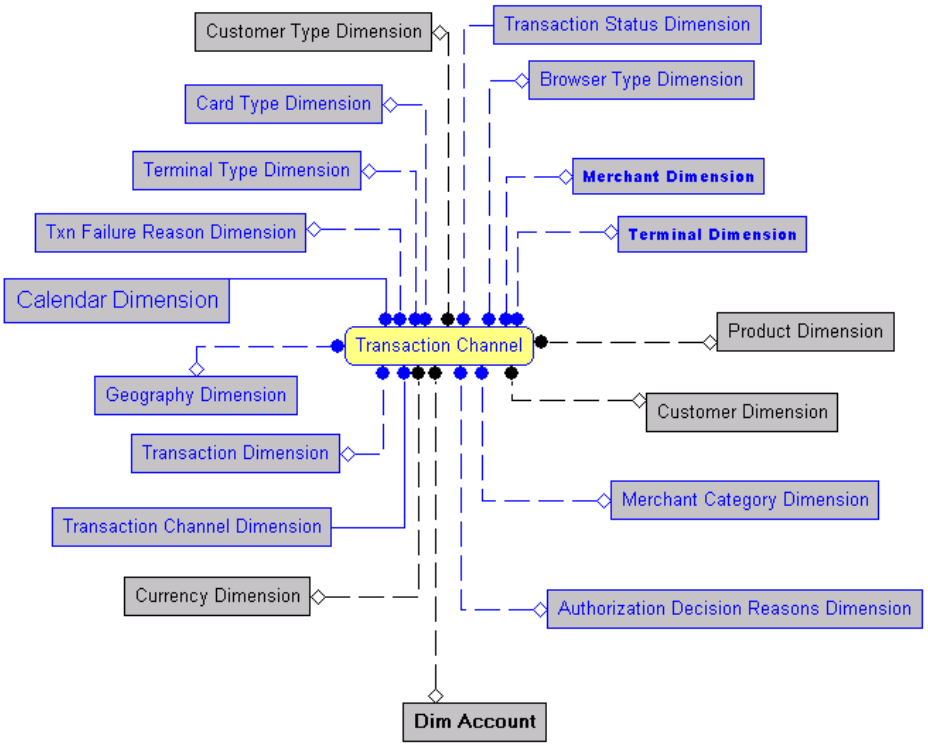
- PFT Account Summary



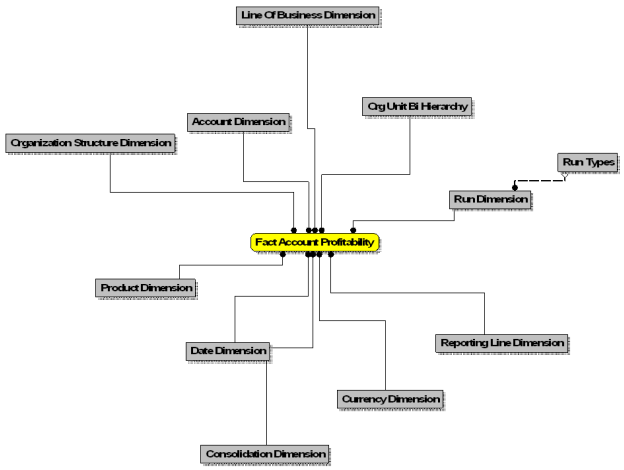
- Product Feature



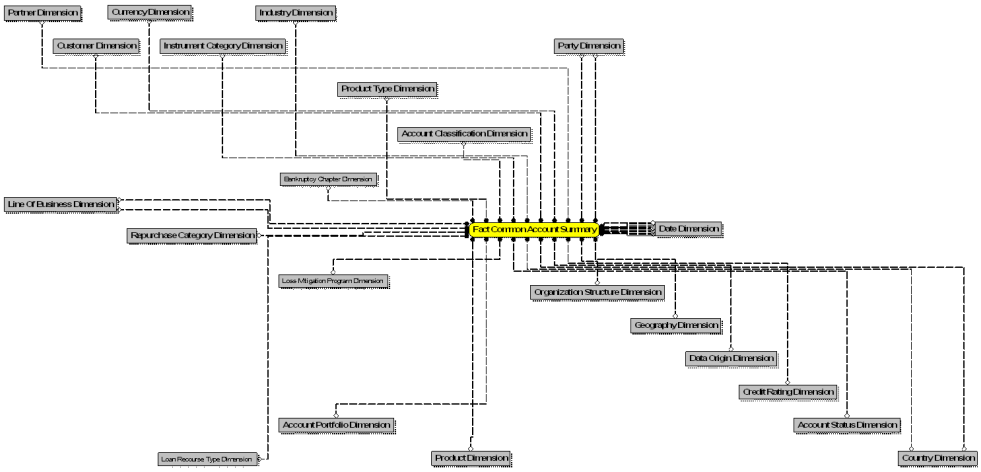
- Transaction Channel



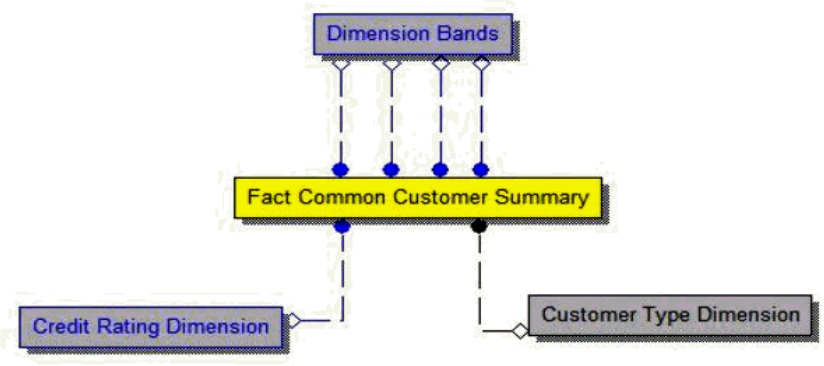
- Fact Account Profitability



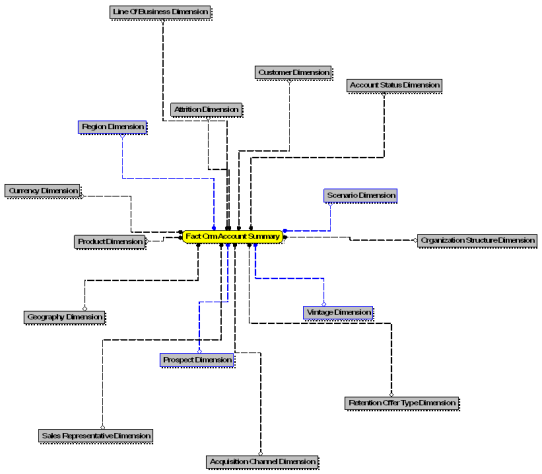
- Fact Common Account Summary



- Fact Common Customer Summary



- Fact CRM Account Summary


Line Of Business Dimension
Customer Dimension
Account Status Dimension
Attrition Dimension
Region Dimension
Currency Dimension
Scenario Dimension
Product Dimension
Fact Crm Account Summary
Organization Structure Dimension
Geography Dimension
Vintage Dimension
Prospect Dimension
Retention Offer Type Dimension
Sales Representative Dimension
Acquisition Channel Dimension

3

Dimension Loading Process

Dimension Tables Population

OFSRCA solution use the SCD component to handle dimensional data changes.

Overview of SCD Process

SCDs are dimensions that have data that changes slowly, rather than changing on a time-based, regular schedule.

For more information on SCDs, see

- *Oracle Data Integrator Best Practices for a Data Warehouse* at

  http://www.oracle.com/technetwork/middleware/data-integrator/overview/odi-best practices-datawarehouse-whi-129686.pdf

- *Oracle® Warehouse Builder Data Modeling, ETL, and Data Quality Guide* at

  http://docs.oracle.com/cd/E14072_01/owb.112/e10935.pdf

Additional online sources include:

- http://en.wikipedia.org/wiki/Slowly_changing_dimension
- http://www.oracle.com/webfolder/technetwork/tutorials/obe/db/10g/r2/owb/owb10 gr2_gs/owb/lesson3/slowlychangingdimensions.htm
- http://www.oraclebidwh.com/2008/11/slowly-changing-dimension-scd/
- http://www.informationweek.com/news/software/bi/showArticle.jhtml?articleID=2 04800027&pgno=1
- http://www.informationweek.com/news/software/bi/showArticle.jhtml?articleID=5 9301280

An excellent published resource that covers SCD in detail is *"The Data Warehouse Toolkit: The Complete Guide to Dimensional Modeling"* by Ralph Kimball and Margy Ross.

The SCD component of the platform is delivered via a C++ executable. The types of SCD handled by the OFSAAI SCD component for OFSPA solution are Type 1 and Type 2.

Prerequisites

1. The SCD executable should be present under <installation home>ficdb/bin. The file name is **scd.**
2. The user executing the SCD component should have execute rights on the file mentioned as prerequisite in point 2.
3. The setup tables accessed by SCD component are SYS_TBL_MASTER and SYS_STG_JOIN_MASTER.

   SYS_TBL_MASTER stores the information like which is the source stage table and the target dimension tables. The source sometimes can be the database views which could be simple or a complex view.

   SYS_STG_JOIN_MASTER stores the information like which source column is mapped to which column of a target dimension table. It makes use of data base sequence to populate into surrogate key columns of dimension tables.

Tables Used by the SCD Component

The database tables used by the SCD component are:

- SYS_TBL_MASTER

  The solution installer will populate one row per dimension for the seeded dimensions in this table.

Column Name	Data Type	Column Description
MAP_REF_NUM	NUMBER(3) NOT NULL	The Mapping Reference Number for this unique mapping of a Source to a Dimension Table.
TBL_NM	VARCHAR2(30) NOT NULL	Dimension Table Name

Column Name	Data Type	Column Description
STG_TBL_NM	VARCHAR2(30) NOT NULL	Staging Table Name
SRC_PRTY	NUMBER(2) NULL	Priority of the Source when multiple sources are mapped to the same target.
SRC_PROC_SEQ	NUMBER(2) NOT NULL	The sequence in which the various sources for the DIMENSION will be taken up for processing.
SRC_TYP	VARCHAR2(30) NULL	The type of the Source for a Dimension, that is, Transaction Or Master Source.
DT_OFFSET	NUMBER(2) NULL	The offset for calculating the Start Date based on the Functional Requirements Document (FRD).
SRC_KEY	NUMBER(3) NULL	

Sample Data: This is the row put in by the solution installer for the Line of Business dimension.

MAP_REF_NUM	6
TBL_NM	DIM_LOB
STG_TBL_NM	STG_LOB_MASTER
SRC_PRTY	
SRC_PROC_SEQ	23
SRC_TYP	MASTER

DT_OFFSET	0
SRC_KEY	

Note: *For any new dimension added, a row will have to be inserted to this table manually.*

- SYS_STG_JOIN_MASTER

  The solution installer will populate this table for the seeded dimensions.

Column Name	Data Type	Column Description
MAP_REF_NUM	NUMBER(3) NOT NULL	The Mapping Reference Number for this unique mapping of a Source to a Dimension Table.
COL_NM	VARCHAR2(30) NOT NULL	Name of the column in the Dimension Table.
COL_TYP	VARCHAR2(30) NOT NULL	Type of column. The possible values are given in the following section.
STG_COL_NM	VARCHAR2(60) NULL	Name of the column in the Staging Table.
SCD_TYP_ID	NUMBER(3) NULL	SCD type for the column.
PRTY_LOOKUP_REQD_FLG	CHAR(1) NULL	Column to determine whether Lookup is required for Priority of Source against the Source Key Column or not.

Column Name	Data Type	Column Description
COL_DATATYPE	VARCHAR2(15) NULL	The list of possible values are VARCHAR, DATE, NUMBER based on the underlying column datatype.
COL_FORMAT	VARCHAR2(15) NULL	

The possible values for column type (the COL_TYPE column) in SYS_STG_JOIN_MASTER are:

1. PK – Primary Dimension Value (may be multiple for a given "Mapping Reference Number")
2. SK – Surrogate Key
3. DA – Dimensional Attribute (may be multiple for a given "Mapping Reference Number")
4. SD – Start Date
5. ED – End Date
6. LRI – Latest Record Indicator (Current Flag)
7. CSK – Current Surrogate Key
8. PSK – Previous Surrogate Key
9. SS – Source Key
10. LUD – Last Updated Date / Time
11. LUB – Last Updated By

Sample Data: This is the row put in by the solution installer for the Line of Business dimension.

MAP_REF_NUM	6

COL_NM	V_LOB_CODE
COL_TYP	PK
STG_COL_NM	V_LOB_CODE
SCD_TYP_ID	
PRTY_LOOKUP_REQD_FLG	N
COL_DATATYPE	VARCHAR
COL_FORMAT	61

> **Note:** *For any new dimension added, the column details will have to be inserted to this table manually.*

- DIM_<dimensionname>_V – The database view which SCD uses as the source.

  Example
  Dim_Bands_V

  These views come as part of install for the dimensions seeded with the application.

  > **Note:** *For any new dimension added, a view will have to be created similar to DIM_BANDS_V.*

- DIM_<dimensionname> – Output table to which SCD writes the dimension data.

A sequence should be added for every user-defined dimension.

Example

```
create sequence SEQ_DIM_<DIM>  minvalue 1
maxvalue 999999999999999999999999999
increment by 1
```

Executing the SCD Component

To execute the SCD component from OFSAAI ICC framework create a batch according to the following steps:

> **Note:** For a more comprehensive coverage of configuration and execution of a batch, see *Oracle Financial Services Analytical Applications*

Infrastructure User Guide.

- From the **Home** menu, select **Operations**, then select **Batch Maintenance**.
- Click **New Batch** ('+' symbol in Batch Name container) and enter the Batch Name and Description.
- Click **Save.**
- Select the Batch you created in the earlier step by clicking the check box in the Batch Name container.
- Click **New Task** ('+' symbol in Task Details container).
- Enter the Task ID and Description.
- Select **Run Executable**, from the Component ID list.
- Click **Parameters.** Select the following from the Dynamic Parameters List and then click **Save**:
  - Datastore Type - Select the appropriate datastore from the list
  - Datastore Name - Select the appropriate name from the list
  - IP address - Select the IP address from the list
  - Executable - scd,<map ref num>

    Example
    scd, 61 (Refer the following sections for details)
  - Wait: When the file is being executed you have the choice to either wait till the execution is complete or proceed with the next task. Click the list box of the field provided for Wait in the Value field to select 'Yes' or 'No'. Clicking **Yes** confirms that you wish to wait for the execution to be complete. Clicking **No** indicates that you wish to proceed.
  - Batch Parameter: Clicking **Yes** would mean that the batch parameters are also passed to the executable being started; else the batch parameters will not be passed to the executable.

    Important: Always select **Y** in Batch Parameter.

For the Parameter Executable earlier mentioned, the map ref num values are

- -1 (if you want to process all the dimensions). The *Executable* parameter

mentioned earlier would be

scd,-1

- If you want to process for a single dimension, query the database table SYS_TBL_MASTER and give the number in the map_ref_num column for the dimension you want to process. These are the ones which come seeded with the install.

- Execute the batch from Batch Execution by choosing the batch created following the steps mentioned in the preceding sections for a date.

  Note: Seeded batch <Infodom>_FTP_PFT_Reqd_Dim is provided FTP or PFT application is installed which can be executed for populating FTP/PFT required dimensions.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen. You can access this from the Left Hand Side (LHS) menu as follows:

From the **Home** menu, select **Operations**, then select **Batch Monitor.**

Note: For a more comprehensive coverage, see *Oracle Financial Services Analytical Applications Infrastructure User Guide.*

The status messages in Batch Monitor are :

N - Not Started

O - On Going

F - Failure

S – Success

The ICC execution log can be accessed on the application server in the following directory: $FIC_DB_HOME/log/ficgen.

The file name will have the batch execution id.

Sample

/dbfiles/home/oracle/OFSAAI/ficdb/log/ficgen

The detailed SCD component log can be accessed on the application server in the directory $FIC_HOME, go one folder up from there and then accessing the following path /ftpshare/<infodom name>/logs

The file name will have the batch execution id.

Sample

/dbfiles/home/oracle/ftpshare/OFSAADEMO/logs

Check the **.profile** file in the installation home if you are not able to find the paths mentioned earlier.

4

Time Dimension Population

Business data commonly represents information as of a point in time (for example, a balance as of a point in time) or as of a particular span of time (for example, income for the month of March). Time dimension makes it possible to report the balances by Year, Quarter or Month using the rollup functionality of cubes. Cubes makes it possible to rollup the monthly balances to a quarter and then to a year level. For example, the monthly data for January, February and March gets rolled up to Quarter 1 and the Quarter 1, 2, 3 and 4 data get rolled up to, say Year 2011. The rollup of a particular balance depending on their nature could be a simple additive rollup wherein the child member balances are added up to arrive at the parent node balance (for example, Ending Balance) or non additive rollups wherein a node formula is used to specify how to rollup the child member balances (for example, 3 month rolling average).

This chapter covers the following topics:

- Overview of Time Dimension Population
- Prerequisites
- Tables Used by the Time Dimension Population Transformation
- Executing the Time Dimension Population Transformation
- Checking the Execution Status

Overview of Time Dimension Population

Time dimension population transformation is used to populate the DIM_DATES table with values between two dates specified by the user as a batch parameter.

The database components, used by the transformations are:

1. Database function - FN_DIM_DATES
2. Database procedure - PROC_DIM_DATES_POPULATION, which is called by the function FN_DIM_DATES.

Prerequisites

1. All the post install steps mentioned in the *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration guide* and the solution installation manual of *Oracle Financial Services Retail Customer Analytics* have to be completed successfully.

2. Application User must be mapped to a role that has seeded batch execution function (BATPRO).

3. Before executing a batch check if the following services are running on the application server (For more information on how to check if the services are up and on and how to start the services if you find them not running, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*).

    1. Iccserver

    2. Router

    3. AM Server

    4. Messageserver

4. Batches will have to be created for executing the function. For more details see, Executing the Time dimension population transformation, page 4-2.

Tables Used by the Time Dimension Population Transformation

- DIM_DATES - This table stores the date details to be used for building the cubes.

For more details on viewing the structure of earlier tables, refer to*Oracle Financial Services Analytical Applications Data Model Data Dictionary* or the *Erwin Data Model.*

Executing the Time Dimension Population Transformation

To execute the function from OFSAAI Information Command Center (ICC) frame work, create a batch by performing the following steps:

> **Note:** For a more comprehensive coverage of configuration and execution of a batch, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

1. From the **Home** menu, select **Operations**, then select **Batch Maintenance**.

2. Click **New Batch** ('+' symbol in Batch Name container) and enter the Batch Name and description.

3. Click **Save**.

4. Select the Batch you have created in the earlier step by clicking on the checkbox in the Batch Name container.

5. Click **New Task** ('+' symbol in Task Details container).

6. Enter the Task ID and Description.

7. Select **Transform Data**, from the components list.

8. Select the following from the Dynamic Parameters List and then click **Save**:

   - Datastore Type - Select appropriate datastore from the list
   - Datastore Name - Select appropriate name from the list
   - IP address - Select the IP address from the list
   - Rule Name - Select **Dim_Dates_Population** from the list of all available transformations. (This is a seeded Data Transformation which is installed as part of the OFSRCA solution installer. If you don't see this in the list, contact Oracle support)
   - Parameter List – Start Date, End Date (Refer the following for details on Parameter list)

     Explanation for the parameter list is:

     - Start Date – This is the date starting from which the Transformation will populate Dim_Dates table. Date should be specified in the format 'YYYYMMDD'.
     - End Date - This is the date up to which the Transformation will populate Dim_Dates table. Date should be specified in the format 'YYYYMMDD'.

       Sample parameter for this task is '20081131','20091231'.

9. You can execute the batch in two ways:

   1. Execute the batch from Batch Execution by choosing the batch created following the steps mentioned in the preceding sections for a date.

      Note: A seeded batch <INFODOM>_aCRM_CommonTasks - Task2 is provided so that the user can just modify the

parameters and execute the batch.

2. The function can also be executed directly on the database through SQLPLUS. Details are:

   Function Name : FN_DIM_DATES

   Parameters : p_batch_run_id, p_as_of_date, P_ST_DT, P_ED_DT

   Sample parameter values : 'Batch1','20091231', '20081131','20091231'

Checking the Execution Status

The status of execution can be monitored using the batch monitor screen.

> **Note:** For a more comprehensive coverage of configuration & execution of a batch, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

The status messages in batch monitor are :

N - Not Started

O - On Going

F - Failure

S – Success

The Event Log window in Batch Monitor provides logs for execution with the top row being the most recent. If there is any error during execution, it will get listed here. Even if you see Successful as the status in Batch Monitor it is advisable to go through the Event Log and re-check if there are any errors. The execution log can be accessed on the application server by going to the following directory $FIC_DB_HOME/log/date. The file name will have the batch execution id.

The database level operations log can be accessed by querying the FSI_MESSAGE_LOG table. The batch run id column can be filtered for identifying the relevant log.

Check the **.profile** file in the installation home if you are not able to find the paths mentioned earlier.

5

Exchange Rate History Population

Introduction

Exchange Rate History entity stores the exchange rates between the currencies for an effective date from one or multiple sources.

Exchange Rate History population should be executed before any fact table is populated to ensure exchange rates between currencies are available prior. Exchange Rate History entity is loaded by means of Table to Table Transformation process.

Following is the seeded Table-to-Table definition that loads data into Exchange Rate History:

T2T Definition Name	Source Table(s)	Destination Table
T2T_EXCHANGE_RATE_HIST	STG_EXCHANGE_RATE_HIST	FSI_EXCHANGE_RATE_HIST

Exchange Rate History Population

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<INFODOM>_aCRM_CommonTasks - Task4** has to be executed for the required date.

Alternatively, following steps will help to create a new batch task for Loading Historical Exchange Rates:

1. From the **Home** menu, select **Operations**, then select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the Batch Name and

Description.

3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the Batch, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the components list.
7. Select the following from the Dynamic Parameters List and then click **Save**.
   - **Datastore Type** - Select appropriate datastore from the list.
   - **Datastore Name** - Select appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select Table to Table from the list.
   - **Source Name** - Select <**T2T Source Name**> from the list.
   - **File Name** - Select the table to table transformation **T2T_EXCHANGE_RATE_HIST**.

     Data file name will be blank for any Table to Table Load mode.
8. Repeat steps 4 to 8 for adding the remaining T2Ts within the same batch definition.
9. Execute the batch created in the preceding steps.

   For more information, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.
10. Check T2T component logs and batch messages to check the status of load.

    T2T component can fail because of following cases:
    - Unique constraint error – Target table may already contain the primary keys that are part of the staging tables.
    - NOT NULL constraint error – do not have values for NOT NULL columns in the target table.

Execution of Currency Exchange Rates Population T2T

The batch <INFODOM>_POP_EXCHANGE_RATES needs to be executed to populate fsi_exchange_rates as the entries in setup_master are seeded during installation.

Note: FSI_EXCHANGE_RATES table has to be loaded prior loading any of the other Account Summary tables.

- Metadata Browser
- Common Account Summary

Currency Execution Rates - Batch Execution

A seeded batch, <Infodom>_POP_EXCHANGE_RATES has to be executed for the required MIS Date.

Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the Batch Name and Description.
3. Click **Save**.
4. Click the check box in the Batch Name container to select the Batch, you created in the earlier step.
5. Enter the Task ID and Description.
6. Select Load Data from the Components list.
7. Select the following from the Dynamic Parameters List:
   - Datastore Type - Select the appropriate datastore from the list.
   - Datastore Name - Select the appropriate name from the list.
   - IP address - Select the IP address from the list.
   - Load Mode - Select Table to Table from the list.
   - Source Name - Select the <T2T Source Name> from the list.
   - File Name - Select the T2T name for the source stage channel table you want to process.
8. Click **Save**.

   Data file name will be blank for any Table to Table Load mode. Default value refers

to currency calculation. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

9. Execute the batch created in the preceding steps.

Checking the Execution Status

The status of execution can be monitored using the batch monitor screen.

The status messages in batch monitor are:

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the **$FIC_DB_HOME/log/t2t** directory: The file name will have the batch execution id.

<INFODOM>_FN_RATEVALIDATION is invoked for exchange rate history. Once data is loaded into fsi_exchange_rate_hist table, run the batch <INFODOM>_FN_RATEVALIDATION.

6

Account Summary Population

Account Summary tables are loaded from the staging product processor tables using the Table to Table (T2T) component of Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) framework.

This chapter covers the following topics:

- Overview of Account Summary Tables
- Overview of Account Summary Population
- Prerequisites
- Executing the Account Summary Population T2T
- Checking the Execution Status
- Account Summary T2Ts

Overview of Account Summary Tables

Customer account level data from the Oracle Financial Services Analytical Applications (OFSAA) staging product processor tables must be consolidated into a standardized relational Business Intelligence (BI) data model. This consolidation is done to have all the staging product processor table data in a single Fact table.

The Account Summary table data can be used for building cubes which allow rollup of data for a dimension or a combination of dimensions.

This relational BI model consists of three vertically partitioned Account Summary tables that are organized by application subject area.

- FCT_COMMON_ACCOUNT_SUMMARY – This table is shared by all OFSAA BI applications which contain dimensional values, attributes, and financial measures which are generally applicable to the individual account records. This data is sourced directly from the staging area.
- FCT_CRM_ACCOUNT_SUMMARY – This table has the measures used by all the

Customer Insight applications.

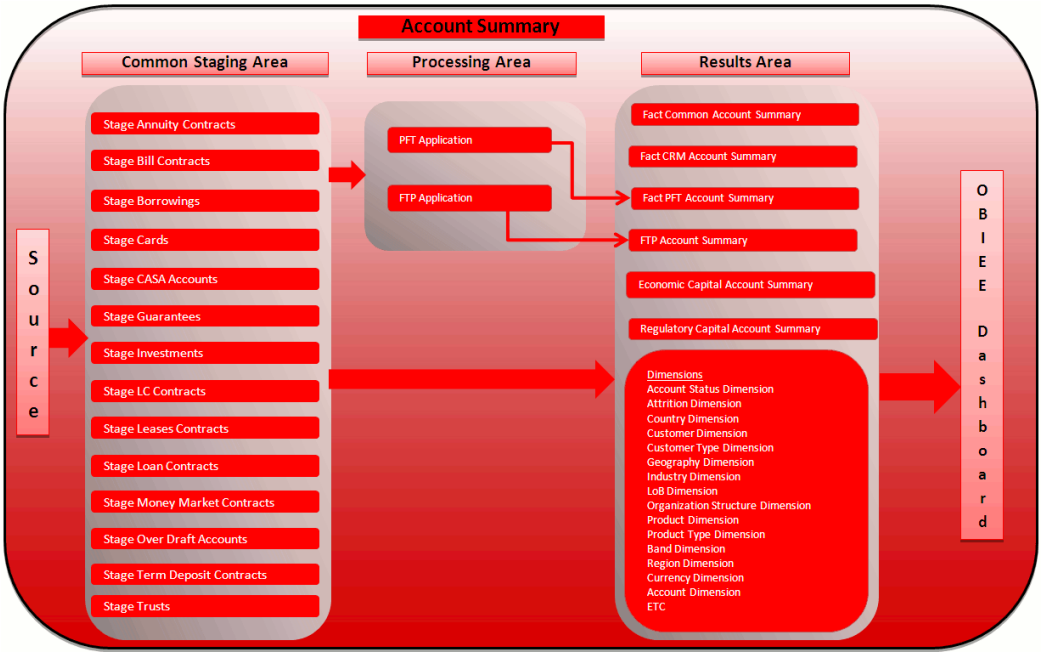
Yet, there are few other Account Summary tables which have been designed to store Enterprise Risk Management (ERM) data:

- FCT_PFT_ACCOUNT_SUMMARY – This table has Profitability Management (PFT) specific measures.
- FCT_FTP_ACCOUNT_SUMMARY – This table has Funds Transfer Pricing (FTP) specific measures.
- FCT_REG_CAP_ACCOUNT_SUMMARY – This table has Regulatory Capital specific measures.
- FCT_ECO_CAPITAL_ACCOUNT_SUMMARY – This table has Economic Capital specific measures.

The above mentioned Account Summary tables are part of data model, but there are no seeded T2T definitions available to populate these tables. T2T processes must be custom configured to populate these tables to use measures defined on these tables for reporting.

Data Flow

The Below diagram depicts the flow of data into account summary tables:



Overview of Account Summary Population

Table to Table seeded definitions are provided for loading data into Common Account Summary and CRM Account summary tables.

Following are the lists for the same:

- Common Account Summary

SL No	Source Table	T2T Definition Name	Destination Table
1	STG_ANNUITY_CONTRACTS	T2T_STG_ANNUITY_CONTRACTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
2	STG_BILLS_CONTRACTS	T2T_STG_BILLS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
3	STG_BORROWINGS	T2T_STG_BORROWINGS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
4	STG_CARDS	T2T_STG_CARDS_CAS	FCT_COMMON_ACCOUNT_SUMMARY

SL No	Source Table	T2T Definition Name	Destination Table
5	STG_CASA	T2T_STG_CASA_CAS	FCT_COMMON_ACCOUNT_SUMMARY
6	STG_GUARANTEES	T2T_STG_GUARANTEES_CAS	FCT_COMMON_ACCOUNT_SUMMARY
7	STG_INVESTMENTS	T2T_STG_INVESTMENTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
8	STG_LC_CONTRACTS	T2T_STG_LC_CAS	FCT_COMMON_ACCOUNT_SUMMARY
9	STG_LEASES_CONTRACTS	T2T_STG_LEASES_CONTRACTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
10	STG_LOAN_CONTRACTS	T2T_STG_LOANS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
11	STG_MM_CONTRACTS	T2T_STG_MM_CAS	FCT_COMMON_ACCOUNT_SUMMARY
12	STG_OD_ACCOUNTS	T2T_STG_OD_CAS	FCT_COMMON_ACCOUNT_SUMMARY
13	STG_TD_CONTRACTS	T2T_STG_TD_CONTRACTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
14	STG_TRUSTS	T2T_STG_TRUSTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
15	STG_COMMITMENT_CONTRACTS	T2T_STG_COMMITMENT_CONTRACTS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
16	STG_MUTUAL_FUNDS	T2T_STG_MUTUAL_FUNDS_CAS	FCT_COMMON_ACCOUNT_SUMMARY

- CRM Account Summary

Sl No.	Source Table	T2T Definition Name	Destination Table
1	STG_ANNUITY_CONTRACTS	T2T_STG_CRMAS_ANNUITY_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
2	STG_BILLS_CONTRACTS	T2T_STG_CRMAS_BILLS_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
3	STG_BORROWINGS	T2T_STG_CRMAS_BORROWINGS	FCT_CRM_ACCOUNT_SUMMARY
4	STG_CARDS	T2T_STG_CRMAS_CARDS	FCT_CRM_ACCOUNT_SUMMARY
5	STG_CASA	T2T_STG_CRMAS_CASA	FCT_CRM_ACCOUNT_SUMMARY
6	STG_GUARANTEES	T2T_STG_CRMAS_GUARANTEES	FCT_CRM_ACCOUNT_SUMMARY
7	STG_INVESTMENTS	T2T_STG_CRMAS_INVESTMENTS	FCT_CRM_ACCOUNT_SUMMARY
8	STG_LC_CONTRACTS	T2T_STG_CRMAS_LC_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
9	STG_LEASES_CONTRACTS	T2T_STG_CRMAS_LEASES_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
10	STG_LOAN_CONTRACTS	T2T_STG_CRMAS_LOAN_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
11	STG_MM_CONTRACTS	T2T_STG_CRMAS_MM_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
12	STG_OD_ACCOUNTS	T2T_STG_CRMAS_OD_ACCOUNTS	FCT_CRM_ACCOUNT_SUMMARY
13	STG_TD_CONTRACTS	T2T_STG_CRMAS_TD_CONTRACTS	FCT_CRM_ACCOUNT_SUMMARY
14	STG_TRUSTS	T2T_STG_CRMAS_TRUSTS	FCT_CRM_ACCOUNT_SUMMARY

Sl No.	Source Table	T2T Definition Name	Destination Table
15	STG_COMMITMENT_CONTRACTS	T2T_STG_CRMAS_COMMITMENTS	FCT_CRM_ACCOUNT_SUMMARY
16	STG_MUTUAL_FUNDS	T2T_STG_CRMAS_MUTUAL_FUNDS	FCT_CRM_ACCOUNT_SUMMARY

Tables FTP Account Summary and PFT Account Summary must be loaded directly if PFT and FTP applications do not already co-exist with Retail Customer Analytics.

> **Note:** Currency Exchange Rate History table has to be populated prior loading the Account Summary tables.

Prerequisites

1. All the post install steps mentioned in the *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration guide* and the solution installation manual have to be completed successfully.
2. Application User must be mapped to a role that has seeded batch execution function (BATPRO).
3. Before executing a batch, check if the following services are running on the application server (For more information on how to check if the services are up and on, and how to start the services if you find them not running, see *Oracle Financial Services Analytical Applications Infrastructure User Guide.*)
    1. Iccserver
    2. Router
    3. AM Server
    4. Messageserver
4. Batches will have to be created for executing. This is explained in Executing the Account Summary Population T2T section.
5. Dimension Population should have been done before you execute the T2T batch. (See Dimension Loading Process and Time Dimension Population chapters)

Fact Common Account Summary

Following are the lists of tables used in the population of Fact Common Account Summary & Fact CRM Account Summary tables.

Below mentioned Dimension tables are required to be loaded prior to executing the T2T:

- DIM_DATES
- DIM_ACCOUNT
- DIM_CUSTOMER
- DIM_PRODUCT
- DIM_CHANNEL
- DIM_BANDS
- DIM_ORG_STRUCTURE and so on.

Fact CRM Account Summary

Fact Common Account Summary entity needs to be populated before executing the Fact CRM Account Summary T2Ts.

Following are the list of tables used in the population of Fact CRM Account Summary and these tables are required to be loaded prior to running the T2T:

- DIM_DATES
- DIM_ACCOUNT
- FCT_COMMON_ACCOUNT_SUMMARY
- DIM_ACCT_STATUS
- DIM_BANDS
- DIM_CAMPAIGN
- DIM_CHANNEL
- DIM_CUSTOMER
- DIM_ORG_STRUCTURE

- DIM_LOB
- DIM_OFFER
- DIM_OPPORTUNITY
- DIM_PRODUCT
- DIM_PROSPECT
- DIM_RETENTION_OFFER_TYPE
- DIM_SALES_REPRESENTATIVE
- DIM_TREATMENT
- DIM_VINTAGE

For more information, see Dimension Tables Population, section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

For more information on populating account dimension, see Account Dimension Population, chapter.

For more information, see Time Dimension Population, chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s).

For more information on the dimensions, refer to *ERwin Datamodel*.

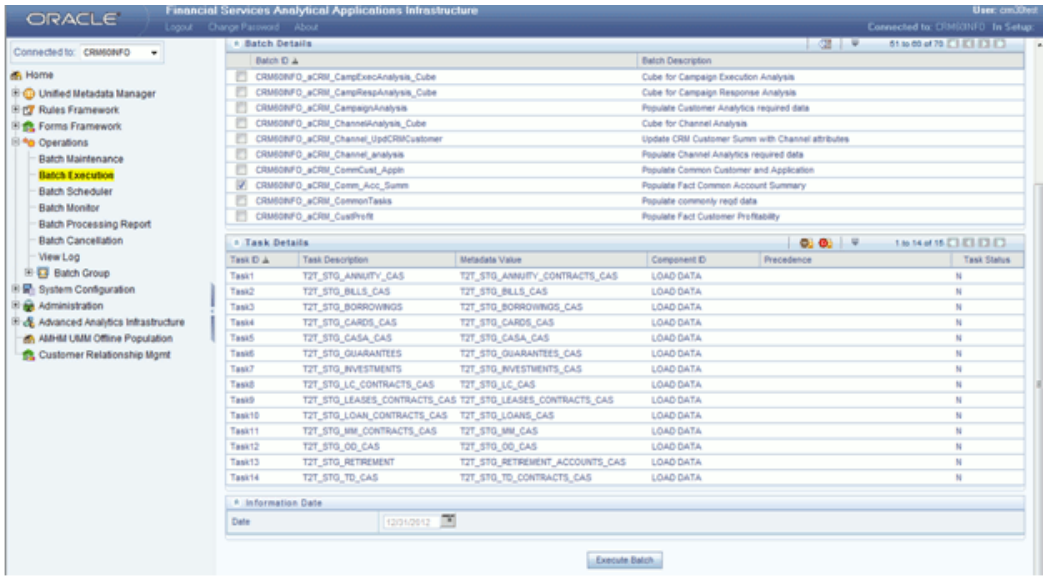
Executing the Account Summary Population T2T

Fact Common Account Summary table has to be loaded prior loading any of the other Account Summary tables.

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen)::

Fact Common Account Summary

A seeded batch, **<Infodom>_aCRM_Comm_Acc_Summ** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save.**
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select Table to Table from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name for the source stage channel table you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to currency calculation. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD' Here 'USD' acts as reporting currency parameter to T2T.

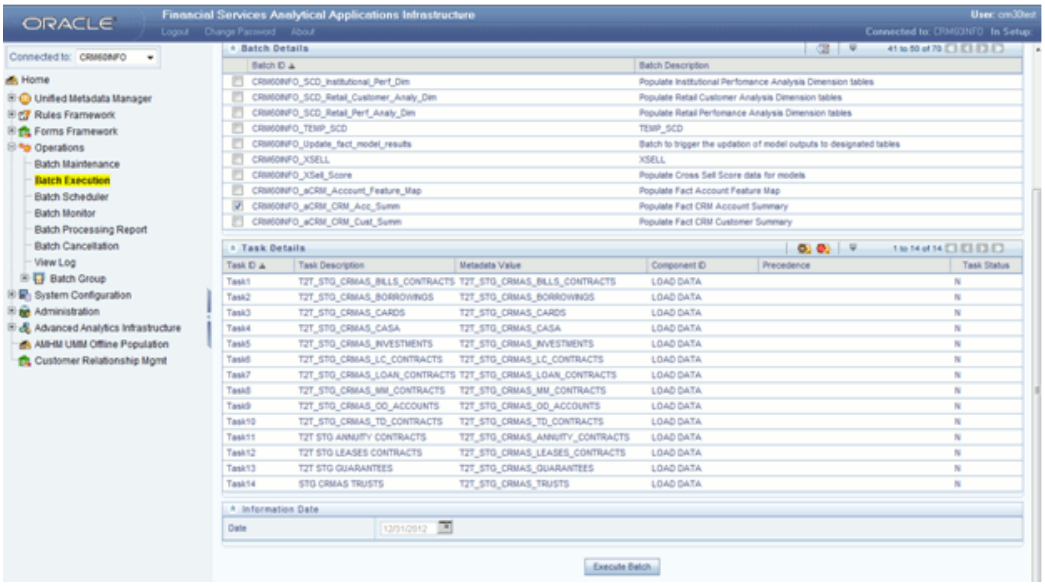
9. Repeat steps 4 to 8 for adding the remaining T2Ts within the same batch definition.

10. Execute the batch created in the preceding steps.

For more information, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Fact CRM Account Summary

A seeded batch, **<Infodom>_aCRM_CRM_Acc_Summ** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.

2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.

3. Click **Save**.

4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.

5. Enter the **Task ID** and **Description**.

6. Select **Load Data** from the Components list.

7. Select the following from the Dynamic Parameters List and click **Save**.

   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select Table to Table from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name for the source stage product processor table you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to currency calculation. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD' Here 'USD' acts as reporting currency parameter to T2T.

9. Repeat steps 4 to 8 for adding the remaining T2Ts within the same batch definition.

10. Execute the batch created in the preceding steps.

For more information, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

> **Note:** For a more comprehensive coverage of configuration and execution of a batch, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

The status messages in Batch Monitor are :

N - Not Started

O - On Going

F - Failure

S – Success

The execution log can be accessed on the application server in the following directory $FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_COMMON_ACCOUNT_SUMMARY$
- FCT_CRM_ACCOUNT_SUMMARY$

Account Summary T2Ts

T2T definitions can be retrieved as an excel document for reference from the metadata browser of the Unified Metadata Manager (UMM) component of OFSAAI.

7

Customer Summary Population

This chapter explains the process flow for populating Fact Common Customer Summary table.

This chapter covers the following topics:

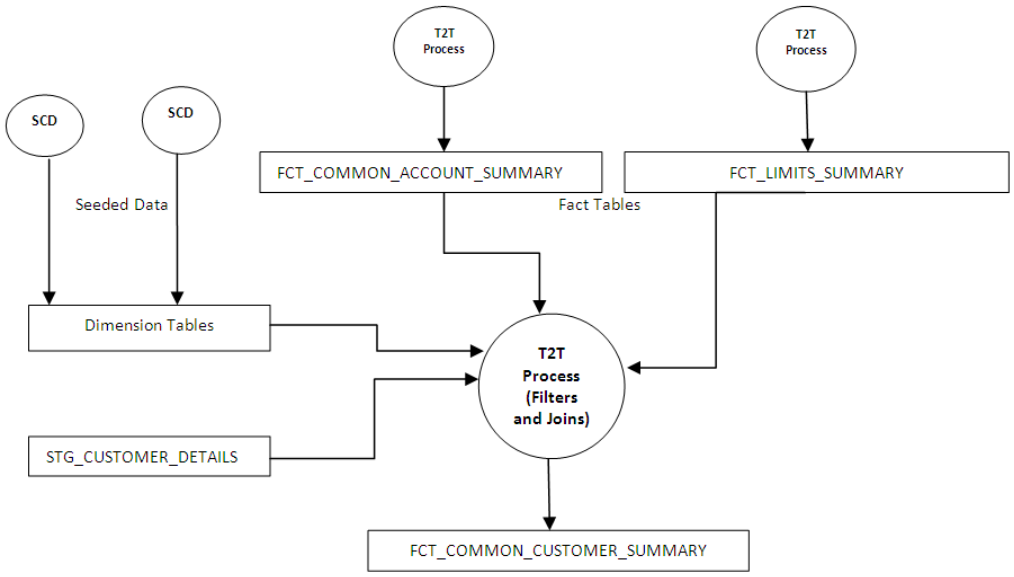
- Overview of Common Customer Summary Tables
- Prerequisites
- Executing the Customer Summary Population T2T

Overview of Common Customer Summary Tables

Fact Common Customer Summary table stores attributes pertaining to customer related data on an 'as-is' basis received from the source system. Data is populated into this table using T2T.

Customer balances are derived from account summary. Customer relationship table drives the relationship between accounts and customers. Common customer summary data is populated for all the active customers in customer dimension.

Following data flow diagram explains the process flow for populating Fact Common Customer Summary table:



Prerequisites

Following are the lists of tables used in the population of Fact Common Customer Summary and these tables are required to be loaded prior to running the T2T:

- DIM_CUSTOMER
- DIM_BANDS
- DIM_EDUCATION
- DIM_CUSTOMER_TYPE
- DIM_GENDER
- DIM_INDUSTRY
- DIM_CHANNEL
- DIM_GEOGRAPHY
- DIM_MARITAL_STATUS
- DIM_MANAGEMENT
- DIM_PROFESSION
- DIM_CREDIT_RATING

- DIM_VINTAGE
- DIM_MIGRATION_REASONS
- FCT_COMMON_ACCOUNT_SUMMARY
- FCT_LIMITS_SUMMARY
- STG_CUSTOMER_DETAILS
- STG_PARTY_RATING_DETAILS
- STG_PARTY_FINANCIALS

Dimensions tables are loaded through the SCD process. The fact tables such as FCT_COMMON_ACCOUNT_SUMMAY and FCT_LIMITS_SUMMARY are loaded from their respective T2T processes.

For more information on SCDs, refer to Dimension Loading Process, chapter.

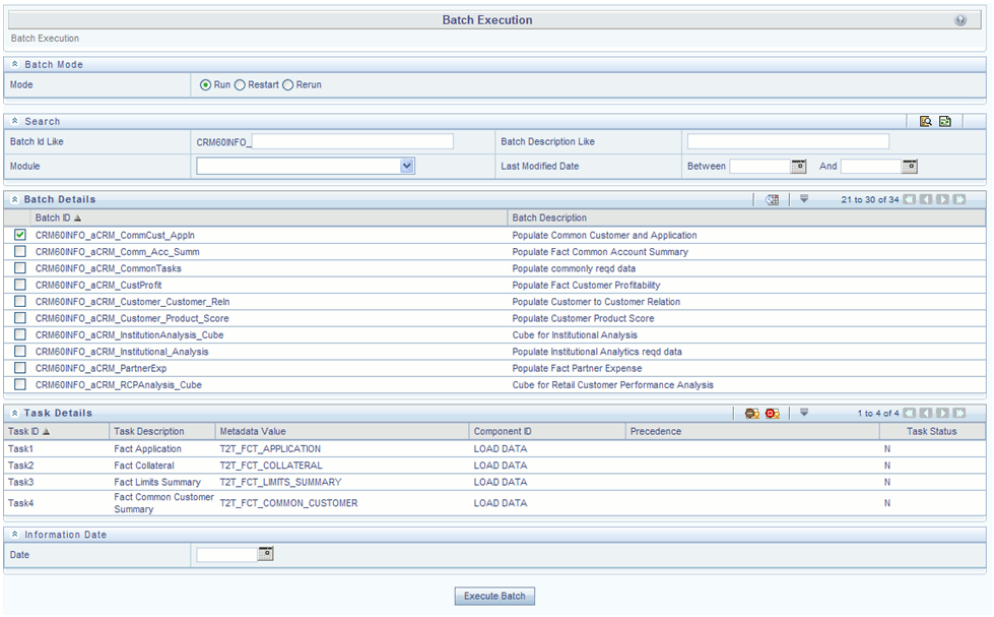
Executing the Customer Summary Population T2T

Fact Common Customer Summary T2T can be executed by executing task present in the seeded batch

<INFODOM>_aCRM_CommCust_Appln.

Following steps will help you to execute the batch:

1. Go to the Batch Execution screen.
2. Select the seeded batch <INFODOM>_aCRM_CommCust_Appln where INFODOM is the information domain where application is installed.
3. Select the AS_OF_DATE for which source customer information is required to be loaded into the table.
4. Click **Execute Batch**.
5. Monitor the status of the batch using Batch Monitor.



Error Messages

Following is the most common error message which will be logged in the T2T log file present in the $FIC_DB_HOME/logs/t2t folder:

- **Unique Constraint Violation** : This occurs when attempting re-load or loading existing records for the already executed AS_OF_DATE.

8

Fact Data Population

Introduction

This chapter explains all the fact tables which within describe about the seeded T2T Definitions with related Source Table and Destination tables. Prerequisites needed in population of the Fact table and tables required to be loaded prior to running the T2T.

Each fact table contains a section on how to execute the T2T component from OFSAA Infrastructure ICC framework and access the execution log to check the execution status.

Fact CRM Customer Summary

Fact CRM Customer Summary entity captures different derived/computed customer attributes pertaining to Customer Insight. Fact Common Customer Summary stores the generic application-agnostic source/raw customer attributes. Fact CRM Customer Summary is a vertical partitioned entity and has relationship to Fact Common Customer Summary.

Load Data into Fact CRM Customer Summary

Customer balances in the Fact CRM Customer Summary entity are derived from account summary. Customer relationship entity drives the relationship between accounts and customers.

Following is the seeded Table-to-Table definitions that loads data related to Fact CRM Customer Summary:

T2T Definition Name	Source Table(s)	Destination Table
T2T_FCT_CRM_CUSTOMER_	STG_CUSTOMER_MASTER	FCT_CRM_CUSTOMER_S

T2T Definition Name	Source Table(s)	Destination Table
SUMMARY	STG_CUSTOMER_DETAILS	UMMARY
	FCT_COMMON_ACCOUNT_ SUMMARY	
	FCT_CRM_ACCOUNT_SUM MARY	

Refer to *Oracle Financial Services Analytical Applications Data Model Data Dictionary* or the *Erwin Data Model* to view the detailed structure of the tables.

Prerequisites

Fact Common Customer Summary entity needs to be populated before executing the Fact CRM Customer Summary T2T. Refer to Fact Common Account Summary chapter for details related to Fact Common Customer Summary T2T.

Following tables that are used in the population of Fact CRM Customer Summary need to have relevant data prior to executing the T2T:

- STG_CUSTOMER_MASTER - Mandatory
- STG_CUSTOMER_DETAILS - Mandatory
- DIM_DATES - Mandatory
- DIM_CUSTOMER - Mandatory
- FCT_COMMON_ACCOUNT_SUMMARY - Mandatory
- FCT_CRM_ACCOUNT_SUMMARY - Mandatory
- DIM_BANDS - Optional

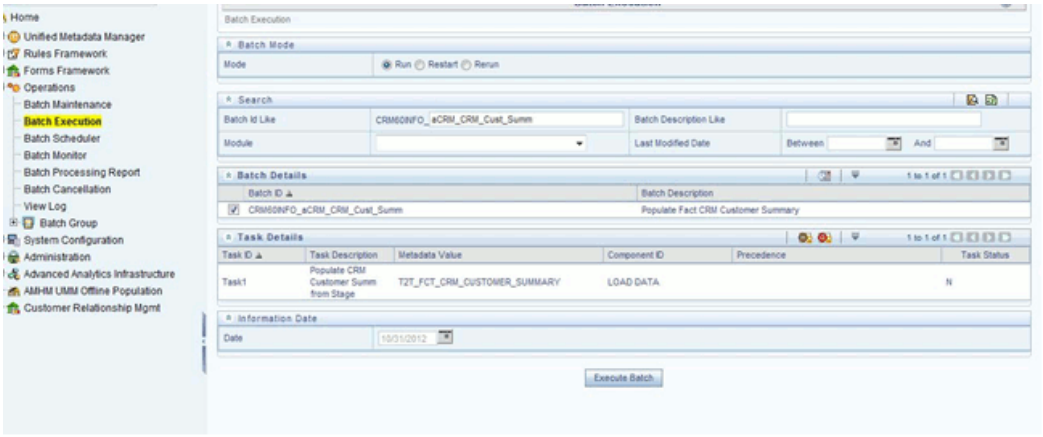
  For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

  For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s).

  Also, see Population of Fact CRM Customer Summary and Fact CRM Account Summary sections for details on populating these fact tables.

Executing the Fact CRM Customer Summary Population T2Ts

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the Operations module of OFSAAI). A seeded batch, **<Infodom>_aCRM_CRM_Cust_Summ** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select Table to Table from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.

- **File Name** - Select the T2T name "T2T_FCT_CRM_CUSTOMER_SUMMARY" you want to process.

8. Data file name will be blank for any Table to Table Load mode.

9. Default value refers to any parameter that has to be passed to T2T. It has to be blank.

10. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_CRM_CUSTOMER_SUMMARY

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Update Fact CRM Customer Summary with Transaction Attributes

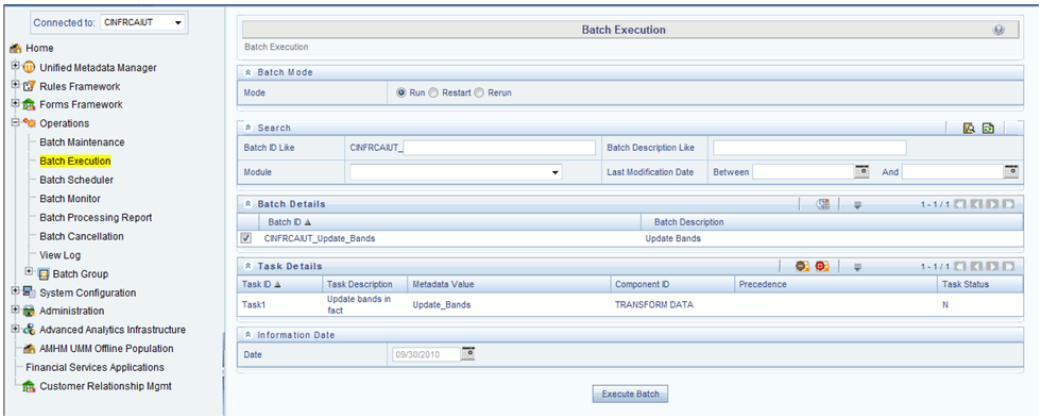
A seeded Data Transformation is provided with the installer which updates the entity Fact CRM Customer Summary with transaction attributes of customer such as ATM usage, Branch usage, net usage, Point of Sale (POS) usage, Number of ATM transactions, transacted amount, and so on.

The following table lists the seeded Post Load Transformation Definition with related

Source Table and Destination tables:

DT Definition Name	Source Tables	Destination Table
FN_UPD_CRM_CUST_CHNL	FCT_TXN_CHANNEL	FCT_CRM_CUSTOMER_SUMMARY

A seeded batch, **<Infodom>_aCRM_Channel_UpdCRMCustomer** has to be executed for the required MIS Date.



Alternatively, a new batch can be created if required by following the below mentioned steps:

1. Select the check box adjacent to the newly created Batch Name in the *Batch Maintenance* screen.
2. Click **Add** (+) button from the *Task Details* grid.

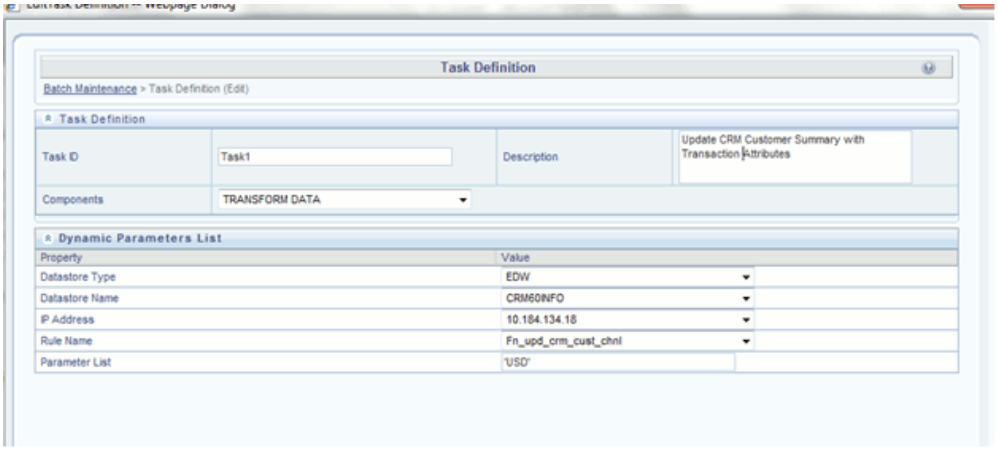
   The *Task Definition* screen is displayed.
3. Enter the **Task ID** and **Description**.
4. Select the **TRANSFORM DATA** component from the **Components** drop down list.
5. In the Dynamic Parameters List, select the appropriate **Datastore Type** from the drop down list.
6. Select the appropriate **Datastore Name** from the drop down list. Usually it is the Information Domain name.
7. Select the **IP Address** from the drop down list.
8. Select the Rule Name **FN_UPD_CRM_CUST_CHNL** from the drop down list.

9. Enter the Parameter List details as mentioned below:

   - Reload Account Profitability table for the given MIS Date flag - can be Y or N within single quotes.
   - Reporting Currency code - This has to be enclosed within single quotes.

   For Example, if reporting currency is in US Dollar, then '**USD**' has to be specified.

   > **Note: Batch run ID** and **As Of Date** are passed internally by the batch to the Data Transformation task.



10. Execute the batch for which the Task has been created.

For more information, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Checking the Execution Status

The status of execution can be monitored using the *Batch Monitor* screen of OFSAAI.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/date.

The file name will have the batch execution id.

> **Note:** For more information on configuration and execution of a batch, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Fact Account Feature Map

A product might be facilitated with its own features. Fact Account Feature Map entity stores the mapping between the Account and Product Feature that is the features of the product availed by the customer account. Product processor tables in staging have information related to customer accounts.

Following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_FCT_ACCOUNT_FEATURE_MAP	STG_ACCT_FEATURE_MAP	FCT_ACCOUNT_FEATURE_MAP

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the tables.

Prerequisites

Following are the lists of tables used in the population of Fact Account Feature Map and these tables are required to be loaded prior to executing the T2T:

- DIM_DATES
- DIM_PRODUCT_FEATURE
- DIM_ACCOUNT
- DIM_CUSTOMER
- DIM_PRODUCT
- DIM_VENDOR
- DIM_CAMPAIGN
- DIM_CHANNEL

- STG_ACCT_FEATURE_MAP

For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

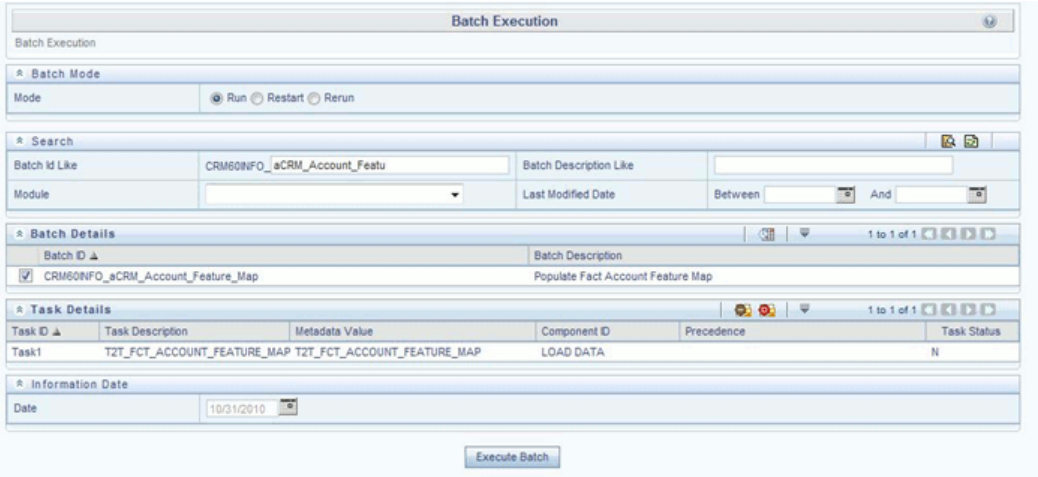
For more information on populating account dimension, see Account Dimension Population chapter.

For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s).

Executing the Fact Account Feature Map Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_Account_Feature_Map** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.

5. Enter the **Task ID** and **Description**.

6. Select **Load Data** from the Components list.

7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name "T2T_FCT_ACCOUNT_FEATURE_MAP" you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. This should be blank.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_ACCOUNT_FEATURE_MAP$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Customer to Customer Relationship

Fact Customer to Customer Relationship entity stores the relationship between the customers. Example of relationship amongst customers could be Employer, Employee, Children, Parent, Spouse, and so on.

Following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_CUST_CUST_RELATION	STG_CUST_CUST_RELATIONSHIP	FCT_CUST_CUST_RELATIONSHIP

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the tables.

Prerequisites

Following are the lists of tables used in the population of Fact Customer to Customer Relationship and these tables are required to be loaded prior to running the T2T:

- DIM_DATES
- DIM_CUSTOMER
- STG_CUST_CUST_RELATIONSHIP

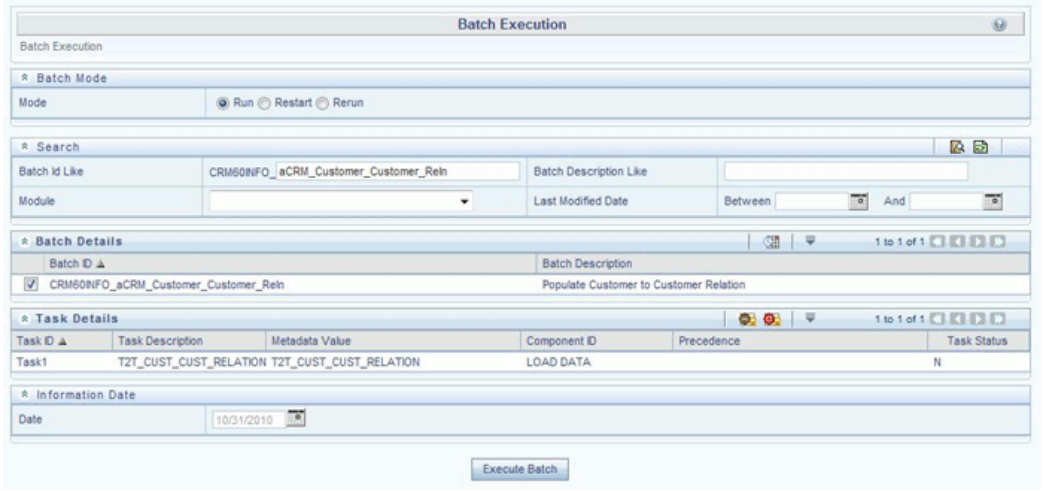
For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s).

Executing the Fact Customer to Customer Relationship Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_Customer_Customer_Reln - Task1** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.

- **Source Name** - Select **<T2T Source Name>** from the list.
- **File Name** - Select the T2T name "T2T_CUST_CUST_RELATION" you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. This should be blank.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_CUST_CUST_RELATIONSHIP$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Transaction Channel

Fact Transaction Channel entity stores the details of all transactions (successful and failed) done through any of the transaction channels offered by the Financial Institutions. This fact entity is loaded from multiple source staging tables.

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_TEL_FCT_TXN_CHANNEL	STG_SRC_TB_TXNS	FCT_TXN_CHANNEL
T2T_POS_FCT_TXN_CHANNEL	STG_SRC_POS_TXNS	
T2T_NET_FCT_TXN_CHANNEL	STG_SRC_NET_TXNS	
T2T_BRA_FCT_TXN_CHANNEL	STG_SRC_BRANCH_TXNS	
T2T_ATM_FCT_TXN_CHANNEL	STG_SRC_ATM_TXNS	

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the earlier tables.

Prerequisites

Following are the lists of tables used in the population of Fact Transaction Channel and these tables are required to be loaded prior to running the T2T:

- DIM_DATES
- DIM_TXN_CHANNEL
- DIM_ACCOUNT
- DIM_AUTH_DECISION_REASONS
- DIM_BANDS
- DIM_BROWSER_TYPE
- DIM_CARD_TYPE
- DIM_CURRENCY
- DIM_CUSTOMER

- DIM_CUSTOMER_TYPE
- DIM_GEOGRAPHY
- DIM_MERCHANT
- DIM_MERCHANT_CATEGORY
- DIM_PRODUCT
- DIM_TERMINAL
- DIM_TERMINAL_TYPE
- DIM_TRANSACTION
- DIM_TXN_FAILURE_REASON
- DIM_TXN_STATUS
- STG_SRC_ATM_TXNS
- STG_SRC_BRANCH_TXNS
- STG_SRC_NET_TXNS
- STG_SRC_POS_TXNS
- STG_SRC_TB_TXNS

For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

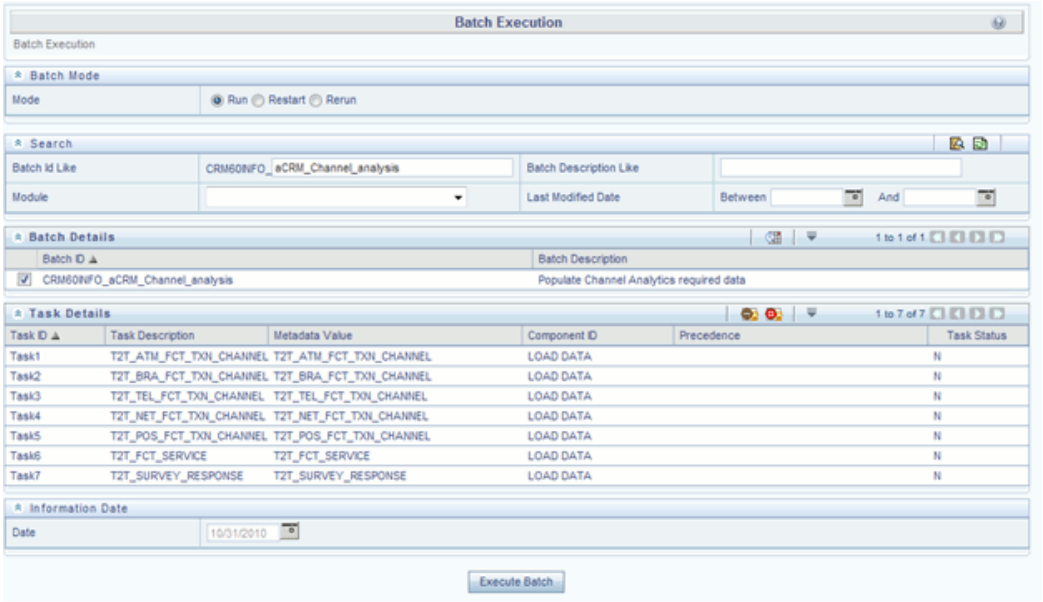
For more information on populating account dimension, see Account Dimension Population chapter.

For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required in Channel Transaction tables in staging for the purpose of Customer Insight Application(s).

Executing the Fact Transaction Channel Population T2Ts

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>Infodom>_aCRM_Txn_Channel Task1 to Task5** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
    - **Datastore Type** - Select the appropriate datastore from the list.
    - **Datastore Name** - Select the appropriate name from the list.
    - **IP address** - Select the IP address from the list.
    - **Load Mode** - Select **Table to Table** from the list.
    - **Source Name** - Select **<T2T Source Name>** from the list.
    - **File Name** - Select the T2T name for the source stage channel table you want to

process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to currency calculation. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD', [DLCY]='USD'

   Here, 'USD' acts as currency parameter to T2T.

9. Steps 4 to 8 must be repeated for adding the remaining 4 T2Ts within the same batch definition.

10. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_TXN_CHANNEL$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Application

Fact Application entity stores the fact data of applications like application details,

current stage, status, rejection reason, time-taken in each stage, and so on.

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_FCT_APPLICATION	STG_APPLICATION	FCT_APPLICATION

For more information and to view the detailed structure of the earlier tables, see *Customer Insight Erwin Data Model*.

Prerequisites

Following are the lists of tables used in the population of Fact Application. These tables are required to be loaded prior to running the T2T:

- DIM_DATES
- DIM_APPLICATION_TYPE
- DIM_PRODUCT
- DIM_CREDIT_OFFICER
- DIM_CUSTOMER
- DIM_CHANNEL
- DIM_CREDIT_CENTER
- DIM_DECISION_STATUS
- DIM_GEOGRAPHY
- DIM_INDUSTRY
- DIM_PROFESSION
- DIM_HOME_OWNERSHIP
- DIM_EDUCATION
- DIM_MARITAL_STATUS
- DIM_APPLICATION_REJECT_REASONS

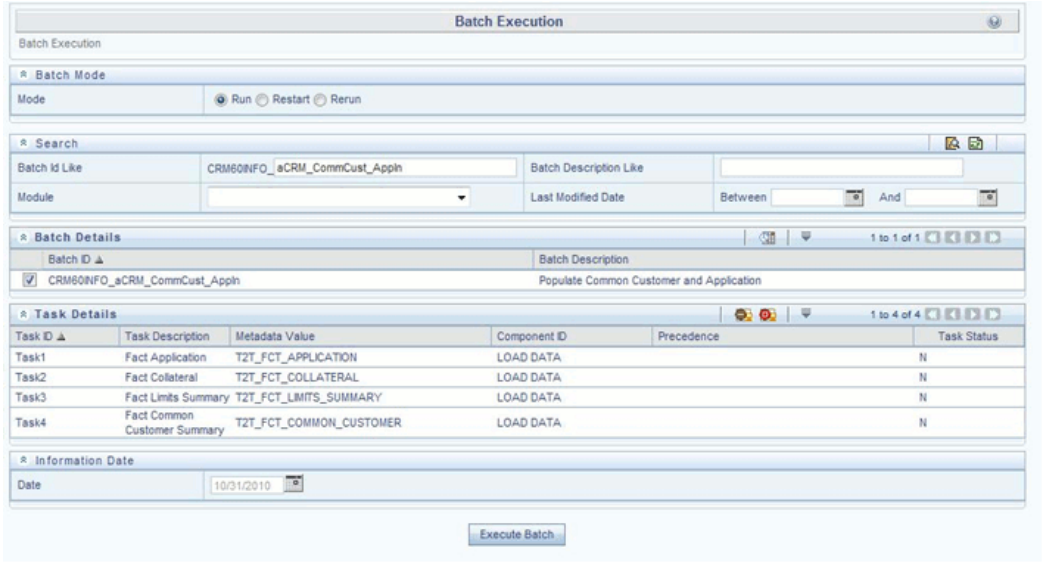
- DIM_DEVIATION_REASONS
- DIM_SALES_REPRESENTATIVE
- DIM_CAMPAIGN
- DIM_ACCOUNT
- DIM_PROSPECT
- DIM_BANDS
- STG_APPLICATION

For details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on, refer to Dimension Tables Population, section under *Dimension Loading Process* chapter.

For details on populating DIM_DATES dimension table, refer to Time Dimension Population, chapter. For identifying fields required in Channel Transaction tables in staging for the purpose of Customer Insight Application(s), refer to *Download Specification*.

Executing the Fact Application Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through *Operations* module), a seeded batch, **<Infodom>_aCRM_CommCust_Appln – Task1** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name 'T2T_FCT_APPLICATION', you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD'

   Here, 'USD' acts as reporting currency parameter to T2T.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_APPLICATION$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Campaign Details

Fact Campaign Details entity stores the information about the details of the campaign like expected 5 year NPV, targeted prospect contact status, days to contact, no of times contacted and so on.

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_FCT_CAMPAIGN_DETAILS	STG_CAMPAIGN_DETAILS	FCT_CAMPAIGN_DETAILS

For more information, see Customer Insight Erwin Data Model to view the detailed structure of the earlier tables.

Prerequisites

Following are the lists of tables used in the population of Fact Campaign Details and these tables are required to be loaded prior to running the T2T:

- DIM_CAMPAIGN_CHANNEL
- DIM_CAMPAIGN
- DIM_CUSTOMER
- DIM_PROSPECT
- DIM_DATES
- DIM_PRODUCT
- DIM_OFFER
- DIM_TREATMENT
- DIM_WAVE
- DIM_VENDOR
- DIM_CONTACT
- DIM_REGION
- DIM_MKTG_PROGRAM
- STG_CAMPAIGN_DETAILS

For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

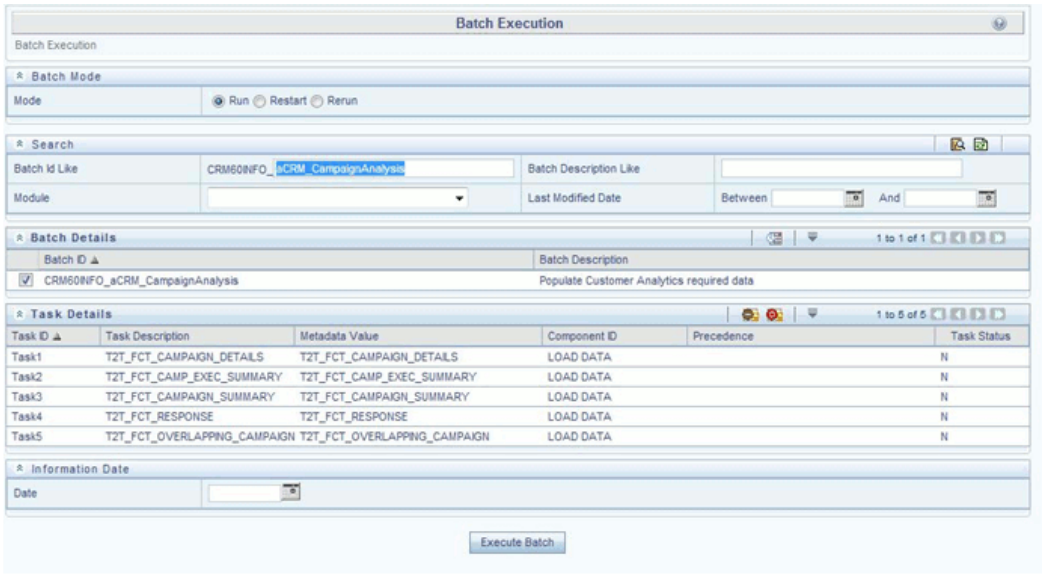
For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table. See *Download Specification* for identifying fields required

in Channel Transaction tables in staging for the purpose of Customer Insight Application(s).

Executing the Fact Application Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_CampaignAnalysis – Task1** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.

- **Datastore Name** - Select the appropriate name from the list.
- **IP address** - Select the IP address from the list.
- **Load Mode** - Select **Table to Table** from the list.
- **Source Name** - Select **<T2T Source Name>** from the list.
- **File Name** - Select the T2T name 'T2T_FCT_CAMPAIGN_DETAILS', you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD'

   Here, 'USD' acts as reporting currency parameter to T2T.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are :

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_CAMPAIGN_DETAILS$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure

User Guide.

Fact Campaign Execution Summary

Fact Campaign Execution Summary entity is a summary table which stores fact information like mail base, no of campaign prospects contacted, cost incurred, number of opt outs from the campaign, expected 5 year NPV, and so on across dimensions like Campaign Region, Offer, Treatment, Product, Wave, Campaign, Vendor, Offer Channel, and so on.

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_FCT_CAMP_EXEC_SUMMARY	FCT_CAMPAIGN_DETAILS	FCT_CAMPAIGN_EXEC_SUMMARY

For more information, see Erwin Data Model to view the detailed structure of the earlier tables.

Prerequisites

Fact Campaign Details T2T needs to be executed prior to populating Fact Campaign Execution Summary fact table.

Following are the lists of tables used in the population of Fact Campaign Execution Summary and these tables are required to be loaded prior to running the T2T:

- FCT_CAMPAIGN_DETAILS
- DIM_DATES

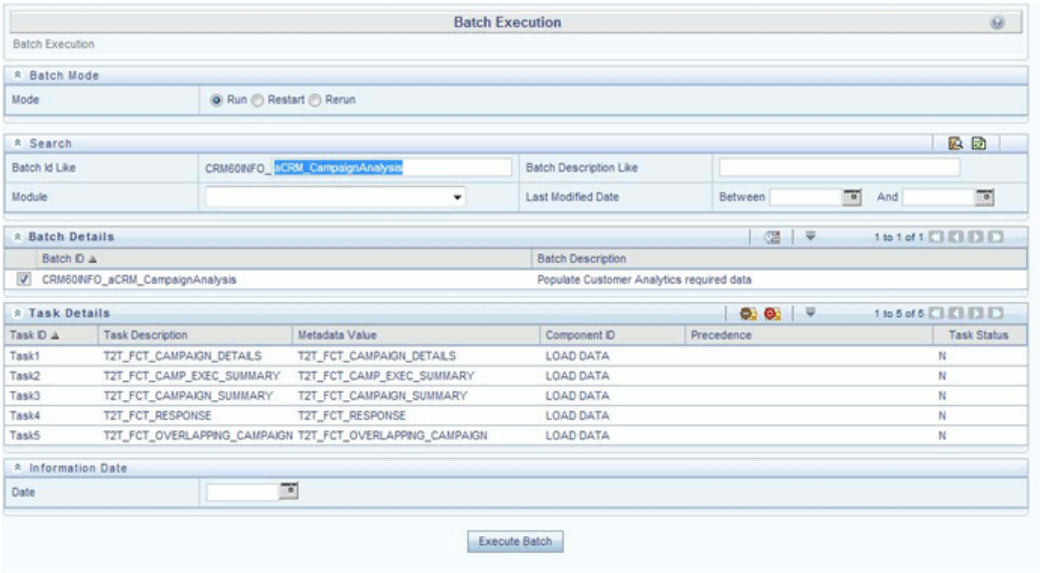
For more information, see *Population of Fact Campaign Details* section on populating campaign details.

For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table.

Executing the Fact Application Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_CampaignAnalysis – Task2** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name 'T2T_FCT_CAMP_EXEC_SUMMARY', you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD'

   Here, 'USD' acts as reporting currency parameter to T2T.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are:

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_CAMPAIGN_EXEC_SUMMARY$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Response

Fact Response entity stores the all the responses for the campaign that was executed. The fact entity stores information such as response type, status, channel, product, offer channel, wave, offer, treatment, and so on.

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_FCT_RESPONSE	STG_RESPONSE	FCT_RESPONSE

For more information, see Erwin Data Model to view the detailed structure of the earlier tables.

Prerequisites

T2Ts related to Fact Campaign Details, Fact Campaign Summary, Fact Common Customer Summary needs to be executed before loading Fact Response table.

Following are the lists of tables used in the population of Fact Response and these tables are required to be loaded prior to running the T2T:

- FCT_CAMPAIGN_DETAILS
- DIM_CAMPAIGN
- DIM_REGION
- DIM_PRODUCT
- DIM_CAMPAIGN_CHANNEL
- DIM_OFFER
- DIM_TREATMENT
- DIM_WAVE
- DIM_VENDOR
- DIM_DATES
- DIM_MKTG_PROGRAM
- DIM_CONTACT
- DIM_REJECTION_REASON
- DIM_RESPONSE_TYPE
- DIM_CHANNEL
- DIM_MARKET_CELL

- DIM_CUSTOMER
- FCT_COMMON_CUSTOMER_SUMMARY
- DIM_PROSPECT
- DIM_PROFESSION
- DIM_CALL_TYPE
- DIM_CAMPAIGN_SOURCE_TYPE

For more information, see *Population of Fact Campaign Details* section on populating campaign details and see *Population of Fact Campaign Summary* section for details on populating Campaign Summary fact table. See *Population of Fact Common Customer Summary* section for details on populating Common Customer Summary fact table.

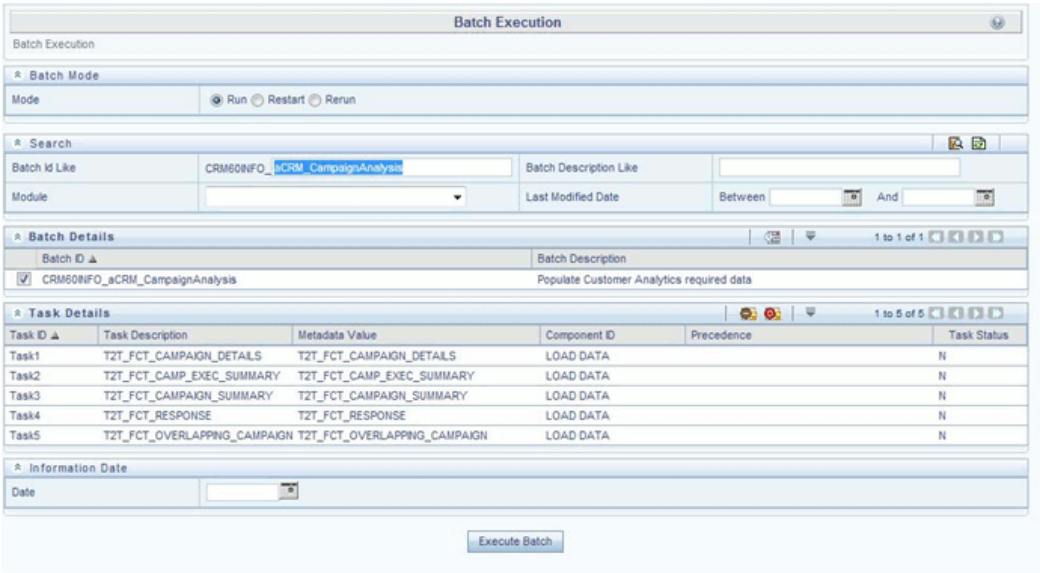
For more information, see *Dimension Tables Population* section under *Dimension Loading Process* chapter for details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on.

For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table.

Executing the Fact Application Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_CampaignAnalysis – Task4** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name 'T2T_FCT_RESPONSE', you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. If there is any need for currency conversion in T2T transactions, Default value has to be provided.

   For example, default value is [DRCY]='USD'

   Here, 'USD' acts as reporting currency parameter to T2T.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are:

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_RESPONSE$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Overlapping Campaign

Fact Overlapping Campaign entity stores the summary information related to prospects who were targeted by multiple campaigns at a point in time.

The following table lists the seeded T2T Definitions with related Source Table and Destination tables:

T2T Definition Name	Source Staging Table	Destination Table
T2T_OVERLAPPING_CAMPAIGN	STG_OVERLAPPING_CAMPAIGN	FCT_OVERLAPPING_CAMPAIGN

For more information, see Erwin Data Model to view the detailed structure of the earlier tables.

Prerequisites

Following are the lists of tables used in the population of Fact Overlapping Campaign and these tables are required to be loaded prior to running the T2T:

- DIM_DATES
- STG_OVERLAPPING_CAMPAIGN

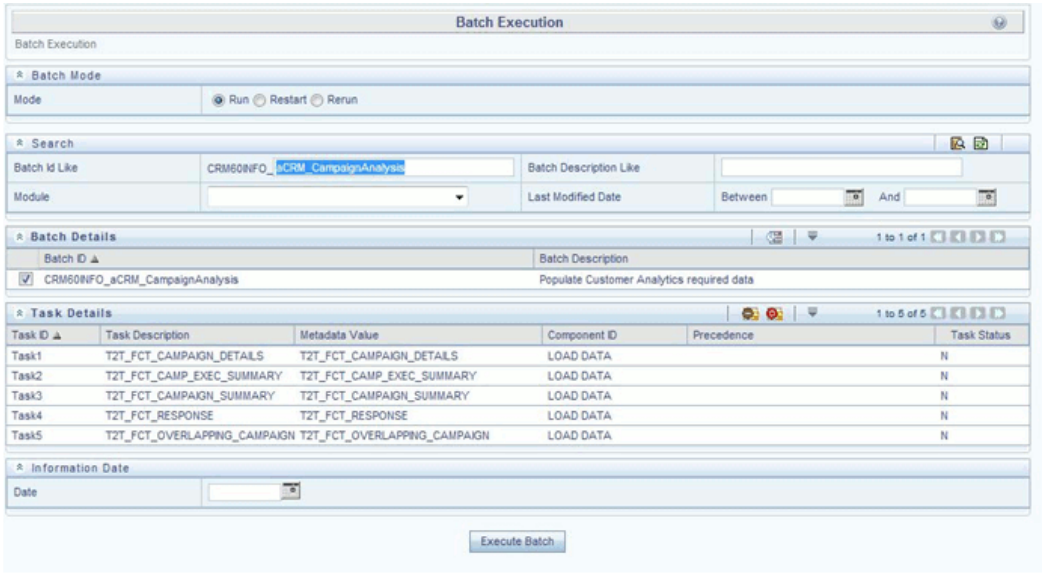
For more information, see *Time Dimension Population* chapter for details on populating DIM_DATES dimension table.

See *Download Specification* for identifying fields required in Stage Customer Master and Stage Customer Details for the purpose of Customer Insight Application(s).

Executing the Fact Application Population T2T

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen).

A seeded batch, **<Infodom>_aCRM_CampaignAnalysis – Task5** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the **Home** menu, click **Operations** and select **Batch Maintenance**.
2. Click **New Batch** ('+' symbol in Batch Name container). Enter the **Batch Name** and **Description**.
3. Click **Save**.
4. Click the check box in the **Batch Name** container to select the **Batch**, you created in the earlier step.
5. Enter the **Task ID** and **Description**.
6. Select **Load Data** from the Components list.
7. Select the following from the Dynamic Parameters List and click **Save**.
   - **Datastore Type** - Select the appropriate datastore from the list.
   - **Datastore Name** - Select the appropriate name from the list.
   - **IP address** - Select the IP address from the list.
   - **Load Mode** - Select **Table to Table** from the list.
   - **Source Name** - Select **<T2T Source Name>** from the list.
   - **File Name** - Select the T2T name 'T2T_OVERLAPPING_CAMPAIGN', you want to process.

8. Data file name will be blank for any Table to Table Load mode.

   Default value refers to any parameter that has to be passed to T2T. It has to be blank.

9. Execute the batch created in the preceding steps.

For more information, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are:

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory:

$FIC_DB_HOME/log/t2t.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_OVERLAPPING_CAMPAIGN$

> **Note:** For more information on configuration and execution of a batch, see Oracle Financial Services Analytical Applications Infrastructure User Guide.

Fact Cross Sell Score

Fact Cross Sell Score entity stores Cross Sell Scores of the customers between product types. This fact entity is loaded from Fact Common Account Summary table. The T2T loads data required for predictive models. The predictive models make use of this data for deriving the cross sell score between the product types for a customer and the cross sell scores are updated back in this fact.

The following table lists the seeded T2T Definitions with related Source Table and Destination table:

T2T Definition Name	Source Table	Destination Table
T2T_XSELL_CARDS_TO_CASA	FCT_COMMON_ACCOUNT_SUMMARY	FCT_XSELL_SCORE
T2T_XSELL_TD_TO_CARDS	FCT_COMMON_ACCOUNT_SUMMARY	FCT_XSELL_SCORE
T2T_XSELL_CARDS_TO_MORT	FCT_COMMON_ACCOUNT_SUMMARY	FCT_XSELL_SCORE
T2T_XSELL_CASA_TO_CARDS	FCT_COMMON_ACCOUNT_SUMMARY	FCT_XSELL_SCORE
T2T_XSELL_CASA_TO_MORT	FCT_COMMON_ACCOUNT_SUMMARY	FCT_XSELL_SCORE
T2T_XSELL_MORT_TO_CARDS	FCT_COMMON_ACCOUNT_SUMMARY	FCT_XSELL_SCORE

For detailed structure of the earlier tables, see Customer Insight Erwin Data Model.

Prerequisites

Following are the lists of tables used in the population of Fact Cross Sell Score and these tables are required to be loaded prior to running the T2T:

- FCT_COMMON_ACCOUNT_SUMMARY

For details on populating dimension tables like DIM_CUSTOMER, DIM_BANDS, and so on, refer to Dimension Tables Population section under Dimension Loading Process chapter.

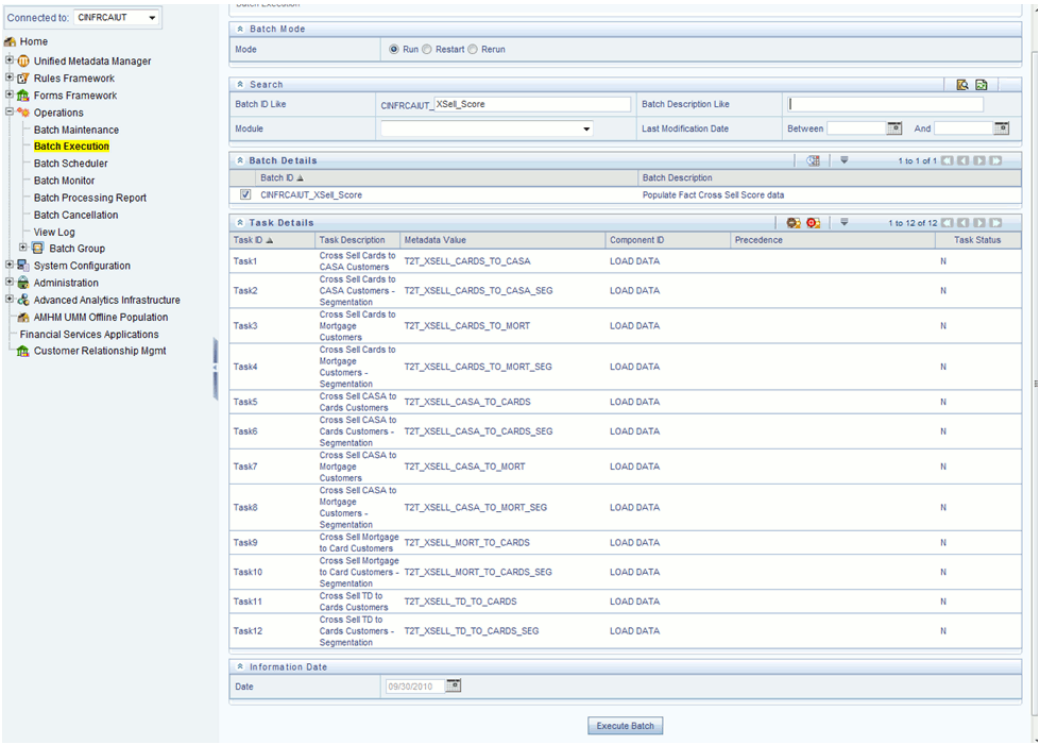
For more information on populating account dimension, refer to Account Dimension Population, chapter.

For details on populating DIM_DATES dimension table, refer to Time Dimension Population, page 4-1 chapter .

Executing the Fact Cross Sell Score Population T2Ts

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed

through the application Batch Operations screen), a seeded batch, **<Infodom>_ XSell_Score** has to be executed for the required MIS Date.



Alternatively, following steps will help you create a new batch:

1. From the Home menu, click Operations and select Batch Maintenance.
2. Click New Batch ('+' symbol in Batch Name container). Enter the Batch Name and Description.
3. Click Save.
4. Click the check box in the Batch Name container to select the Batch, you created in the earlier step.
5. Enter the Task ID and Description.
6. Select Load Data from the Components list.
7. Select the following from the Dynamic Parameters List and click Save:
   - Datastore Type - Select the appropriate datastore from the list.
   - Datastore Name - Select the appropriate name from the list.

- IP address - Select the IP address from the list.
- Load Mode - Select Table to Table from the list.
- Source Name - Select <T2T Source Name> from the list.
- File Name - Select the T2T name for the source stage channel table you want to process.

Data file name will be blank for any Table to Table Load mode and default value should be null.

8. Steps 4 to 8 must be repeated for adding the remaining 11 T2Ts within the same batch definition.

9. Execute the batch created in the preceding steps.

   For more information, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Checking the Execution Status

The status of execution can be monitored using the Batch Monitor screen.

The status messages in Batch Monitor are:

- N - Not Started
- O - On Going
- F - Failure
- S – Success

The execution log can be accessed on the application server in the following directory: *$FIC_DB_HOME/log/t2t*.

The file name will have the batch execution id.

The following tables can be queried for errors:

- FCT_XSELL_SCORE

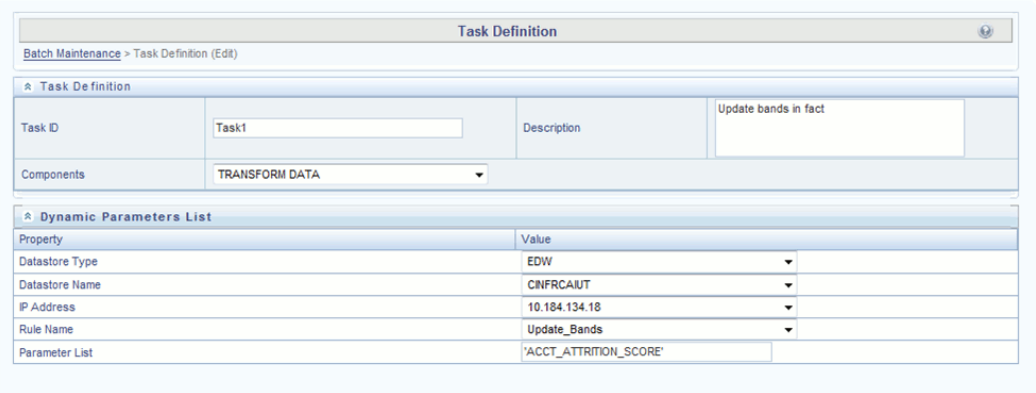
> **Note:** For more information on configuration and execution of a batch, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Update Bands in Fact Tables

You have to update the band values based on the scores in certain cases. For instance, a predictive models execution derive the score values, which are updated to the fact tables. Based on the new score values, it is necessary to have the new band values updated in the fact tables. A Data Transformation "Update_Bands" is seeded to update the bands in fact tables. Update of bands in fact tables make use of a setup table FSI_BAND_SETUP_DETAILS.

Column Name	Data Type	Column Description
TABLE_NAME (PK)	VARCHAR2(30)	This stores the name of the table of the source and the target column.
SRC_COLUMN_NAME (PK)	VARCHAR2(30)	This stores the name of the source column based on which the bands would be updated in the target column.
TGT_COLUMN_NAME (PK)	VARCHAR2(30)	This stores the name of the target column where the bands are updated
BAND_TYPE	VARCHAR2(30)	This stores the band type which has to be used from DIM_BANDS table.

Seeded entries into FSI_BAND_SETUP_DETAILS table are provided with the installer to update attrition score band in the table FCT_CRM_ACCOUNT_SUMMARY and product propensity score band & product propensity segment band in FCT_XSELL_SCORE table.

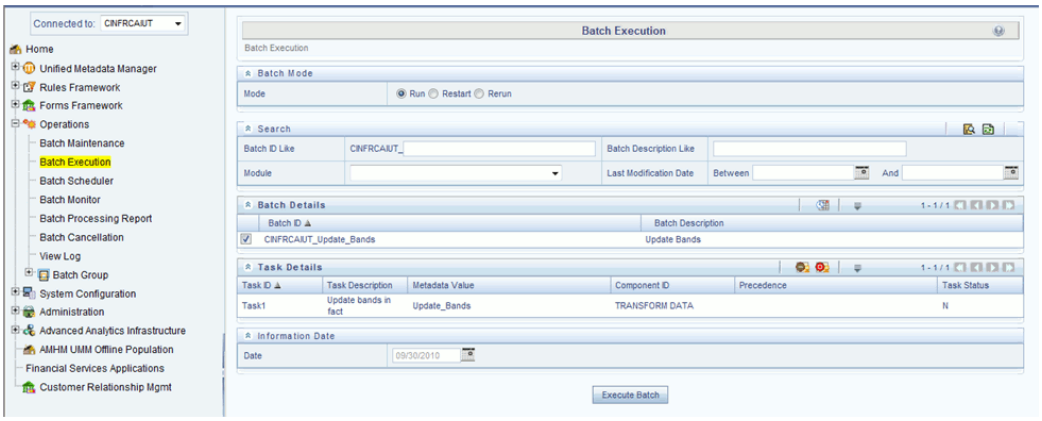


Execute the seeded batch **<Infodom>_Update_Bands**. The parameters passed to DT " Update_Bands" are:

- **Batch Run ID** - This is passed internally to the DT from the Batch in Operations modules of OFSAAI.
- **FIC MIS Date/As of Date** - This is passed internally to the DT from the Batch in Operations modules of OFSAAI.
- **Band Type** - You have to provide the values in Parameter List of *Batch Maintenance* screen.

  The following values can be entered:

Band Type to be updated	Parameter to be passed in DT
Account Attrition Score Band	ACCT_ATTRITION_SCORE
Product Propensity Score Band	PRODUCT_PROP_SCORE



You can also define a new Batch and an underlying Task definition from the *Batch Maintenance* window of OFSAAI.

For more information on defining a new Batch, refer to How to Define a Batch, section.

To define a new task for a selected Batch definition:

1. Select the check box adjacent to the newly created **Batch Name** in the *Batch Maintenance* window.
2. Click **Add** (+) button from the *Task Details* grid.

   The *Task Definition* window is displayed.
3. Enter the **Task ID** and **Description**.
4. Select the **TRANSFORM DATA** component from the Components drop down list.
5. In the Dynamic Parameters List, select the appropriate **Datastore Type** from the drop down list
6. Select the appropriate **Datastore Name** from the drop down list. Usually it is the Information Domain name.
7. Select the **IP Address** from the drop down list.
8. Select the Rule Name **Update_Bands** from the drop down list.
9. Enter the **Parameter List** details as mentioned below:
   - **Band Type** - Refer above for the values which can be passed.

     Note: Batch run ID and **As Of Date** are passed internally by the batch to the Data Transformation task.

10. Click **Save**.

    The Task definition is saved for the selected Batch.

11. Execute the Batch.

    You can execute a Batch definition from the *Batch Execution* section of *OFSAAI Operations* module.

9

Predictive Modeling

Introduction

OFS Customer Analytics currently comprises of the following Predictive Models:

- Cross Sell Model
- Account Attrition Model
- Pre-payment Analysis
- Channel Propensity Analysis
- Product Association Modeling
- Account Value Forecasting and LTV

Cross Sell Model

Cross Sell Model predicts the propensity of a Customer of a Source Product Type to purchase a product in the Target Product Type. The propensity is a probability value between 0 and 1.

Technique: Logistic Regression

Logistic regression is a statistical technique for predicting the outcome of a categorical dependent variable (a dependent variable that can take on a limited number of categories) based on one or more predictor variables (independent variables). The probabilities describing the possible outcome of a single trial are modeled, as a function of explanatory variables, using a logistic function. Logistic regression can be binomial or multinomial. In Cross Sell Model, binomial logistic regression is used.

Dependent Variable

The Dependent Variable for this model is defined as 1 if a customer who owned a product of the Source Product Type all through the historic period considered and just owned a product of the Target Product Type in the current period considered and 0 otherwise.

For example, a customer who owned a Platinum Credit Card (Product Type CARDS) all through the history (say 3 months) and opened a Savings Bank Account (Product Type CASA) 1 month ago (after the end of the historic period) falls in this category.

Data Considered

Historic Period to be considered is an input parameter to the model. The data on which prediction happens is the last available month for which data is available. The data on which the model fitting happens is all the data prior to the prediction period.

Independent Variables

Independent variables for these models are variables that describe Customer Demographics, Account/Customer Activity related information. The relevant variables for a specific Source - Target Combination are chosen appropriately.

The numerical independent variables are averaged over the entire historic calibration period. Categorical variables such as Gender, Product, Marital Status, and Profession are considered as segments and calibration for the model is done group-wise for each relevant combination of these segments.

Source Product Type - Target Product Type combinations

Following Source Product Type - Target Product Type combinations are currently modeled in OFS Customer Analytics:

- Cross Sell CASA to Cards
- Cross Sell Cards to CASA
- Cross Sell Cards to Mortgage
- Cross Sell CASA to Mortgage
- Cross Sell Mortgage to Cards
- Cross Sell TD to Cards

For detailed information on the technique and variables used, refer to the *Model Metadata Sheet*.

Attrition Model

Attrition Model predicts the probability of a Customer of a Product Type to churn i.e. close the account. The probability is a value between 0 and 1.

Technique: Logistic Regression

In Attrition Model, binomial logistic regression is used.

Dependent Variable

The Dependent Variable for this model is defined as 1 if an account of a Product Type has been open all through the historic period considered and has just been closed in the current period considered and 0 otherwise.

For example, a Platinum Credit Card account (Product Type CARDS) has been open all through the history (say 3 months) and has been closed 1 month ago (after the end of the historic period) falls in this category.

Data Considered

Historic Period to be considered is an input parameter to the model. The data on which prediction happens is the last available month for which data is available. The data on which the model fitting happens is all the data prior to the prediction period.

Independent Variables

Independent variables for these models are variables that describe Customer Demographics, Account/Customer Activity related information. The relevant variables for a specific Product Type are chosen appropriately.

The numerical independent variables are averaged over the entire historic calibration period. Categorical variables such as Gender, Product, Marital Status, Profession are considered as segments and calibration for the model is done group-wise for each relevant combination of these segments.

Product Types

Following Product Types are currently considered for Attrition in OFS Customer Analytics

- Account Attrition - Cards
- Account Attrition - TD
- Account Attrition - CASA

For detailed information on the technique and variables used, refer to the *Model Metadata Sheet*.

Pre Payment Analysis

Pre Payment Model predicts the probability of a Customer to pre-pay on his/her loan . The probability is a value between 0 and 1.

Technique: Logistic Regression

In Pre Payment Model, binomial logistic regression is used.

Dependent Variable

The Dependent Variable for this model is defined as 1 if a loan account of a Product Type LOANS has been closed before completion of 95% of the maturity period in the historic period considered and 0 otherwise.

Data Considered

Historic Period to be considered is an input parameter to the model. The data on which prediction happens is the last available month for which data is available. The data on which the model fit.

Independent Variables

Independent variables for this models are variables that describe Customer Demographics, Account/Customer Activity related information. The numerical independent variables are averaged over the entire historic calibration period. Categorical variables such as Gender, Product, Marital Status, and Profession are considered as segments and calibration for the model is done group-wise for each relevant combination of these segments.

For detailed information on the technique and variables used, refer to the *Model Metadata Sheet*.

Channel Propensity Analysis

Channel Propensity Model predicts the relative probability of a Customer to respond through a particular response channel. The probability is obtained for a Customer of a particular Product Type who was part of a campaign of a particular Campaign Type. The probability is a value between 0 and 1. Since the result obtained is the set of relative probabilities, sum of the probabilities of all the channels together will be 1.

For example, a customer belonging to a particular product type who was part of a particular campaign type displayed Channel Propensities of 0.5 for Telemarketing, 0.3

for Email, and 0.2 for Direct Mail.

Technique : Multinomial Logistic Regression

Multinomial Logistic Regression is a classification method that generalizes logistic regression to multi-class problems, that is, with more than two possible discrete outcomes. That is, it is a model that is used to predict the probabilities of the different possible outcomes of a categorically distributed dependent variable.

Dependent Variable

The Dependent Variable for this model is defined as the response channel through which a customer has responded.

Data Considered

Historic Period to be considered is an input parameter to the model. The data on which prediction happens is the last available month for which data is available. The data on which the model fitting happens is all the data prior to the prediction period.

Independent Variables

Independent variables for this models are variables that describe Customer Demographics, Campaign/Channel related statistics, Account/Customer Activity related information. The numerical independent variables are averaged over the entire historic calibration period. Categorical variables such as Gender, Product, Marital Status, and Profession are considered as segments and calibration for the model is done group-wise for each relevant combination of these segments.

For detailed information on the technique and variables used, refer to the *Model Metadata Sheet*.

Product Association Modeling

Product Association Model provides a list of Product Basket - Target Product combinations that are most likely to occur based on historic data. For example, a Credit Card Product being sold to a customer who owns a Term Deposit account, a Mortgage account and a Autoloan account emerges as one of the most common combination of Product Basket - Target Product.

Technique : Apriori

Apriori is an algorithm for frequent item set mining and association rule learning over transactional databases. It proceeds by identifying the frequent individual items in the database and extending them to larger and larger item sets as long as those item sets appear sufficiently often in the database.

Data Considered

Complete historic data available is used. The number of significant itemsets obtained will vary based on the input parameters: Support Probability and Confidence Probability.

For detailed information on the technique and variables used, refer to the *Model Metadata Sheet*.

Account Forecast Modeling

Account Forecast Model estimates the future values of a time series. The future values are obtained for a desired number of lead periods considering a desired (but sufficient) amount of history.

Technique : ARIMA

Autoregressive Integrated Moving Average (ARIMA) model is fitted to a time series to predict future points in the series. The model is generally referred to as an ARIMA (p,d,q) model where parameters p, d, and q are non-negative integers that refer to the order of the autoregressive, integrated, and moving average parts of the model respectively.

Time Series

The Time Series for this model is the reporting line value for each reporting line of each account.

Data Considered

The accounts that are considered for ARIMA fall into one of the three categories:

- The account has sufficient historic data points to be considering its own history for future value estimation. (Typically this period is 2 years)
- The account has insufficient historic data points to consider its own data for forecasting, but has enough to be estimated based on other accounts that fall into its segment. Typically if an account has been open for at least 6
    - belong to the same segment as that account
    - fall into point 1 above
    - have been opened less than 24 months ago
- The account does not have significant historic data points to be considered for

future values estimation. Typically, accounts that have been opened less than 6 months ago.

For detailed information on the technique and variables used, refer to the *Model Metadata Sheet*.

For seeded techniques of Advanced Analytics Infrastructure (AAAI), the models could be of the type NAG or R. Default is set to NAG. This configuration change needs to be done in a database table in the CONFIG schema of OFSAAI to be able to see the R models. The following query needs to be run:

```
UPDATE CONFIGURATION SET PARAMVALUE='R' WHERE
PARAMNAME='F_MODEL_TYPE'

/

COMMIT

/
```

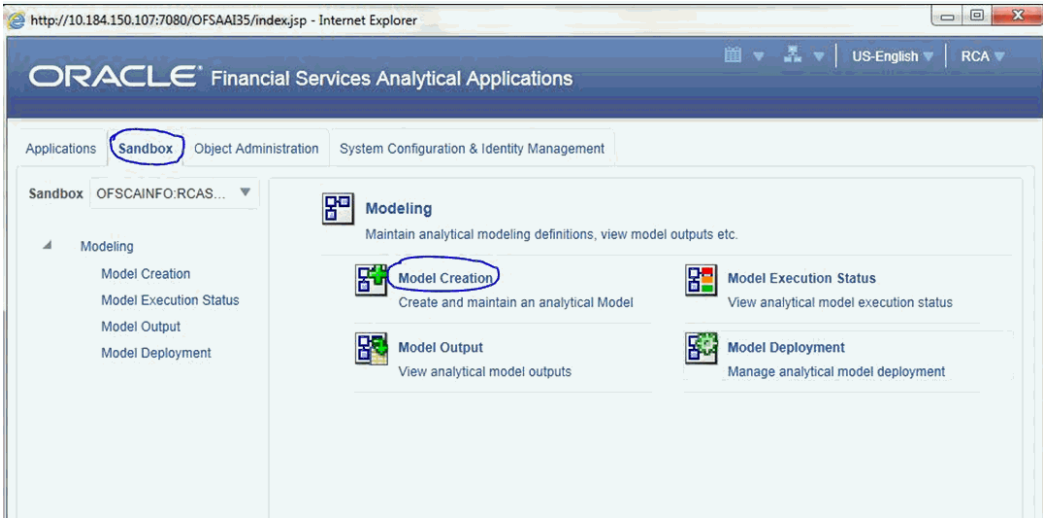
10

Model Creation and Execution

Introduction

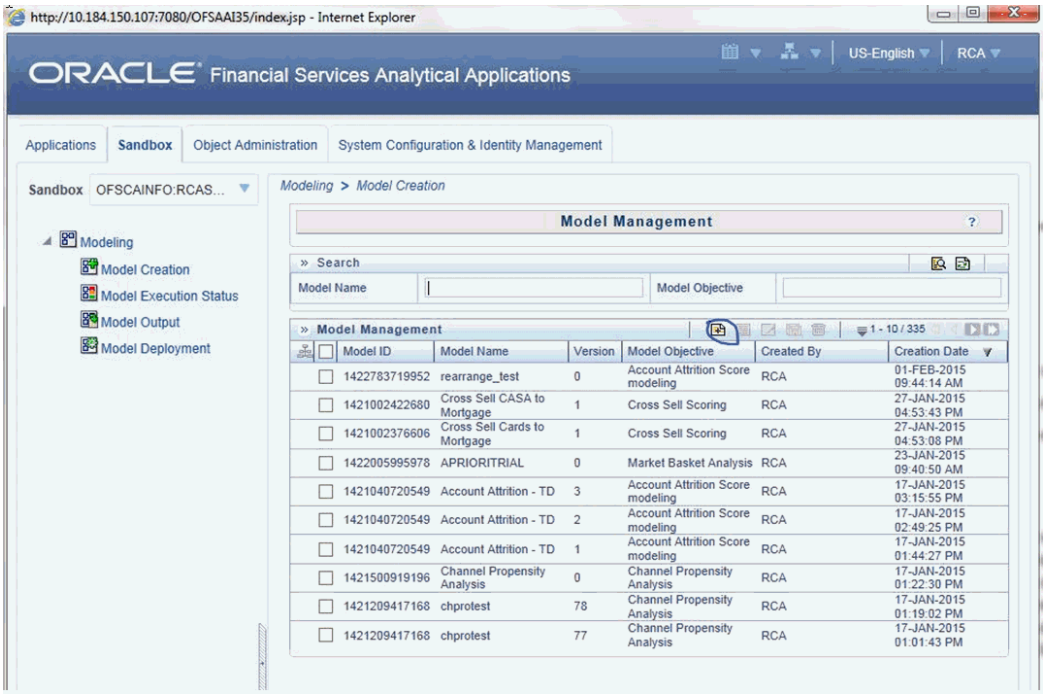
Models are built based on various techniques associated with executable and related parameters based on the business purpose. In the Infrastructure system models are defined in the metadata abstraction layer using the underlying metadata objects such as Measures, Hierarchies, and Datasets along with statistical techniques

Model Creation in the Sandbox Tab of Infrastructure system facilitates you to construct multiple models based on the required parameters and output specifications



The Model Creation screen displays model definition details such as Model ID, Model Name, Version, Model Objective, Created By and Created Date. You can also view, modify, and delete model definitions.

You can also make use of Search and Pagination options to search for a specific model or view the list of existing model definitions within the system.



Adding a New Model

Refer to the following sections for adding a new model.

Create Model Definition

To create a model definition in the **Model Creation** screen, follow these steps:

1. Select **Add** button from the Model Management toolbar. This button is disabled if you have selected any Model ID in the grid. The **Model Definition New** screen is displayed.

2. Enter the details for the model:
   - Name
   - Description
   - Objective (to add a new objective, right click on the heading and add)
   - Dataset
   - Technique – Can be defined two ways
     - Write the technique in the Model Definition Screen itself in the Model

Script section

- Define a technique in the Technique Registration screen

  Navigate to **Applications >Model Management>Technique Registration>Add>Script Console**.

- Write the script for technique in either the Model Script (Model Screen) / Script Console (Technique Registration) section.
- Add the inputs and variables as applicable to the script

  Note: For information on managing variables, refer to *Chapter 6: Managing Variables in Oracle Financial Services Enterprise Modeling User Guide*

- Click **OK** and save the model.

Modify Model Definition

You can update the model definition details of an existing Model in the Model Definition screen.

1. Select the check box adjacent to the Model ID whose details are to be updated.
2. Click **Edit** button in the Model Management toolbar. This button is disabled if you have selected multiple Model IDs.
3. Edit the Model Definition details as required. Model Name, Technique, and Model Objective are not editable. You can update the Model Description, Dataset, and variable parameters based on the technique selected.
4. Once you have updated all the necessary details in the Model Definition Edit screen, you can:
   - Select **Preview Data** to view the new Model Definition details before upload.
   - Click **Save** to update the model definition details.
   - Click **Save** and select **Execute** to process the model execution. The status of which can be verified in Model Execution Status option by accessing **Advanced Analytics Infrastructure>Modeling>Model>Model Execution Status**.

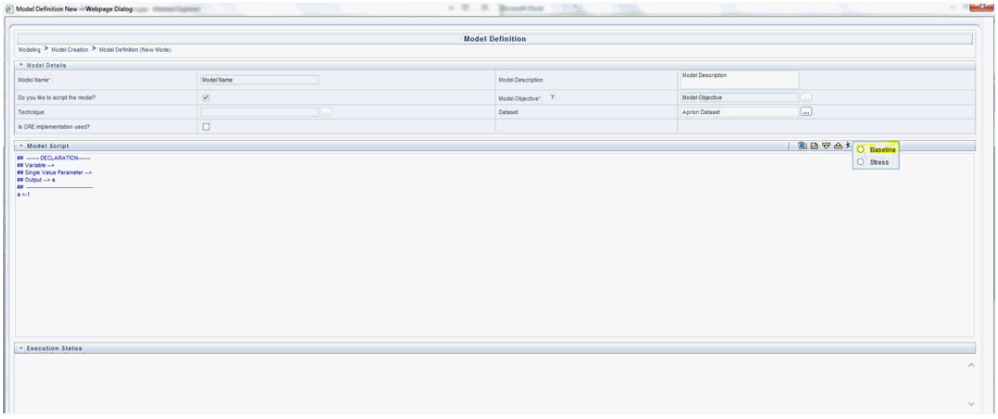
For more information, see *Model Management under Advanced Analytics Infrastructure Chapter in Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Model Execution

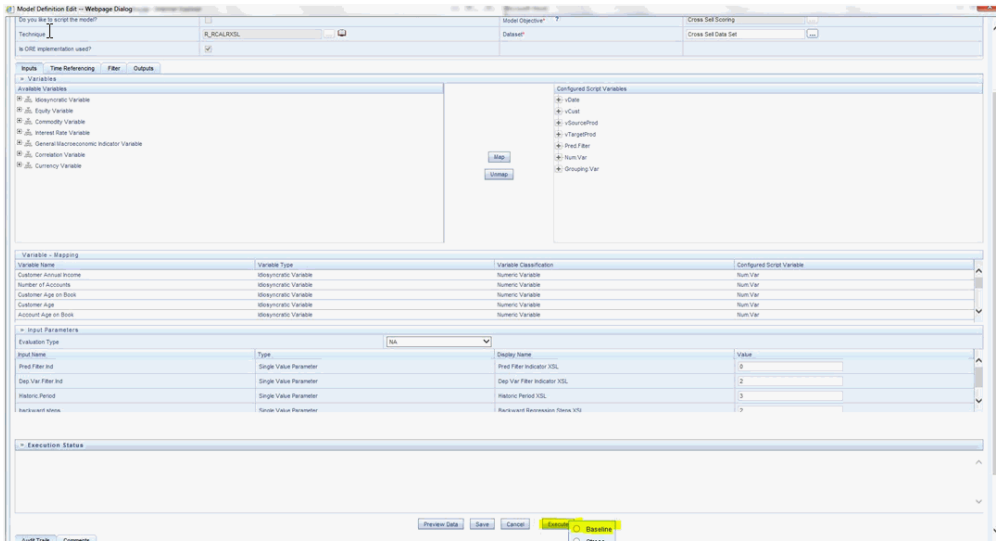
Model Execution happens in two stages: Sandbox Execution and Production Execution. Sandbox Execution of a model happens on the Sandbox Schema where the data is used to calibrate the model. Ideally the model fit in the Sandbox during Calibration is used to predict the results for the data found in Production Schema.

Model Execution (Sandbox)

1. Click the **Execute** Button (as shown below) and select **Baseline**.

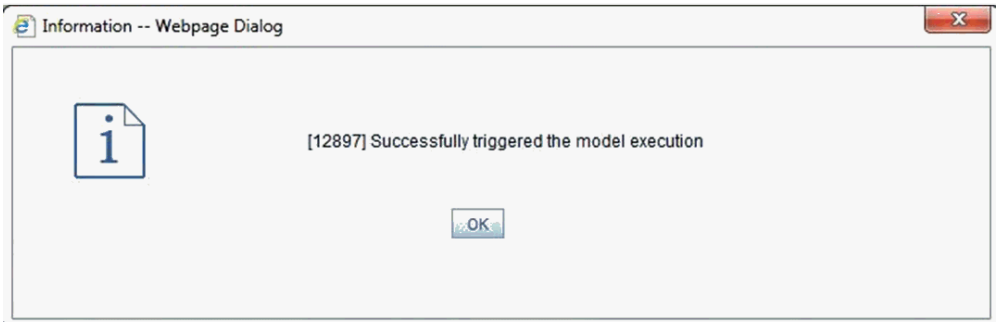


(when technique is directly written in the Modeling Screen)

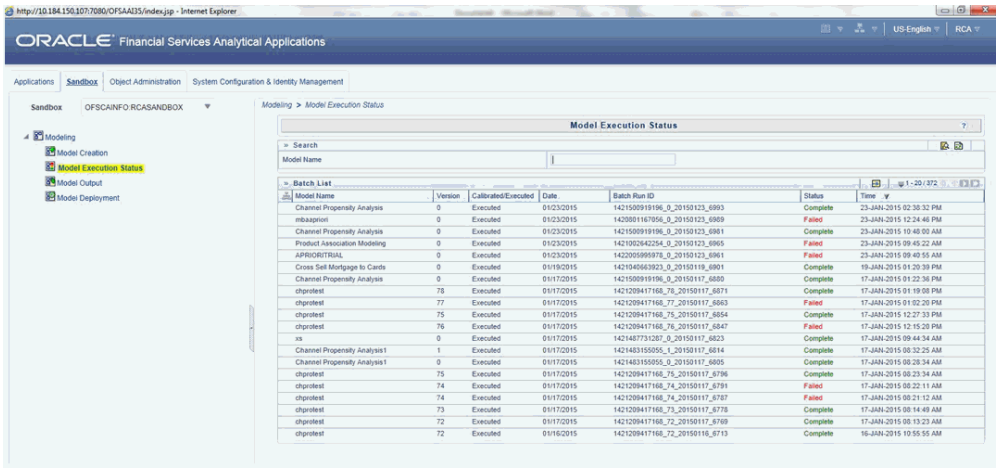


when technique is written in Technique Registration and selected in the Technique screen)

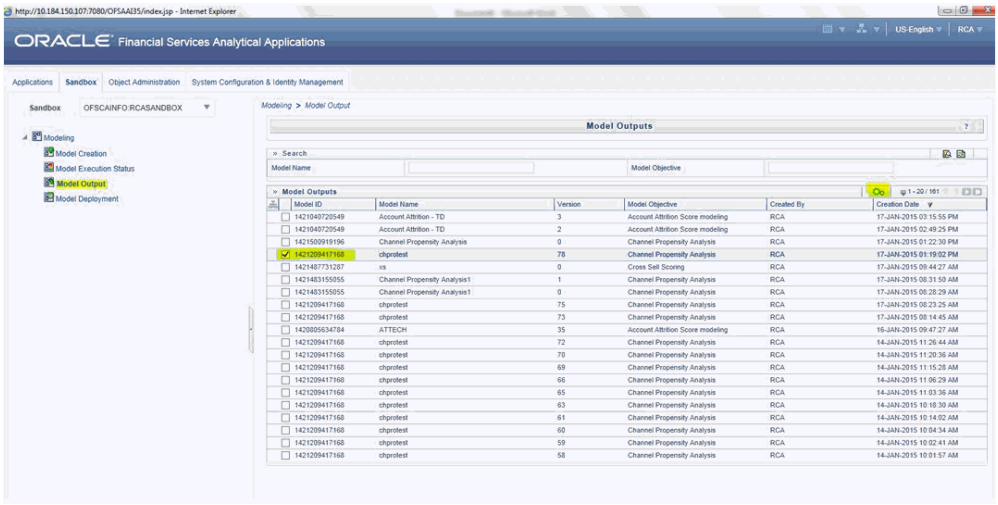
2. After the model execution is successfully triggered, the following message appears:



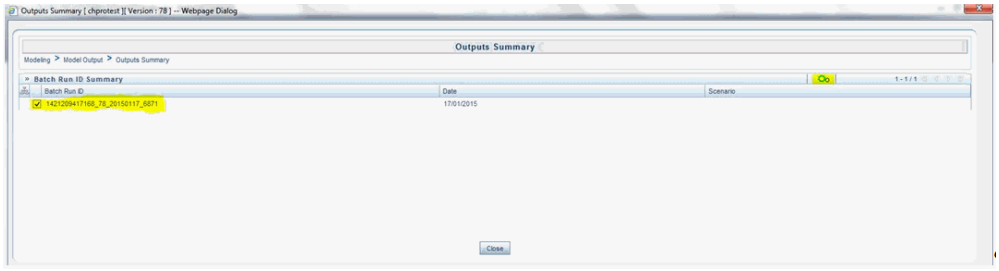
3. Check the model execution status in the "Model Execution Status" window (sort descending by date for the status of the latest execution)



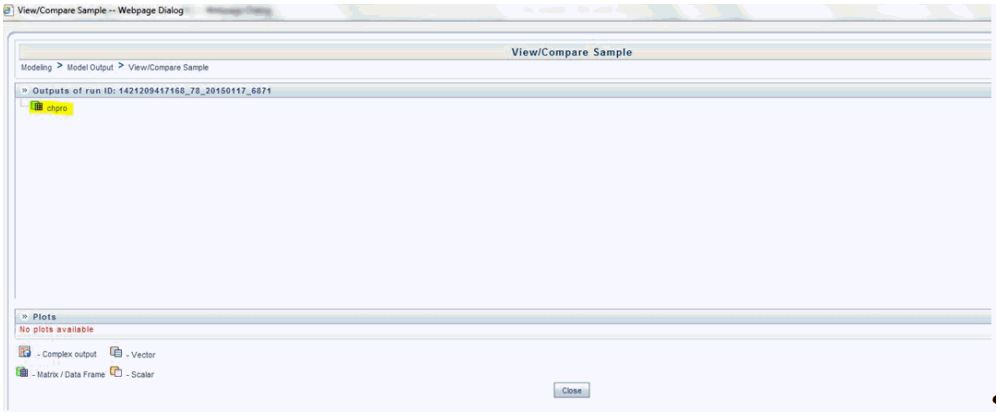
4. Once the model execution is successful, Model Output can be viewed in the Model Output screen



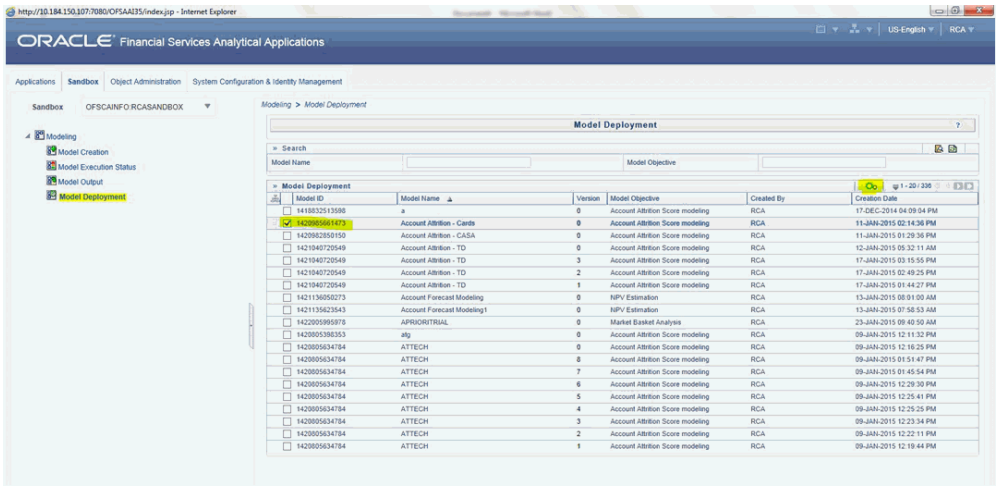
Select the execution ID for which the Output is to be viewed



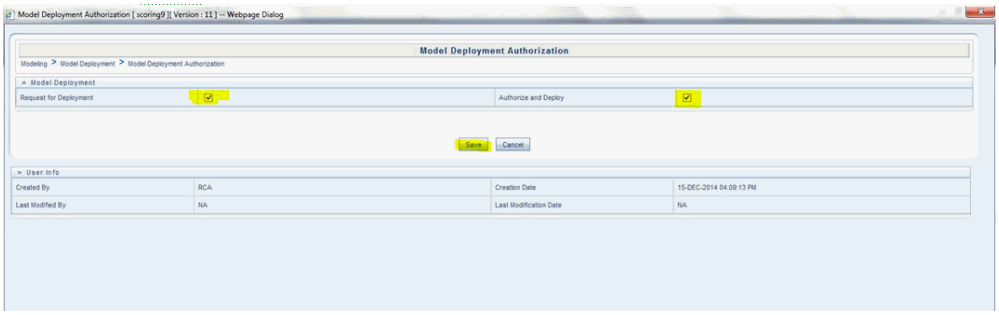
Click the Model Output desired to be viewed



5. Once the model execution is successful and it is confirmed that the model scripted is ready to be executed in the Production Schema, navigate to Model Deployment.



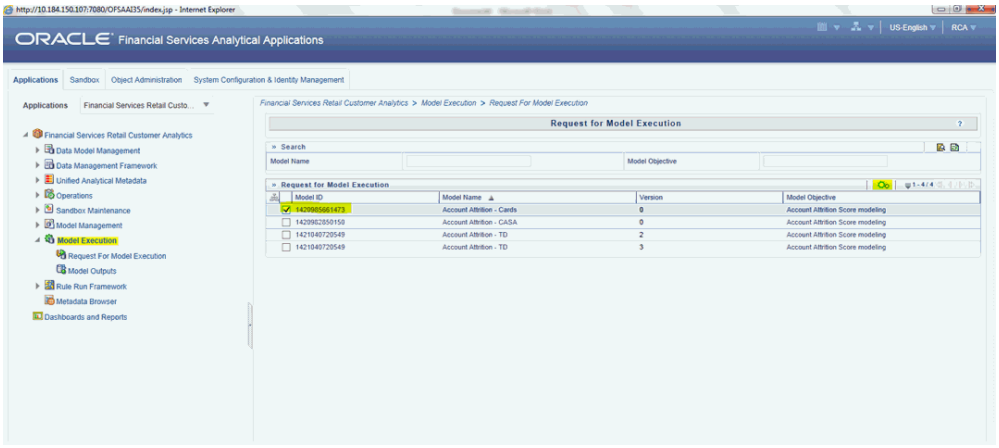
Authorize and Deploy the model to Production Schema



Model Execution (Production)

A Model becomes available for execution in the Production Infodom after it has been authorized and deployed in the sandbox. Once a request is processed for the execution in the Production Infodom, a Batch is registered for the Model. This relevant Batch can be executed to obtain the results.

1. Navigate to **Applications>Model Execution>Request for Model Execution screen**.



2. Select the check box in the Register Batch field and click **Save**. A Batch ID is created for the Model Execution.

Batch Execution

1. Navigate to Operations>Batch Execution and select the module Enterprise Modeling.

2. Find the Batch ID beginning with the same name as the Model ID in the following format: <INFODOM>_<MODEL_ID>_<MODEL_VERSION>

3. Select the desired execution date and execute the batch.

Error Logging

To verify the status of the Model Execution, navigate to the following path:

ORACLE_HOME/dbs/

where ORACLE_HOME is the home of the database server hosting Oracle R Enterprise. A file is created with the batch execution ID of the batch.

Loading Data to the Target Table

Once the Infodom Execution is complete, the results are recorded in the following tables with sequence numbers leading back to the execution process:

1. MF_MODEL_ORE_OUTPUT (Execution Summary)

2. MF_MODEL_ORE_DETAILS (Actual Output Values/Queries to produce Output Values)

Based on the sequence and reference numbers in these tables, the target table is updated. For this purpose, a Batch is triggered. The Batch is built on a process that can backtrack the relevant combination of primary keys and update the relevant records in

the target table's target column(s).

It is important to have the required records in FSI_MODEL_PARAMETERS. Refer to Model Metadata Sheet>Techniques sheets for information on what information to add to this table in case a new model is created.

There are two ways the results are expected in the Reporting Tables:

1. All the required rows are already present and the column corresponding to the score/probability needs to be updated.

2. The relevant rows are all supposed to be inserted into the table afresh.

Result Update

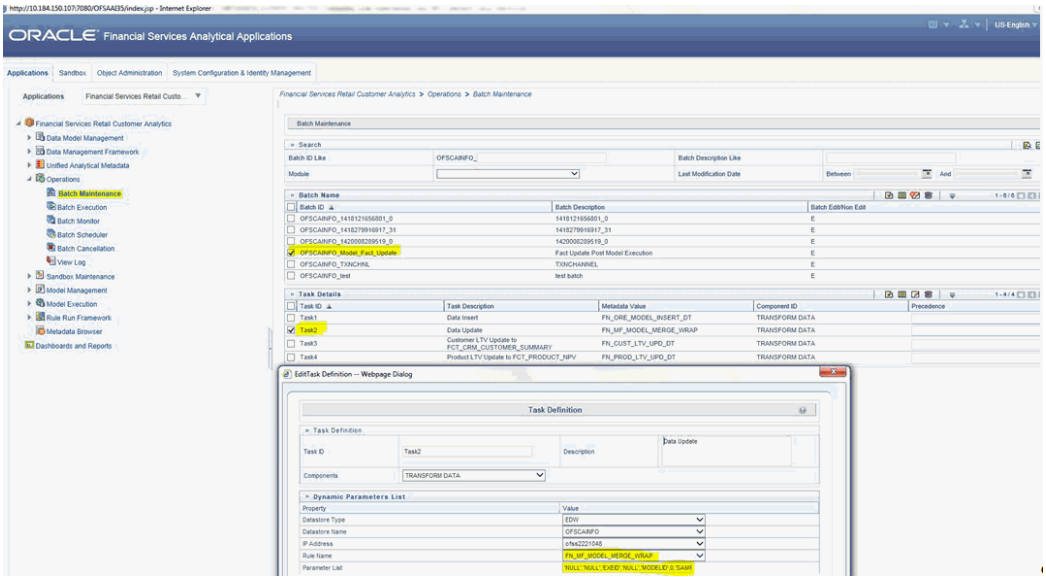
For updating result into the Fact table which already has the required rows, the name of the Batch registered for this purpose is ##INFODOM##_Model_Fact_Update – Task2. This batch accepts the input parameter list and based on this list it identifies the specific Model to update.

The list of parameters required are the following: (This is listed in the exact order)

Parameter	Sample Value/Column name from MF_MODEL_ORE_OUTPUT
Batch ID	'Sample_Batch'
Execution Date	FIC_MIS_DATE
Run ID	''
Process ID	''
Run Execution ID	V_BATCH_RUN_ID
Run Key	''
Model ID	V_MODEL_ID
Model Version	N_MODEL_VERSION
Sample ID	''
Object Name	V_OBJECT_NAME

Parameter	Sample Value/Column name from MF_MODEL_ORE_OUTPUT
Run Key	-1

Execute the Batch created to update data in the target table from the temporary table.

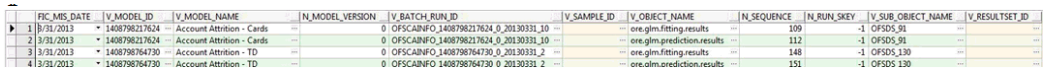


The parameters list must be updated with details relevant to the specific Model. These details are obtained from the temporary table - MF_MODEL_ORE_OUTPUT as mentioned in the table above.

Example

Example

The following is an example of a successful model execution from MF_MODEL_ORE_OUTPUT



	FIC_MIS_DATE	V_MODEL_ID	V_MODEL_NAME	N_MODEL_VERSION	V_BATCH_RUN_ID	V_SAMPLE_ID	V_OBJECT_NAME	N_SEQUENCE	N_RUN_SKEY	V_SUB_OBJECT_NAME	V_RESULTSET_ID
1	3/31/2013	1408798217624	Account Attrition - Cards	0	OFSCAINFO_1408798217624_0_20130331_10		ore.glm.fitting.results	109	-1	OFSDS_91	
2	3/31/2013	1408798217624	Account Attrition - Cards	0	OFSCAINFO_1408798217624_0_20130331_10		ore.glm.prediction.results	112	-1	OFSDS_91	
3	3/31/2013	1408798764730	Account Attrition - TD	0	OFSCAINFO_1408798764730_0_20130331_2		ore.glm.fitting.results	148	-1	OFSDS_130	
4	3/31/2013	1408798764730	Account Attrition - TD	0	OFSCAINFO_1408798764730_0_20130331_2		ore.glm.prediction.results	151	-1	OFSDS_130	

Result Insert

For inserting result data into the Fact table afresh, the name of the Batch registered for this purpose is ##INFODOM##_Model_Fact_Update – Task1. This batch accepts the input parameter list and based on this list it identifies the specific Model to update.

The list of parameters required are the following (This is listed in the exact order)

Parameter	Sample Value/Column name from MF_MODEL_ORE_OUTPUT
Batch ID	'Sample_Batch'
Execution Date	FIC_MIS_DATE
Run ID	''
Process ID	''
Run Execution ID	V_BATCH_RUN_ID
Run Key	''
Model ID	V_MODEL_ID
Model Version	N_MODEL_VERSION
Run Key	

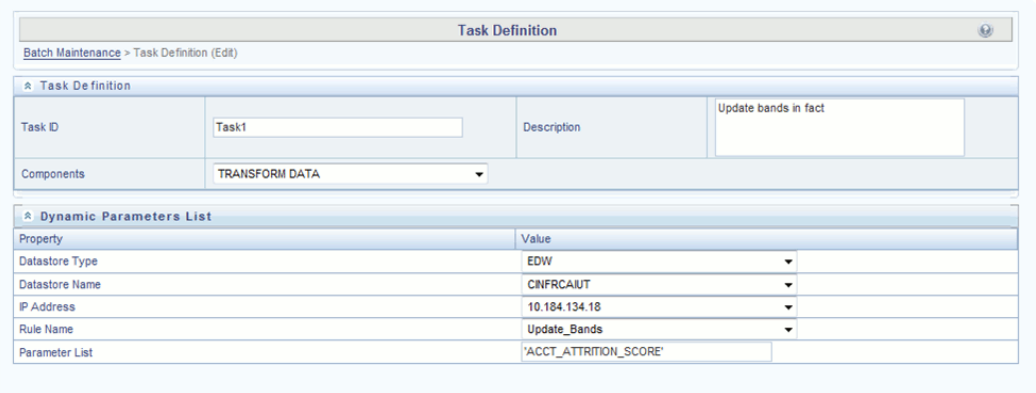
Update Bands in Fact Tables

You have to update the band values based on the scores in certain cases. For instance, a predictive models execution derive the score values, which are updated to the fact tables. Based on the new score values, it is necessary to have the new band values updated in the fact tables. A Data Transformation "Update_Bands" is seeded to update the bands in fact tables. Update of bands in fact tables make use of a setup table FSI_BAND_SETUP_DETAILS.

Column Name	Data Type	Column Description
TABLE_NAME (PK)	VARCHAR2(30)	This stores the name of the table of the source and the target column.

Column Name	Data Type	Column Description
SRC_COLUMN_NAME (PK)	VARCHAR2(30)	This stores the name of the source column based on which the bands would be updated in the target column.
TGT_COLUMN_NAME (PK)	VARCHAR2(30)	This stores the name of the target column where the bands are updated
BAND_TYPE	VARCHAR2(30)	This stores the band type which has to be used from DIM_BANDS table.

Seeded entries into FSI_BAND_SETUP_DETAILS table are provided with the installer to update attrition score band in the table FCT_CRM_ACCOUNT_SUMMARY and product propensity score band & product propensity segment band in FCT_XSELL_SCORE table.

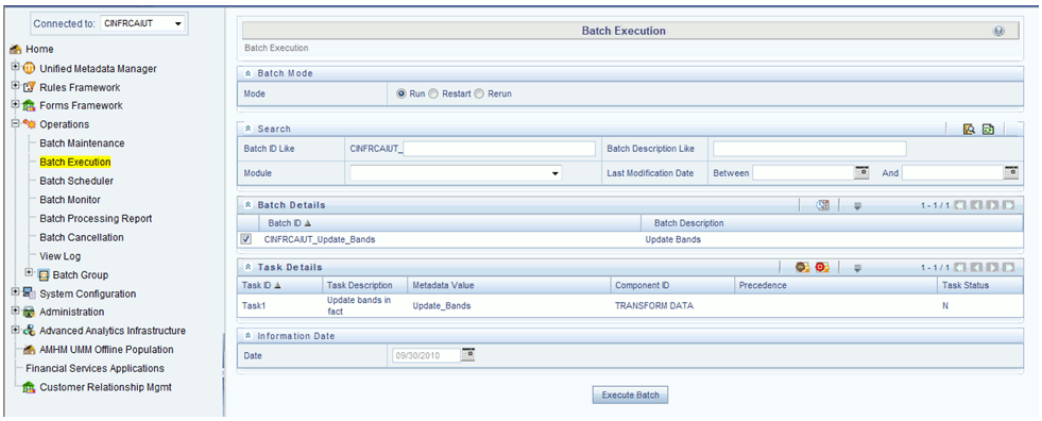


Execute the seeded batch **<Infodom>_Update_Bands**. The parameters passed to DT " Update_Bands" are:

- **Batch Run ID** - This is passed internally to the DT from the Batch in Operations modules of OFSAAI.
- **FIC MIS Date/As of Date** - This is passed internally to the DT from the Batch in Operations modules of OFSAAI.
- **Band Type** - You have to provide the values in Parameter List of *Batch Maintenance* screen.

The following values can be entered:

Band Type to be updated	Parameter to be passed in DT
Account Attrition Score Band	ACCT_ATTRITION_SCORE
Product Propensity Score Band	PRODUCT_PROP_SCORE
Product Propensity Segment Band	PRODUCT_PROP_SEG



You can also define a new Batch and an underlying Task definition from the *Batch Maintenance* window of OFSAAI.

For more information on defining a new Batch, refer to How to Define a Batch, section.

To define a new task for a selected Batch definition:

11

Overview of OFSRCA Reports

Introduction to Dashboards

Oracle Financial Services Retail Customer Analytics (OFSRCA) offers the following dashboards that organize different kinds of reports by subject area.

These reports present:

- Predictive analysis to determine cross sell/up sell scores, product, and channel propensities leveraging transactional/behavioral data.
- ROI of campaigns over time (transaction performance needs to be measured for at least over 12 months for accurate LTV predictions)
- Prospect/list scoring leveraging any internal/bureau information, cluster analysis and projected NPV.
- Customer Segmentation.
- Wallet Share (spend diversity, activation, and so on) and Attrition analysis.
- Performance tracking of current campaigns across key measures like Sales, Asset and Liability balances, Fee-based product subscriptions and sustained performance over time, Credit score distribution of new accounts sourced, and early alerts on any negative skews.

Dashboards

RCA 8.0 has been segregated into four key dashboards and each of these dashboards contains several tabs.

- Campaign Analytics

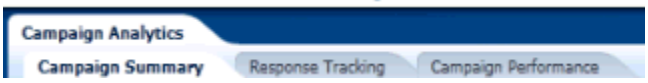
- Channel Analytics
- Customer View
- Predictive Models

Campaign Analytics

The following tabs are present in the Campaign Analytics dashboard:

- Campaign Summary
- Response Tracking
- Campaign Performance

The following screenshots display the essential nature of the available reports as per each tab:

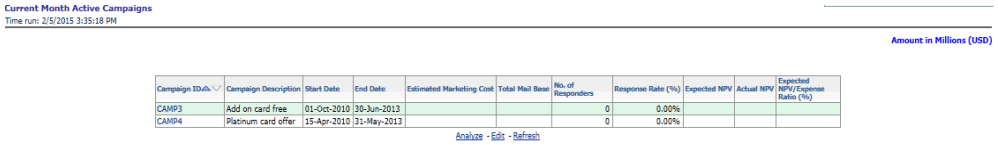


Campaign Summary

This tab contains the following reports:

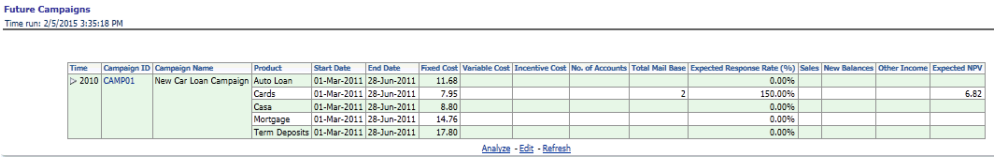
- Current Month Active Campaigns

  This report gives details of the effectiveness of active campaigns in terms response received from the target audience and the expected value to be generated.



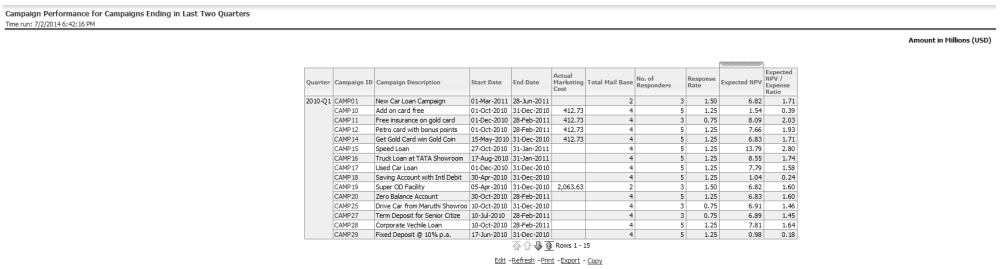
- Future Campaigns

  This report gives details of the expected effectiveness and associated costs of future campaigns.



- Campaign Performance for Campaigns Ending in Last Two Quarters

This report gives details of the effectiveness of campaigns conducted in last two quarters in terms response received from the target audience and the expected value to be generated.



Campaign Performance for Campaigns Ending in Last Two Quarters

Time run: 7/2/2014 6:42:16 PM

Amount in Millions (USD)

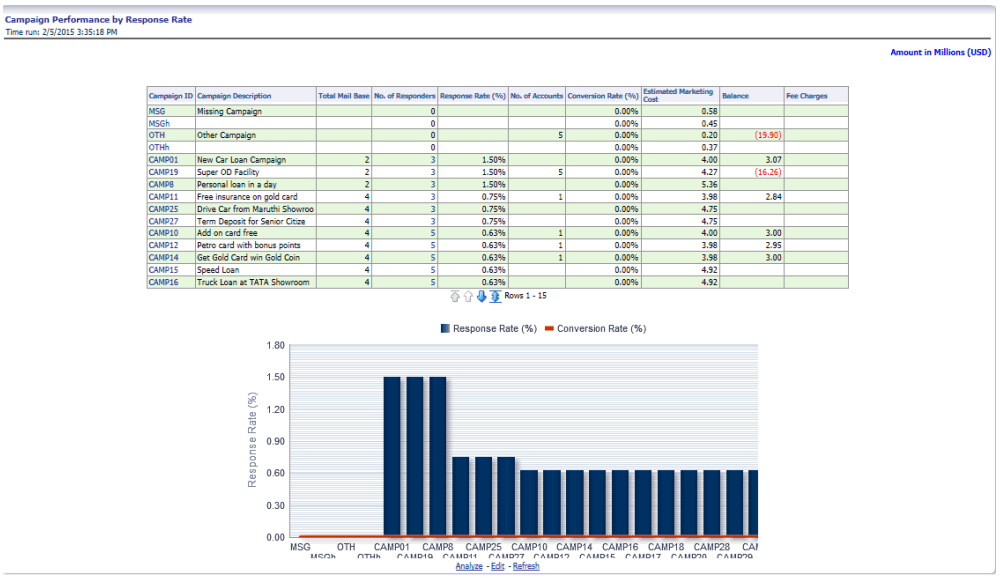
Quarter	Campaign ID	Campaign Description	Start Date	End Date	Actual Marketing Cost	Total Mail Base	No. of Responders	Response Rate	Expected NPV	Expected NPV / Expense Ratio
2010-Q1	CAMP01	New Car Loan Campaign	01-Mar-2011	28-Jun-2011		2	3	1.50	6.82	1.71
	CAMP10	Add on card free	01-Oct-2010	31-Dec-2010	412.73	4	5	1.25	1.54	0.39
	CAMP11	Free insurance on gold card	01-Dec-2010	28-Feb-2011	412.73	4	3	0.75	8.09	2.03
	CAMP12	Petro card with bonus points	01-Oct-2010	28-Feb-2011	412.73	4	5	1.25	7.66	1.93
	CAMP14	Get Gold Card win Gold Coin	15-May-2010	31-Dec-2010	412.73	4	5	1.25	6.83	1.71
	CAMP15	Speed Loan	27-Oct-2010	31-Jan-2011		4	5	1.25	13.79	2.80
	CAMP16	Truck Loan at TATA Showroom	17-Aug-2010	31-Jan-2011		4	5	1.25	8.55	1.74
	CAMP17	Used Car Loan	01-Dec-2010	31-Dec-2010		4	5	1.25	7.79	1.58
	CAMP18	Saving Account with Intl Debit	30-Apr-2010	31-Dec-2010		4	5	1.25	1.04	0.24
	CAMP19	Super OD Facility	05-Apr-2010	31-Dec-2010	2,063.63	2	3	1.50	6.82	1.60
	CAMP20	Zero Balance Account	30-Oct-2010	28-Feb-2011		4	5	1.25	6.83	1.60
	CAMP25	Drive Car from Maruthi Showroo	10-Oct-2010	31-Dec-2010		4	3	0.75	6.91	1.46
	CAMP27	Term Deposit for Senior Citze	10-Jul-2010	28-Feb-2011		4	3	0.75	6.89	1.45
	CAMP28	Corporate Vechile Loan	10-Oct-2010	28-Feb-2011		4	5	1.25	7.81	1.64
	CAMP29	Fixed Deposit @ 10% p.a.	17-Jun-2010	31-Dec-2010		4	5	1.25	0.98	0.18

Rows 1 - 15

Edit - Refresh - Print - Export - Copy

- Campaign Performance by Response Rate

  This report gives details of the effectiveness of a campaign in terms response received from the target audience.



Campaign Performance by Response Rate

Time run: 2/5/2015 3:35:18 PM

Amount in Millions (USD)

Campaign ID	Campaign Description	Total Mail Base	No. of Responders	Response Rate (%)	No. of Accounts	Conversion Rate (%)	Estimated Marketing Cost	Balance	Fee Charges
MSG	Missing Campaign		0			0.00%	0.58		
MSGh			0			0.00%	0.45		
OTH	Other Campaign		0		5	0.00%	0.20	(19.90)	
OTHh			0			0.00%	0.37		
CAMP01	New Car Loan Campaign	2	3	1.50%		0.00%	4.00	3.07	
CAMP19	Super OD Facility	2	3	1.50%	5	0.00%	4.27	(16.26)	
CAMP8	Personal loan in a day	2	3	1.50%		0.00%	5.36		
CAMP11	Free insurance on gold card	4	3	0.75%	1	0.00%	3.98	2.84	
CAMP25	Drive Car from Maruthi Showroo	4	3	0.75%		0.00%	4.75		
CAMP27	Term Deposit for Senior Citze	4	3	0.75%		0.00%	4.75		
CAMP10	Add on card free	4	5	0.63%	1	0.00%	4.00	3.00	
CAMP12	Petro card with bonus points	4	5	0.63%	1	0.00%	3.98	2.95	
CAMP14	Get Gold Card win Gold Coin	4	5	0.63%	1	0.00%	3.98	3.00	
CAMP15	Speed Loan	4	5	0.63%		0.00%	4.92		
CAMP16	Truck Loan at TATA Showroom	4	5	0.63%		0.00%	4.92		

Rows 1 - 15

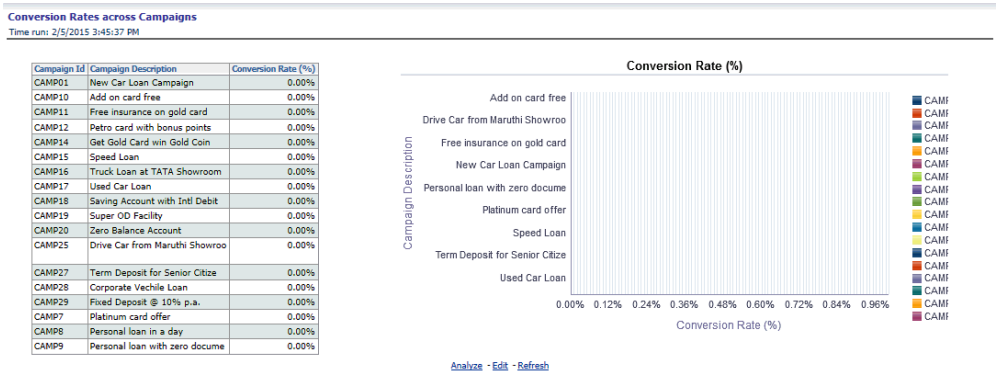
Analyze - Edit - Refresh

Response Tracking

This tab contains the following reports:

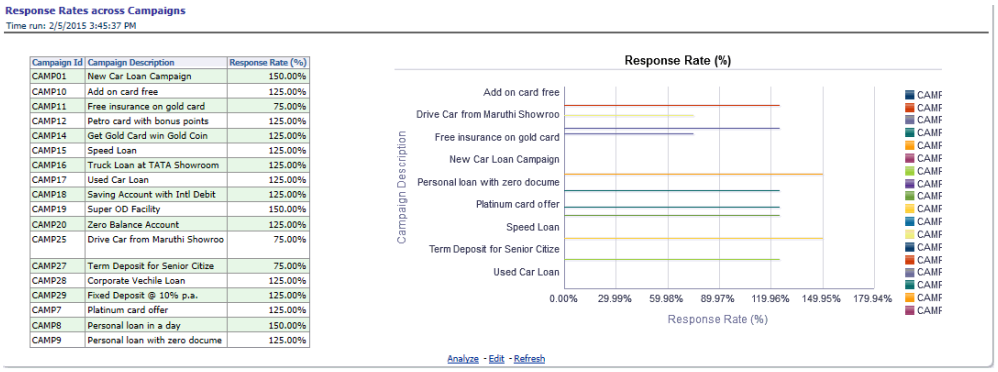
- Conversion Rates across Campaigns

  This report shows the conversion that has been achieved with respect to the leads for a campaign.



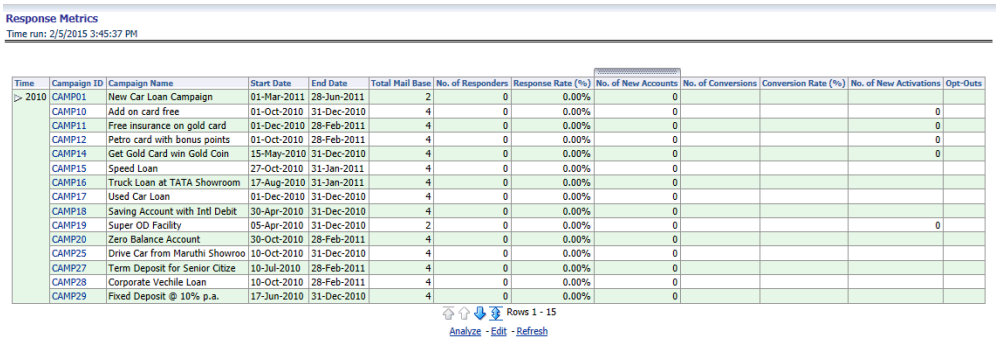
- Response Rates across Campaigns

  This report allows a comparison of conversion rate across campaigns.



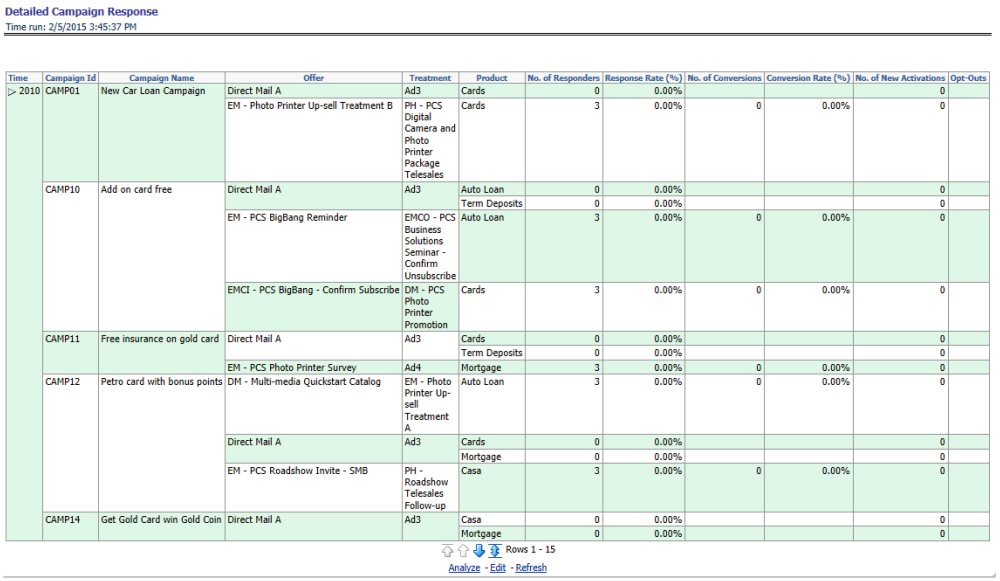
- Response Metrics

  This report provides a detailed account of the effectiveness of campaign in terms of responsiveness and conversions.



- Detailed Campaign Response

  This report provides a detailed account of the effectiveness of campaign offers in terms of responsiveness and conversions.



Detailed Campaign Response

Time run: 2/5/2015 3:45:37 PM

Time	Campaign Id	Campaign Name	Offer	Treatment	Product	No. of Responders	Response Rate (%)	No. of Conversions	Conversion Rate (%)	No. of New Activations	Opt-Outs
▷ 2010	CAMP01	New Car Loan Campaign	Direct Mail A	Ad3	Cards	0	0.00%			0	
			EM - Photo Printer Up-sell Treatment B	PH - PCS Digital Camera and Photo Printer Package Telesales	Cards	3	0.00%	0	0.00%	0	
	CAMP10	Add on card free	Direct Mail A	Ad3	Auto Loan	0	0.00%			0	
					Term Deposits	0	0.00%			0	
			EM - PCS BigBang Reminder	EMCO - PCS Business Solutions Seminar - Confirm Unsubscribe	Auto Loan	3	0.00%	0	0.00%	0	
			EMCI - PCS BigBang - Confirm Subscribe	DM - PCS Photo Printer Promotion	Cards	3	0.00%	0	0.00%	0	
	CAMP11	Free insurance on gold card	Direct Mail A	Ad3	Cards	0	0.00%			0	
					Term Deposits	0	0.00%			0	
			EM - PCS Photo Printer Survey	Ad4	Mortgage	3	0.00%	0	0.00%	0	
	CAMP12	Petro card with bonus points	DM - Multi-media Quickstart Catalog	EM - Photo Printer Up-sell Treatment A	Auto Loan	3	0.00%	0	0.00%	0	
			Direct Mail A	Ad3	Cards	0	0.00%			0	
					Mortgage	0	0.00%			0	
			EM - PCS Roadshow Invite - SMB	PH - Roadshow Telesales Follow-up	Casa	3	0.00%	0	0.00%	0	
	CAMP14	Get Gold Card win Gold Coin	Direct Mail A	Ad3	Casa	0	0.00%			0	
					Mortgage	0	0.00%			0	

Rows 1 - 15

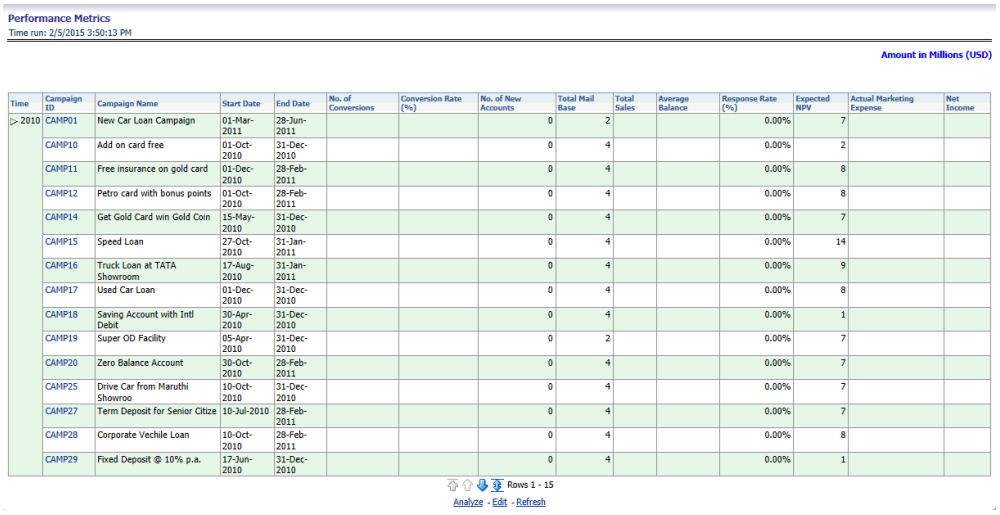
Analyze - Edit - Refresh

Campaign Performance

This tab contains the following reports:

- Performance Metrics

  This performance tracks the performance of a campaign in terms of its responsiveness of leads and value (income) generation.



Performance Metrics

Time run: 2/5/2015 3:50:13 PM

Amount in Millions (USD)

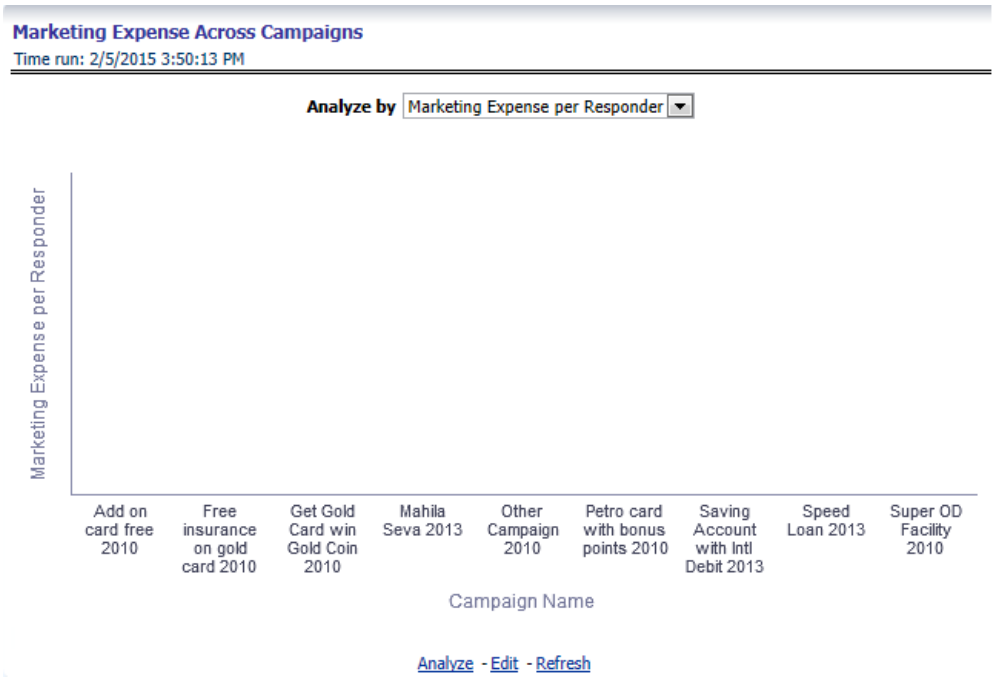
Time	Campaign ID	Campaign Name	Start Date	End Date	No. of Conversions	Conversion Rate (%)	No. of New Accounts	Total Mail Base	Total Sales	Average Balance	Response Rate (%)	Expected NPV	Actual Marketing Expense	Net Income
▷ 2010	CAMP01	New Car Loan Campaign	01-Mar-2011	28-Jun-2011			0	2			0.00%	7		
	CAMP10	Add on card free	01-Oct-2010	31-Dec-2010			0	4			0.00%	2		
	CAMP11	Free insurance on gold card	01-Dec-2010	28-Feb-2011			0	4			0.00%	8		
	CAMP12	Petro card with bonus points	01-Oct-2010	28-Feb-2011			0	4			0.00%	8		
	CAMP14	Get Gold Card win Gold Coin	15-May-2010	31-Dec-2010			0	4			0.00%	7		
	CAMP15	Speed Loan	27-Oct-2010	31-Jan-2011			0	4			0.00%	14		
	CAMP16	Truck Loan at TATA Showroom	17-Aug-2010	31-Jan-2011			0	4			0.00%	9		
	CAMP17	Used Car Loan	01-Dec-2010	31-Dec-2010			0	4			0.00%	8		
	CAMP18	Saving Account with Intl Debit	30-Apr-2010	31-Dec-2010			0	4			0.00%	1		
	CAMP19	Super OD Facility	05-Apr-2010	31-Dec-2010			0	2			0.00%	7		
	CAMP20	Zero Balance Account	30-Oct-2010	28-Feb-2011			0	4			0.00%	7		
	CAMP25	Drive Car from Maruthi Showroo	10-Oct-2010	31-Dec-2010			0	4			0.00%	7		
	CAMP27	Term Deposit for Senior Citize	10-Jul-2010	28-Feb-2011			0	4			0.00%	7		
	CAMP28	Corporate Vechile Loan	10-Oct-2010	28-Feb-2011			0	4			0.00%	8		
	CAMP29	Fixed Deposit @ 10% p.a.	17-Jun-2010	31-Dec-2010			0	4			0.00%	1		

Rows 1 - 15

Analyze - Edit - Refresh

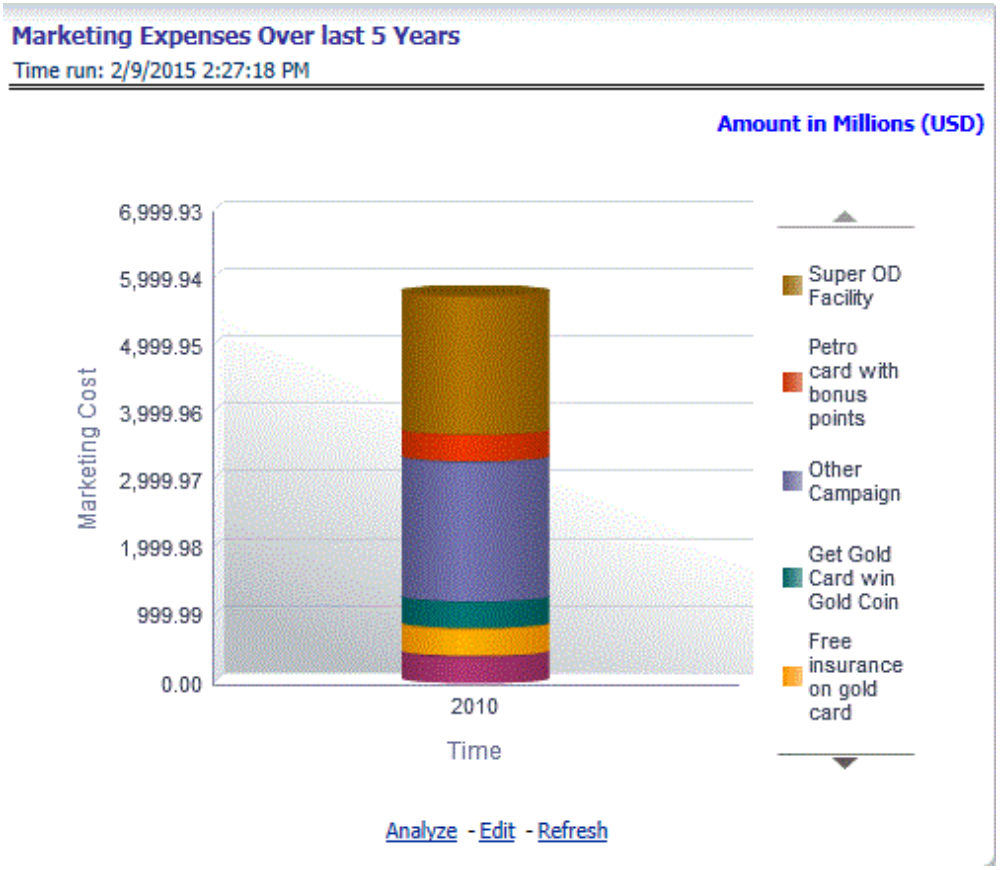
- Marketing Expense Across Campaigns

  This report provides details of the marketing expenses that have incurred for different campaigns thus facilitating the comparison.



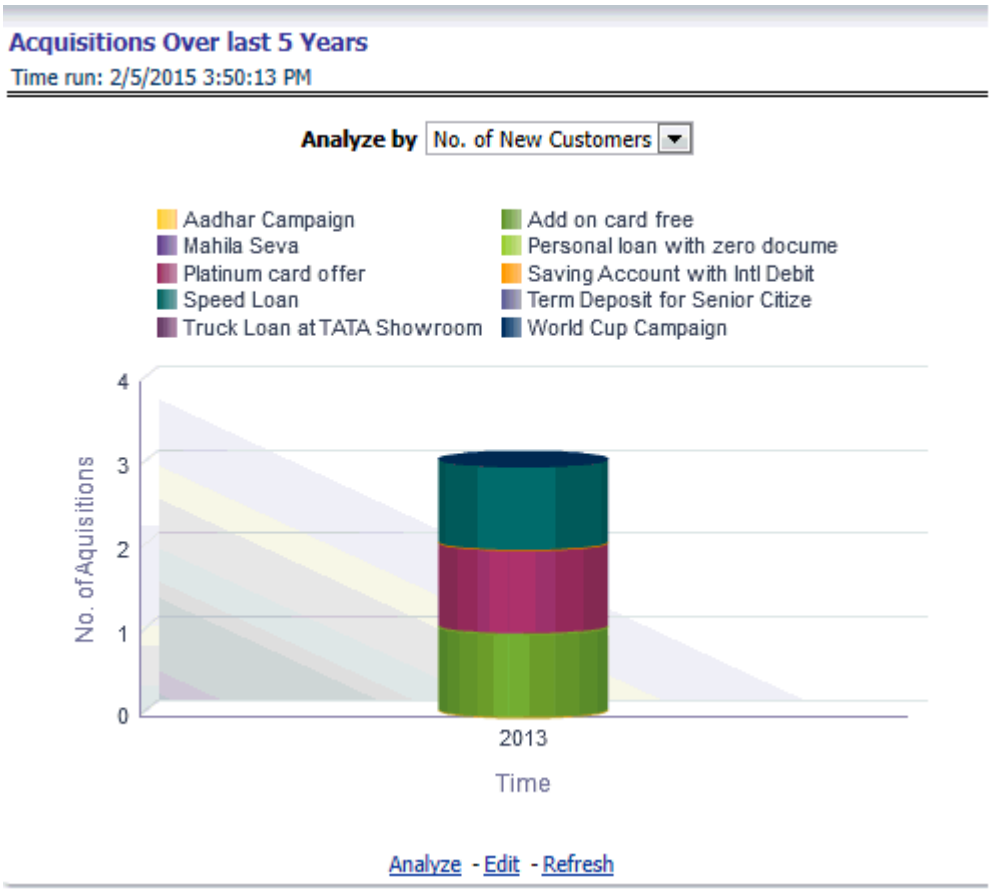
- Marketing Expenses Over last 5 Years

  This report shows the per year distribution of marketing expenses that have been incurred across the components of marketing expenses.



- Acquisitions Over last 5 Years

  This report gives the distribution of newly acquired customers attributing the customer to the campaign through which they were acquired.

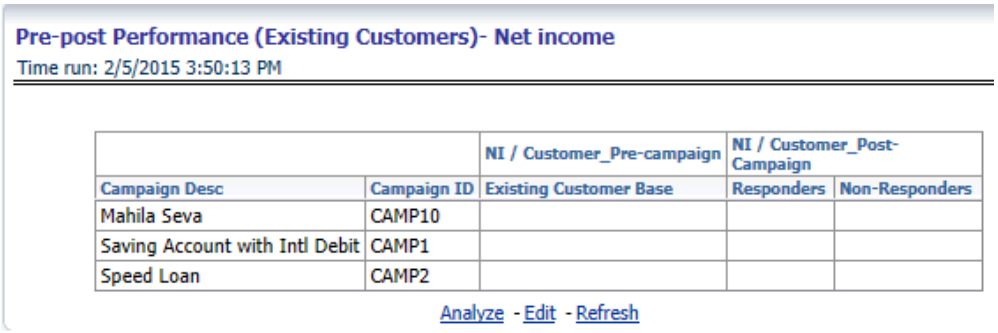


- Cost Per Acquisition (CPA)

  This report describes the cost incurred in acquisition per account over a period of time.

- Pre-post Performance (Existing Customers) - Net income

  This report indicates the effectiveness of the campaign in terms of making a change in the net income of the target customers.



Pre-post Performance (Existing Customers)- Net income

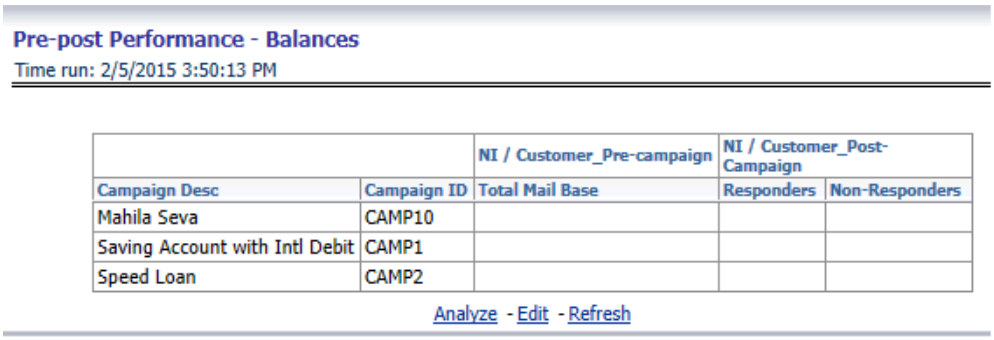
Time run: 2/5/2015 3:50:13 PM

		NI / Customer_Pre-campaign	NI / Customer_Post-Campaign	
Campaign Desc	Campaign ID	Existing Customer Base	Responders	Non-Responders
Mahila Seva	CAMP10			
Saving Account with Intl Debit	CAMP1			
Speed Loan	CAMP2			

Analyze - Edit - Refresh

- Pre-post Performance (Existing Customers) - Balance

  This report indicates the effectiveness of the campaign in terms of making a change in the average balance of the target customer.



Pre-post Performance - Balances

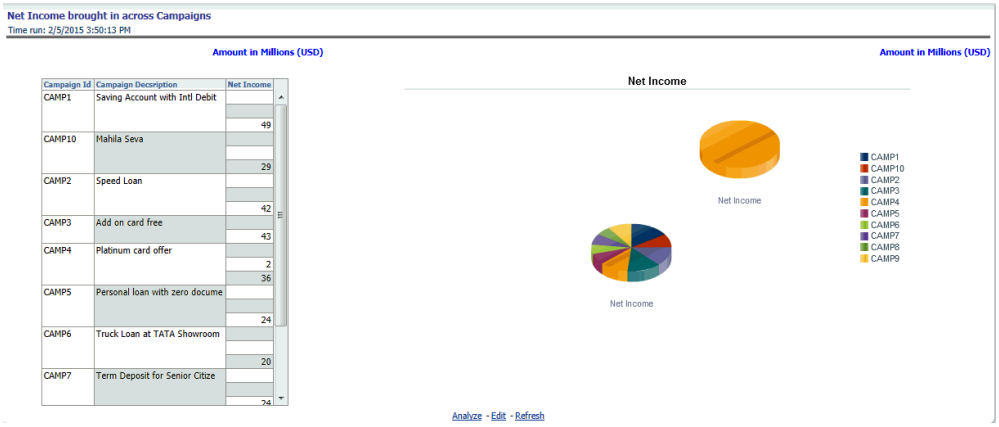
Time run: 2/5/2015 3:50:13 PM

		NI / Customer_Pre-campaign	NI / Customer_Post-Campaign	
Campaign Desc	Campaign ID	Total Mail Base	Responders	Non-Responders
Mahila Seva	CAMP10			
Saving Account with Intl Debit	CAMP1			
Speed Loan	CAMP2			

Analyze - Edit - Refresh

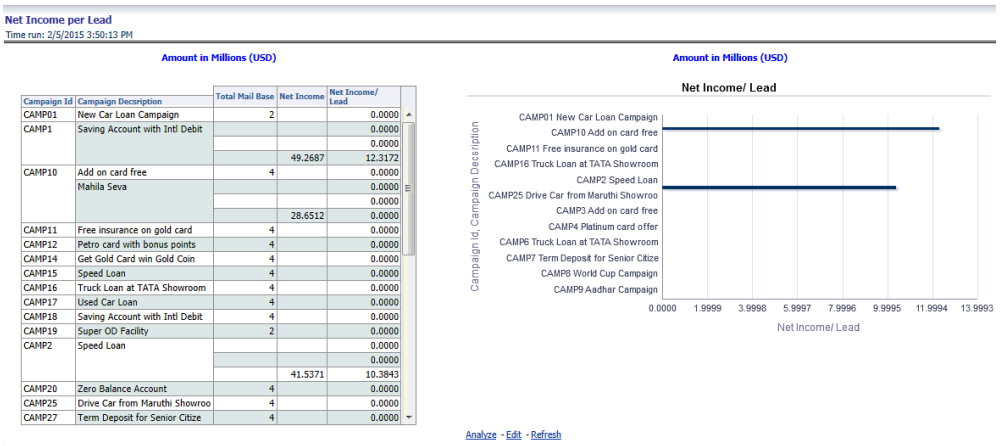
- Net Income brought in across Campaigns

  This report displays the income that has been generated through any campaign.



- Net Income per Lead

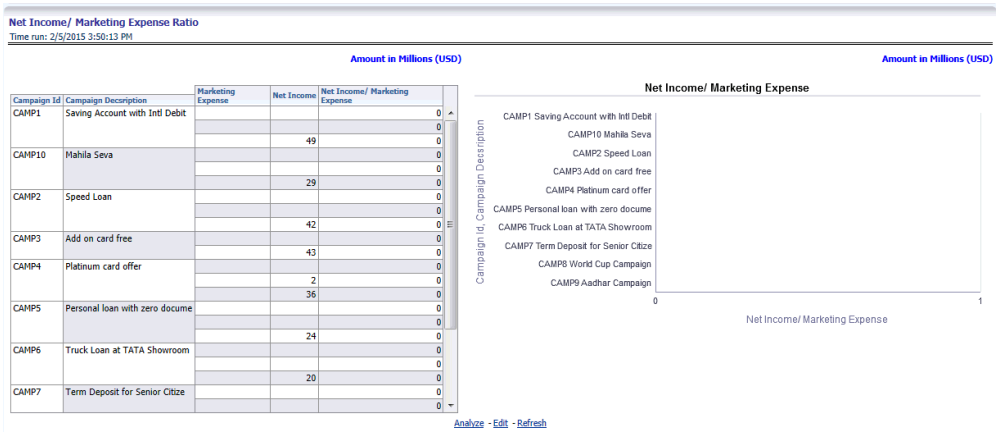
  This report provides details of the income that has been generated per lead for each campaign.



Campaign Id	Campaign Description	Total Mail Base	Net Income	Net Income/ Lead
CAMP01	New Car Loan Campaign	2		0.0000
CAMP1	Saving Account with Intl Debit			0.0000
				0.0000
			49.2687	12.3172
CAMP10	Add on card free	4		0.0000
	Mahila Seva			0.0000
				0.0000
			28.6512	0.0000
CAMP11	Free insurance on gold card	4		0.0000
CAMP12	Petro card with bonus points	4		0.0000
CAMP14	Get Gold Card win Gold Coin	4		0.0000
CAMP15	Speed Loan	4		0.0000
CAMP16	Truck Loan at TATA Showroom	4		0.0000
CAMP17	Used Car Loan	4		0.0000
CAMP18	Saving Account with Intl Debit	4		0.0000
CAMP19	Super OD Facility	2		0.0000
CAMP2	Speed Loan			0.0000
				0.0000
			41.5371	10.3843
CAMP20	Zero Balance Account	4		0.0000
CAMP25	Drive Car from Maruthi Showroo	4		0.0000
CAMP27	Term Deposit for Senior Citize	4		0.0000

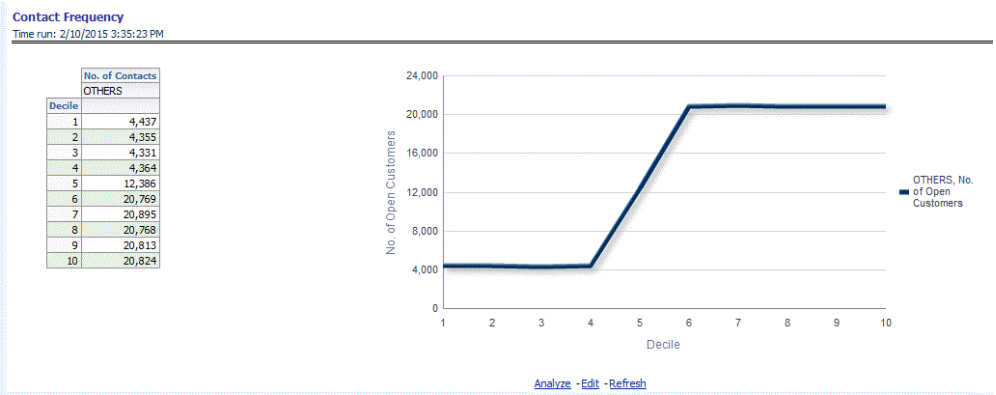
- Net Income/Marketing Expense Ratio

  This report displays the income that has been generated through a campaign in correspondence to the marketing expense that has been incurred.



Campaign Id	Campaign Description	Marketing Expense	Net Income	Net Income/ Marketing Expense
CAMP1	Saving Account with Intl Debit			0
				0
			49	0
CAMP10	Mahila Seva			0
				0
			29	0
CAMP2	Speed Loan			0
				0
			42	0
CAMP3	Add on card free			0
			43	0
CAMP4	Platinum card offer			0
			2	0
			36	0
CAMP5	Personal loan with zero docume			0
				0
			24	0
CAMP6	Truck Loan at TATA Showroom			0
				0
			20	0
CAMP7	Term Deposit for Senior Citize			0
				0

- Contact Frequency



Channel Analytics

The following tabs are present in the Channel Analytics Dashboard:

- Originating Channels
- Transaction Channels
- Service
- Channel Effectiveness

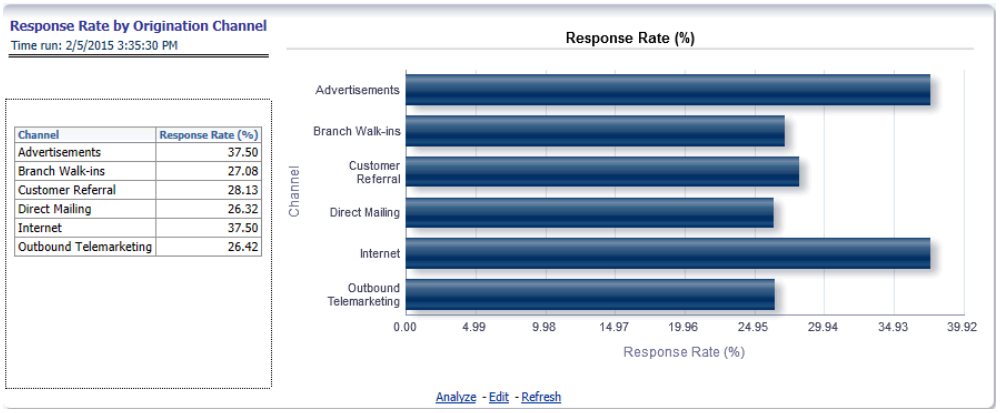
The following screenshots display the essential nature of the available reports as per each tab:

Originating Channels

This tab contains the following reports:

- Response Rate by Origination Channel

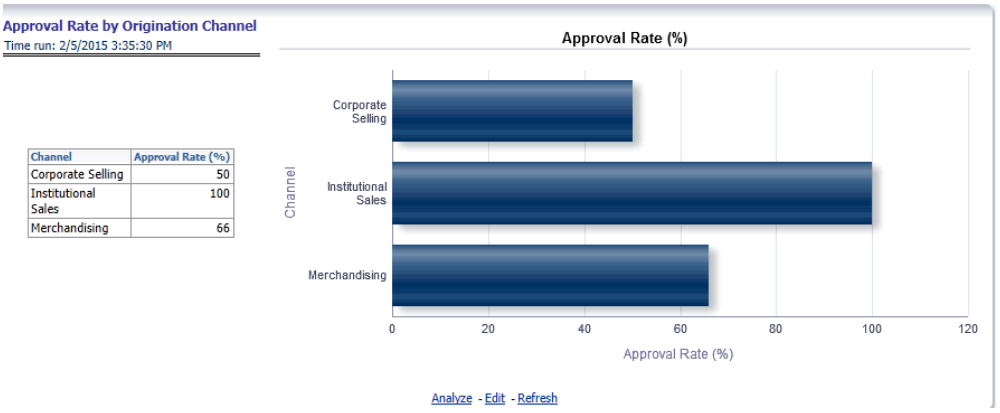
  This report enables comparison of channels in terms of effectiveness for responses when used for initiation.



Channel	Response Rate (%)
Advertisements	37.50
Branch Walk-ins	27.08
Customer Referral	28.13
Direct Mailing	26.32
Internet	37.50
Outbound Telemarketing	26.42

- Approval Rate by Origination Channel

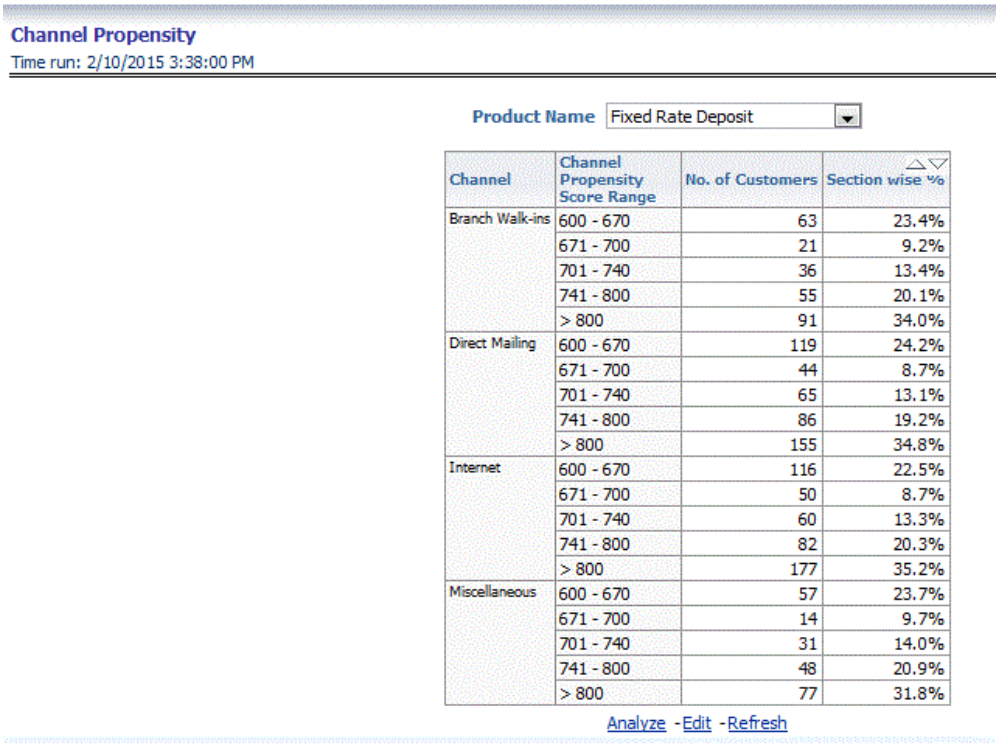
  This report enables comparison of channels in terms of effectiveness for approvals when used for initiation.



Channel	Approval Rate (%)
Corporate Selling	50
Institutional Sales	100
Merchandising	66

- Channel Propensity

  This channel denotes the propensity of a channel for a particular product.



Channel Propensity

Time run: 2/10/2015 3:38:00 PM

Product Name: Fixed Rate Deposit

Channel	Channel Propensity Score Range	No. of Customers	Section wise %
Branch Walk-ins	600 - 670	63	23.4%
	671 - 700	21	9.2%
	701 - 740	36	13.4%
	741 - 800	55	20.1%
	> 800	91	34.0%
Direct Mailing	600 - 670	119	24.2%
	671 - 700	44	8.7%
	701 - 740	65	13.1%
	741 - 800	86	19.2%
	> 800	155	34.8%
Internet	600 - 670	116	22.5%
	671 - 700	50	8.7%
	701 - 740	60	13.3%
	741 - 800	82	20.3%
	> 800	177	35.2%
Miscellaneous	600 - 670	57	23.7%
	671 - 700	14	9.7%
	701 - 740	31	14.0%
	741 - 800	48	20.9%
	> 800	77	31.8%

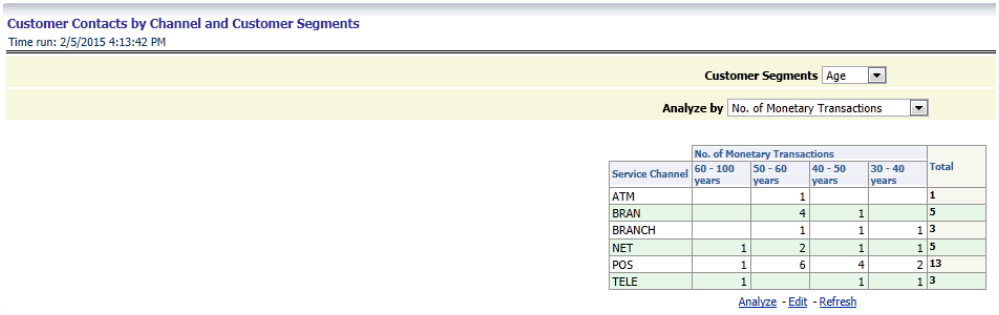
Analyze - Edit - Refresh

Transaction Channels

This tab contains the following reports:

- Customer Contacts by Channel and Customer Segments

  This report displays the customers across dimensions that have been contacted for a type of transaction through different channels.



Customer Contacts by Channel and Customer Segments

Time run: 2/5/2015 4:13:42 PM

Customer Segments: Age

Analyze by: No. of Monetary Transactions

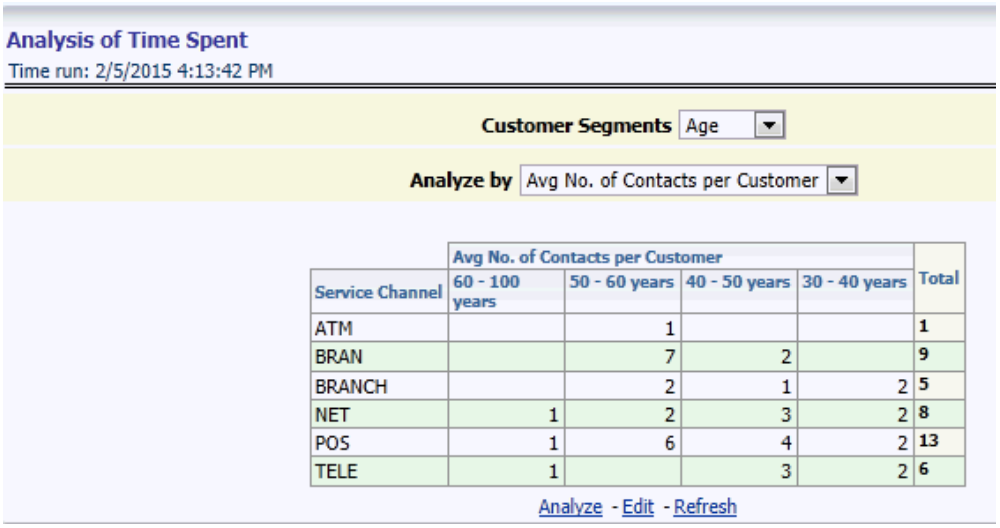
Service Channel	No. of Monetary Transactions				Total
	60 - 100 years	50 - 60 years	40 - 50 years	30 - 40 years	
ATM		1			1
BRAN		4	1		5
BRANCH		1	1	1	3
NET	1	2	1	1	5
POS	1	6	4	2	13
TELE	1		1	1	3

Analyze - Edit - Refresh

- Analysis of Time Spent

  This report provides details of the time spent for any interaction with the customer

across customer dimensions and through the channel of contact.



Analysis of Time Spent

Time run: 2/5/2015 4:13:42 PM

Customer Segments Age

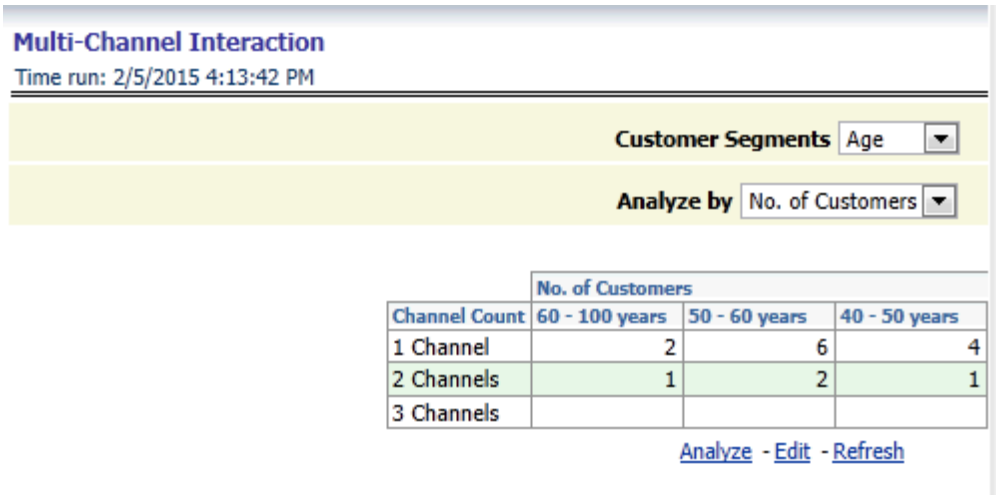
Analyze by Avg No. of Contacts per Customer

	Avg No. of Contacts per Customer				
Service Channel	60 - 100 years	50 - 60 years	40 - 50 years	30 - 40 years	Total
ATM		1			1
BRAN		7	2		9
BRANCH		2	1	2	5
NET	1	2	3	2	8
POS	1	6	4	2	13
TELE	1		3	2	6

Analyze - Edit - Refresh

- Multi-Channel Interaction

  This report shows the details for customers interacting through multiple channels across different customer attributes.



Multi-Channel Interaction

Time run: 2/5/2015 4:13:42 PM

Customer Segments Age

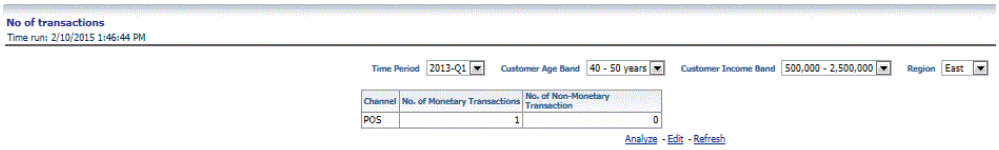
Analyze by No. of Customers

	No. of Customers		
Channel Count	60 - 100 years	50 - 60 years	40 - 50 years
1 Channel	2	6	4
2 Channels	1	2	1
3 Channels			

Analyze - Edit - Refresh

- No of transactions

  This report gives details of the number of monetary as well as non-monetary transactions that are carried out through a channel across customer dimensions.

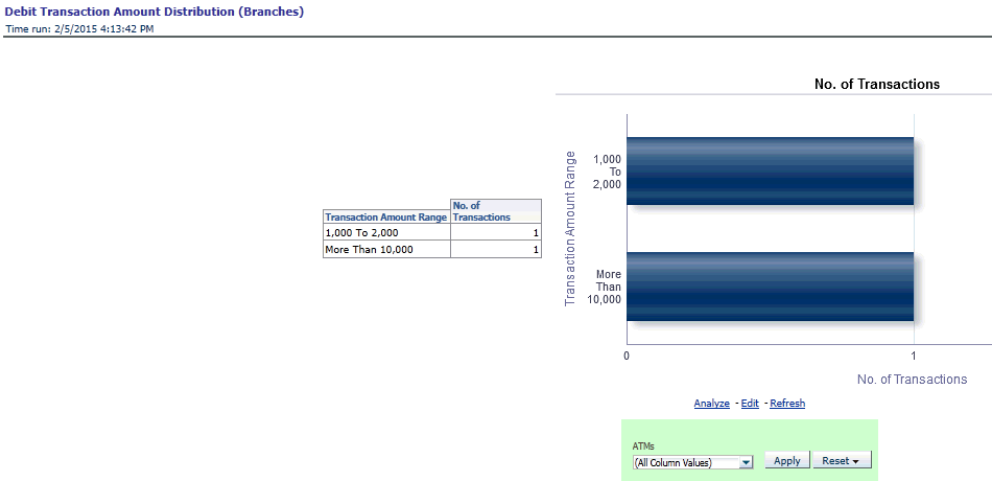


- Channels used for transaction types

  This report displays the distribution across channels of a particular transaction type.

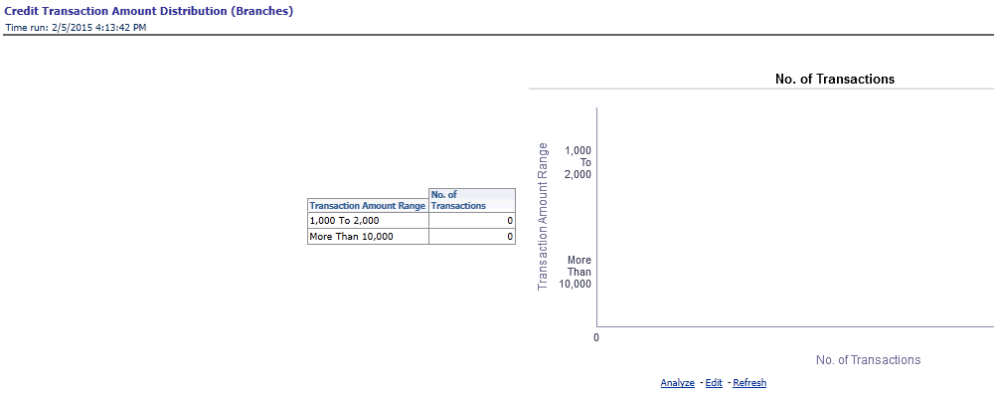
- Debit Transaction Amount Distribution (Branches)

  This report displays the distribution of debit transactions across different bands of transaction amounts.



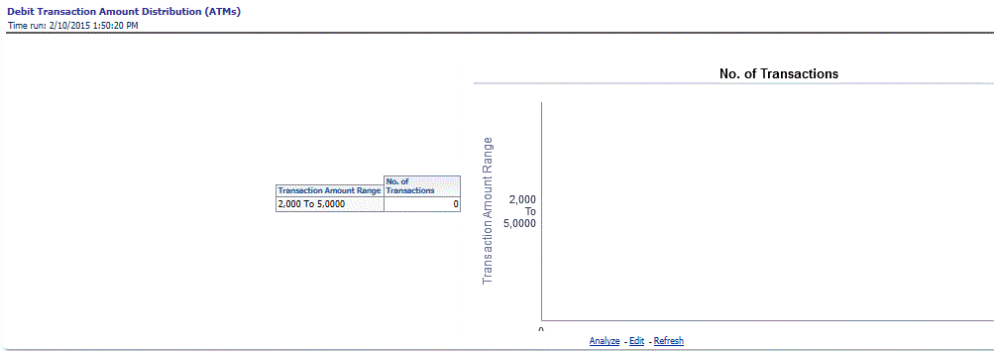
- Credit Transaction Amount Distribution (Branches)

  This report displays the distribution of credit transactions across different bands of transaction amounts.



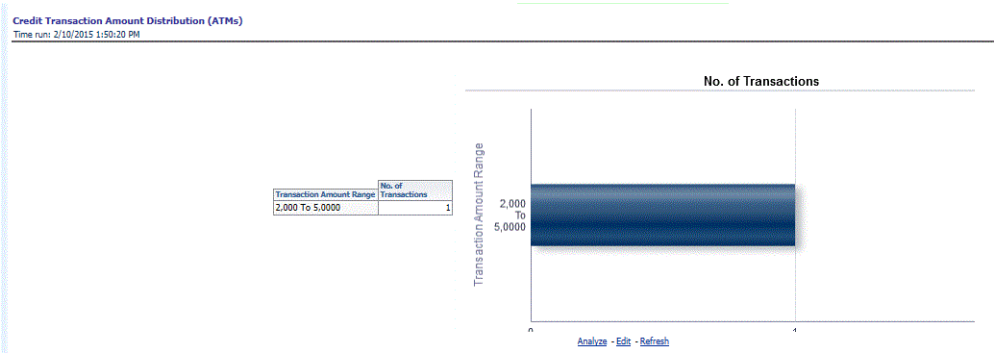
- Debit Transaction Amount Distribution (ATMs)

  This report shows the distribution of debit transactions across different transaction amount ranges thus signifying the concentration of transaction amount.



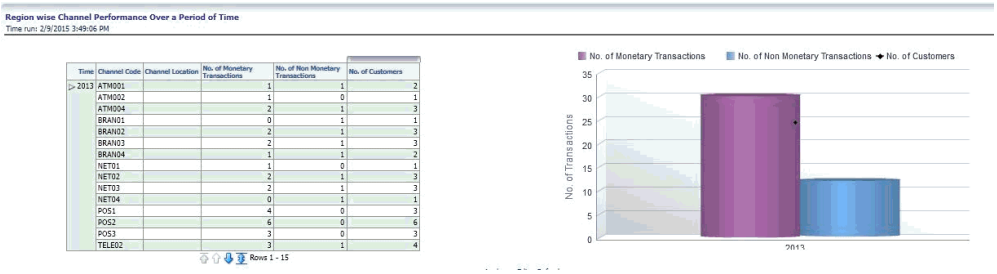
- Credit Transaction Amount Distribution (ATMs)

  This report displays the distribution of credit transactions across different bands of transaction amounts.



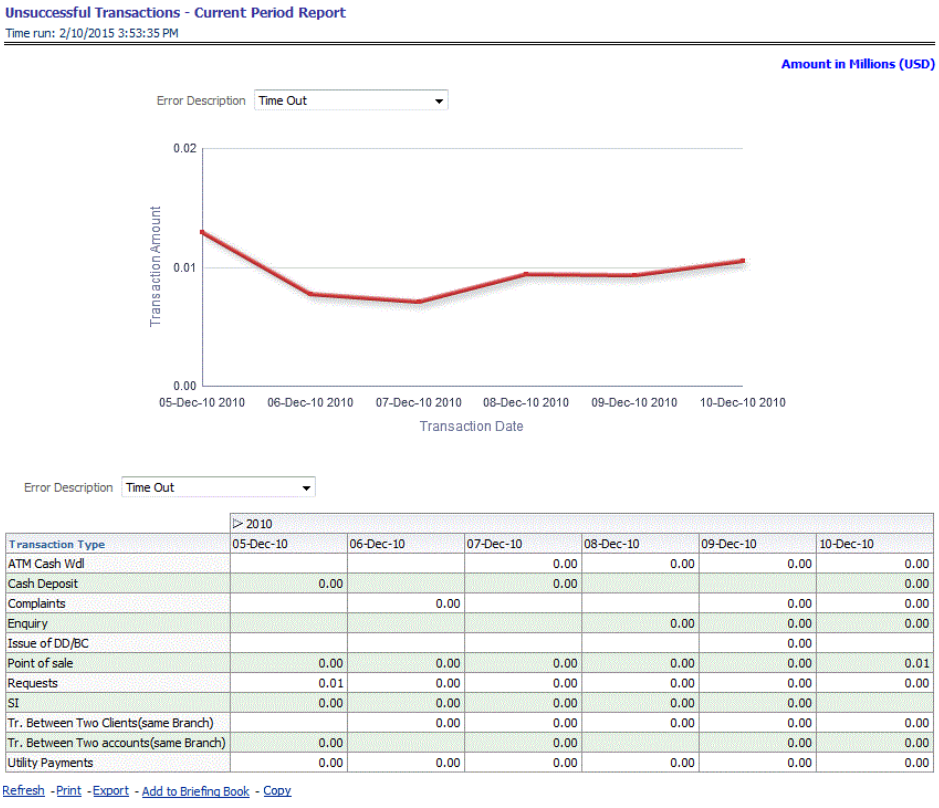
- Region wise Transactions by Channel Over a Period of Time

  This report gives details of the number of monetary and non-monetary transactions and the number of customers transacting through a particular channel in a certain period of time.



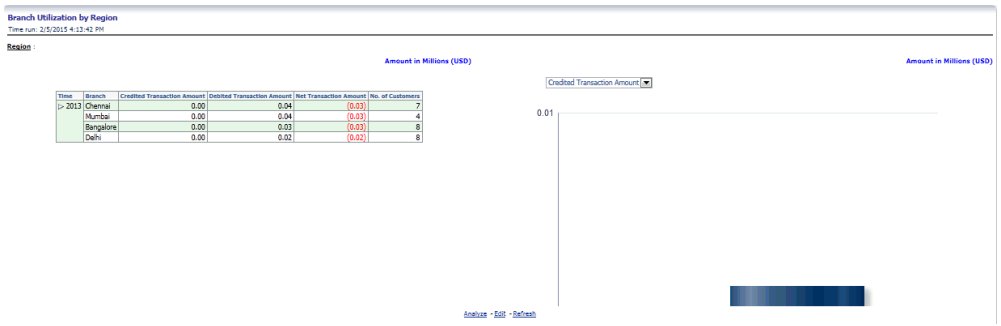
- Unsuccessful Transactions - Current Report Period

  The number of unsuccessful transactions are shown across time and their distribution by reasons for failure are shown in this report.



- Branch Utilization by Region

  This report provides details of the transactions that have occurred at any branch.

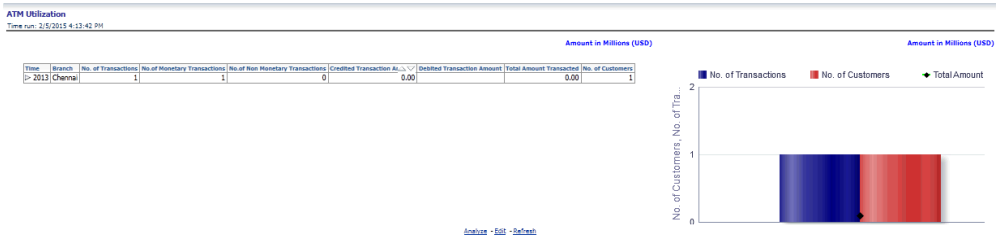


- Top 10 Branches by Utilization

  This report displays the details of branch transactions for the top most used 10 branches.

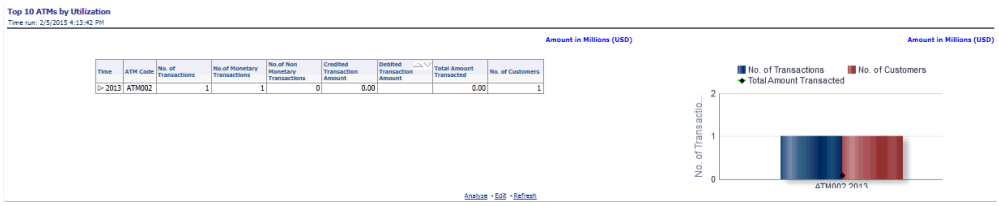
- ATM Utilization

  This report provides details of the transactions that have occurred for any ATM.



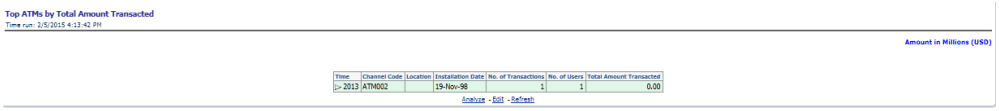
- Top 10 ATMs by Utilization

  This report displays the details of ATM transactions for the top most used 10 ATMs.



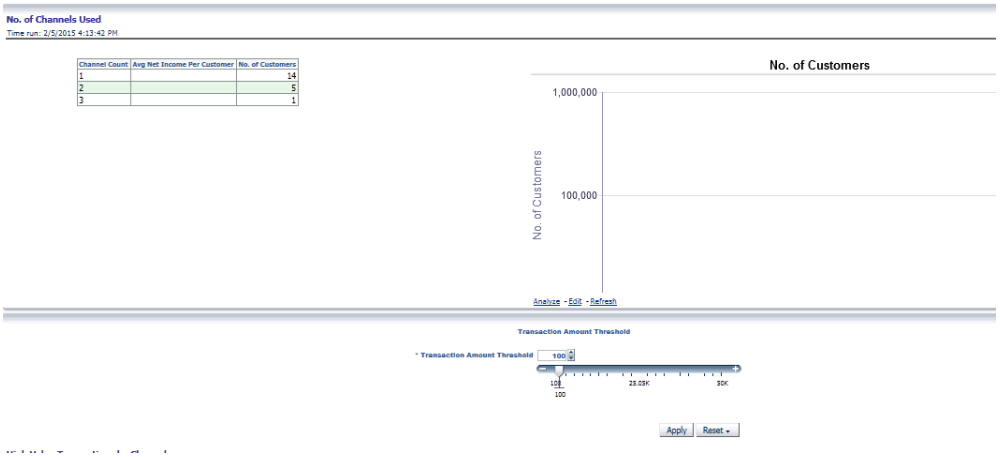
- Top ATMs by Total Amount Transacted

  This report gives details of the ATMs which have the maximum transaction amounts.



- No of channels used

  This report displays the number of customers using different number of channels and the average net income generated through each such customer group.

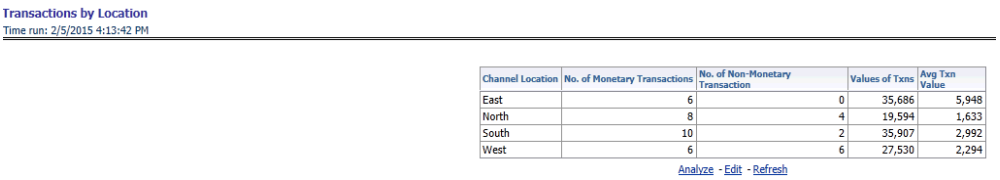


- Spends by Transaction Channel

  Details of transactions carried out through a channel and the size of those transactions is exhibited in this report.

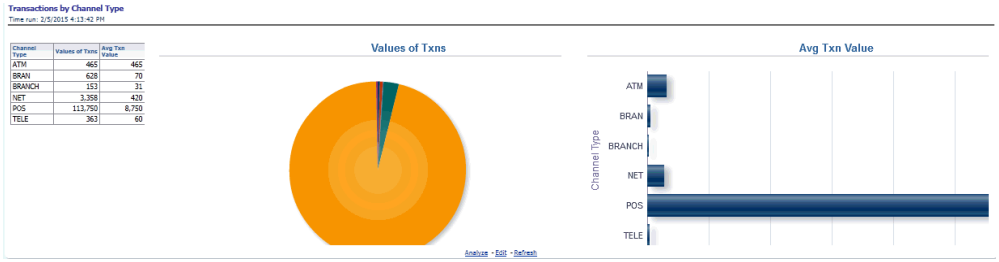
- Transactions by Location

  This report provides the distribution of transactions and the transacted amount across different locations.



- Transactions by Channel type

  This report provides the distribution of transactions and the transacted amount across different channels.

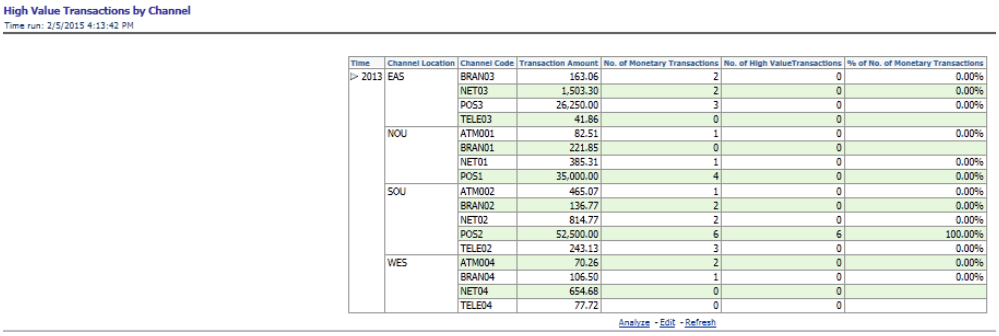


- Channels used for transaction types

  This report displays the distribution across channels of a particular transaction type.

- High Value Transactions by Channel

  This report shows the proportion of high value transactions to the total monetary transactions across different channels.

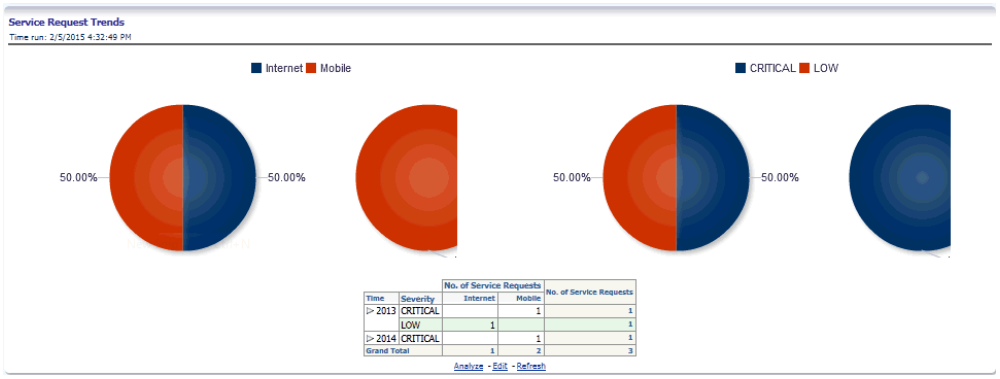


Service

This tab contains the following reports:

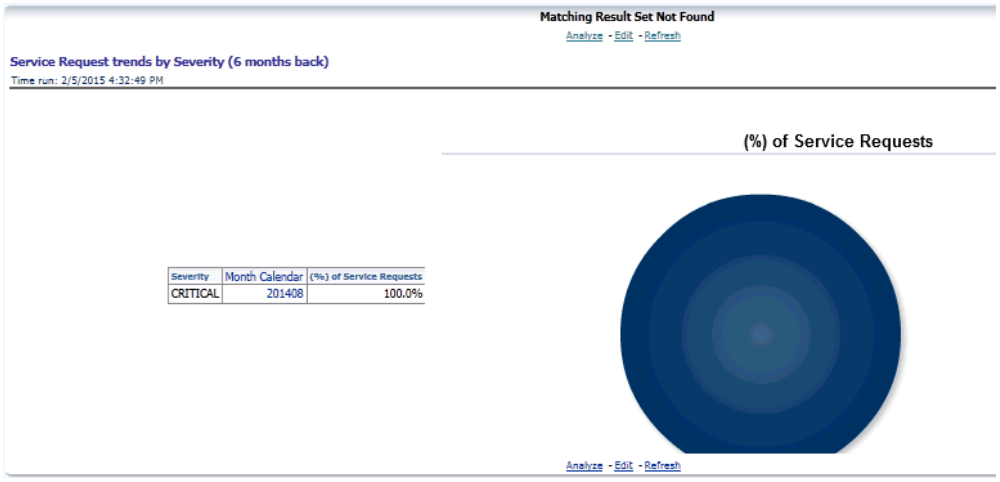
- Service Request Trends

  This report displays the service requests with their severity and channel across a period of time thus emphasizing on the trend that has been observed.



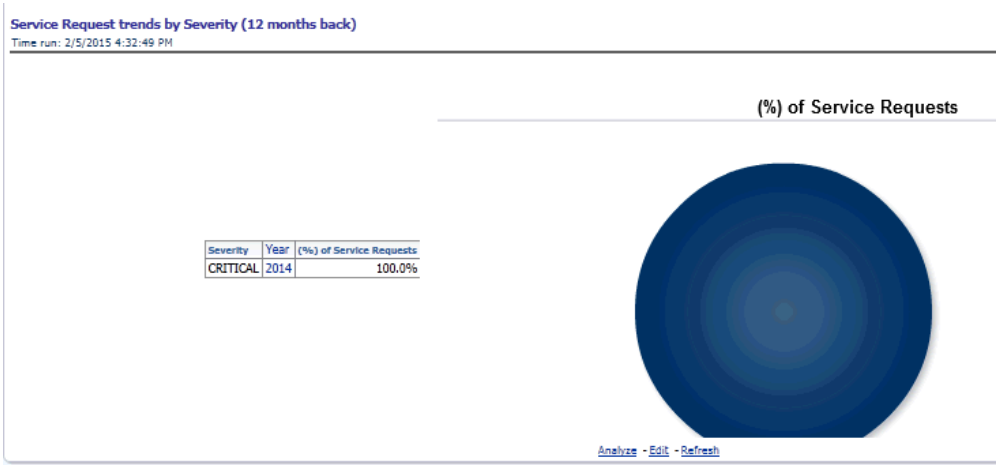
- Service Request trends by severity (6 months back)

  This report shows the distribution of service requests received in past 6 months in terms of severity.



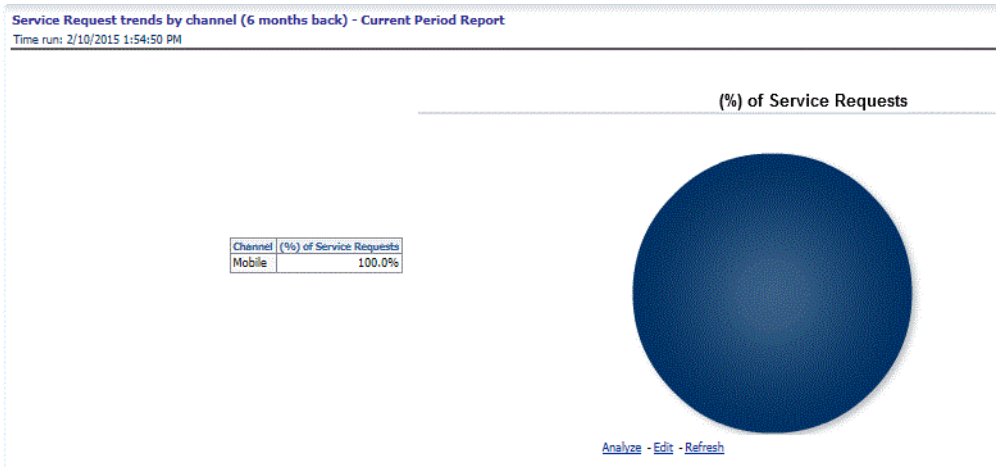
- Service Request trends by severity (12 months back)

  This report shows the distribution of service requests received in past 12 months in terms of severity.



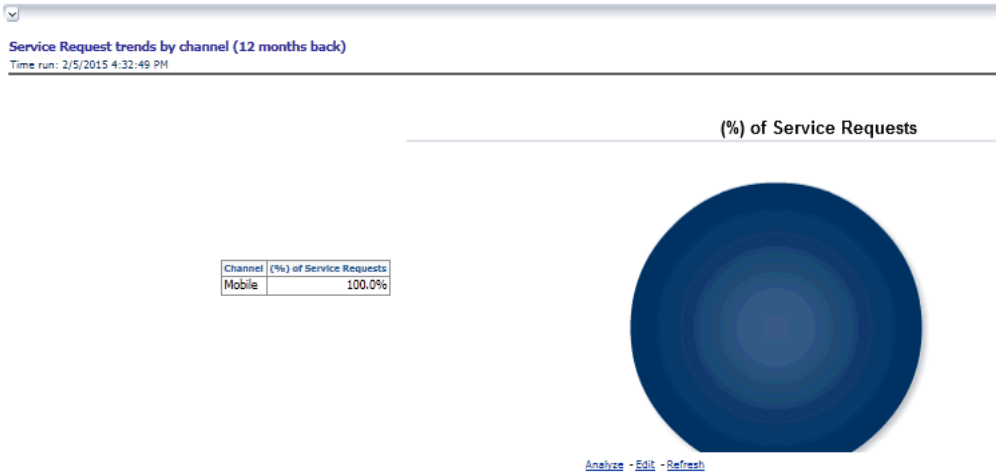
- Service Request trends by channel (6 months back)

  This report shows the distribution of service requests received in past 6 months across different channels.



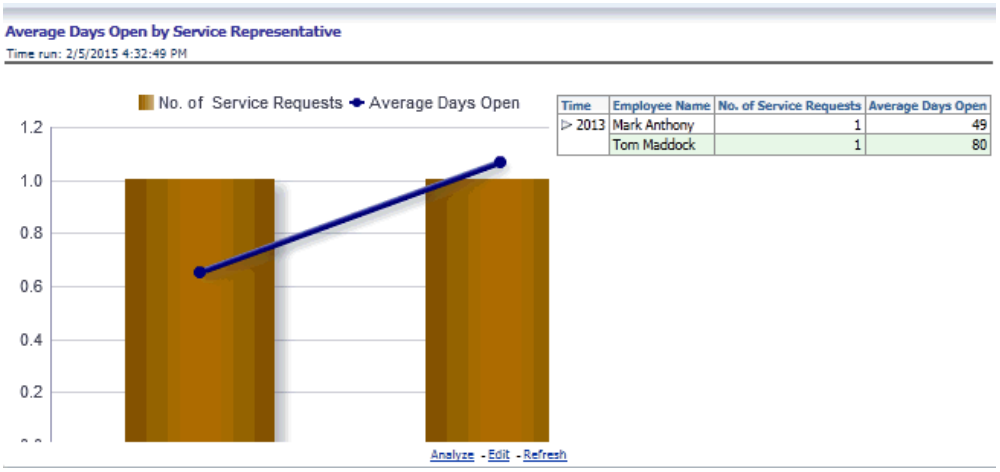
- Service Request trends by channel (12 months back)

  This report shows the distribution of service requests received in past 12 months across different channels.



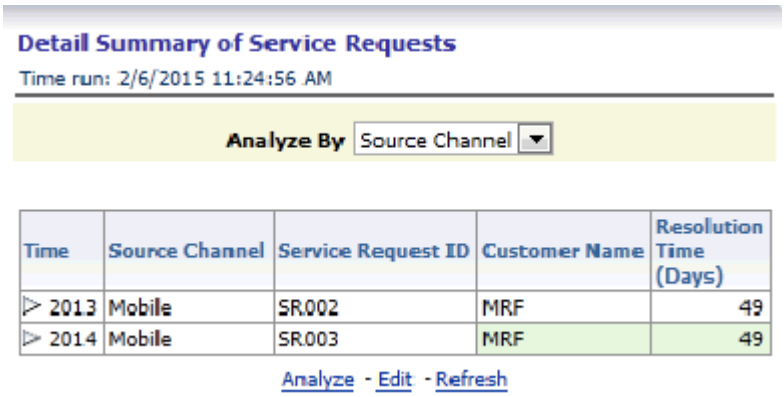
- Average Days Open by Service Representative

  This report provides a clear relationship between the number of service requests for an employee and the average number of days taken to address the requests.

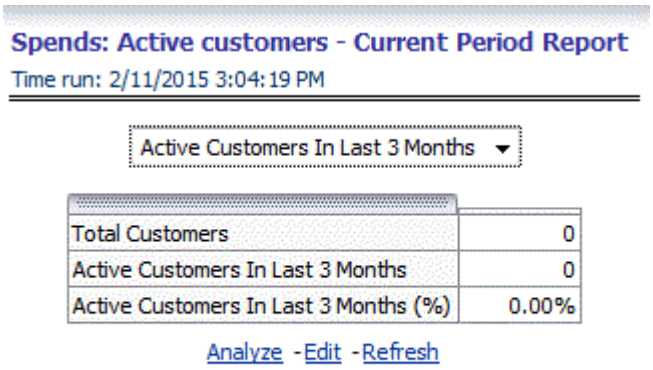


- Detailed Summary of Service Requests

  This report provides a detailed summary of the service requests along with the ability to sort by service request attributes.

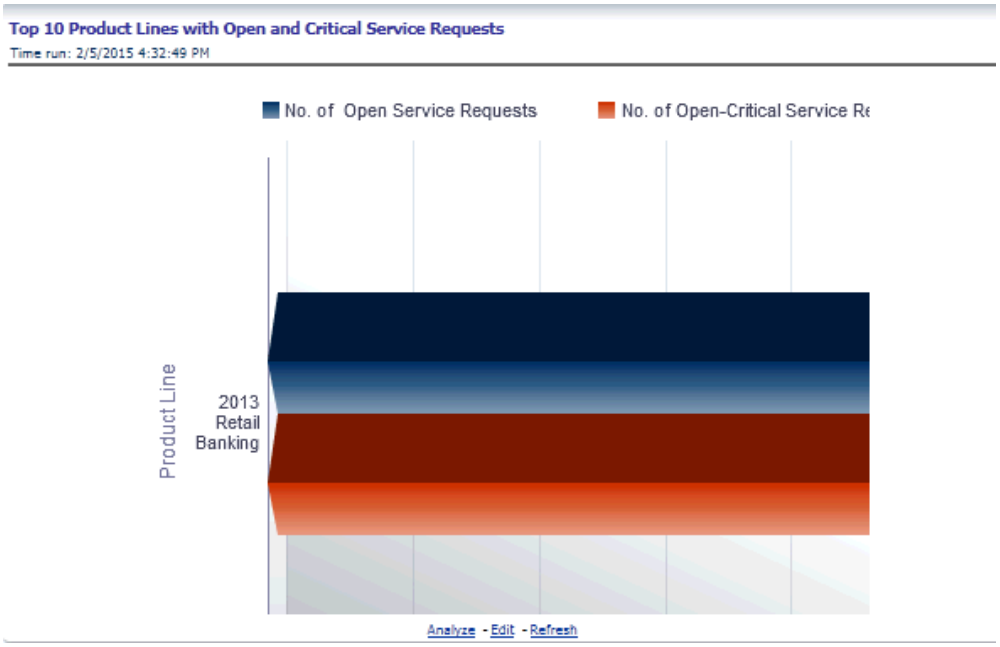


- Spends: Active Customers - Current Active Report



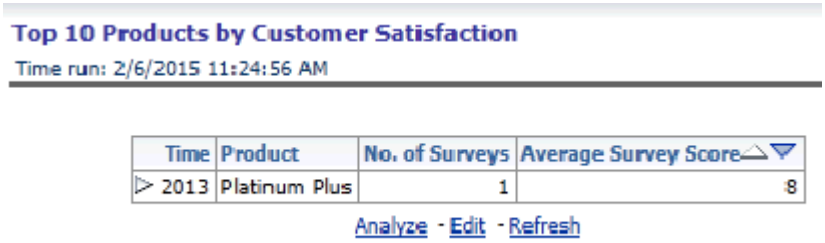
- Top 10 Product Lines with Open and Critical Service Requests

  This report displays the product lines with the maximum number of open and critical service requests.



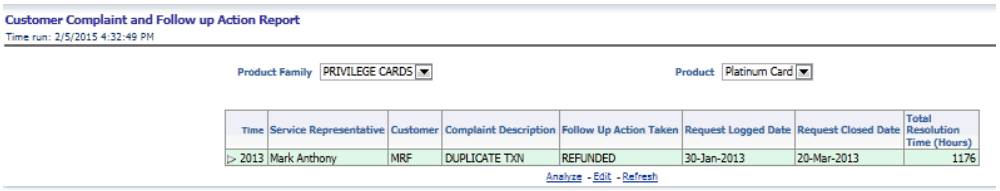
- Top 10 Products by Customer Satisfaction

  This report ranks the products in order of customer satisfaction.



- Customer Complaint and Follow up Action Report

  This report provides details about any complaint that has been reported and the action that has been taken upon it along with the time taken to resolve it.

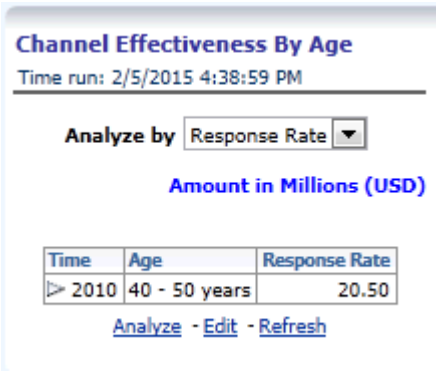


Channel Effectiveness

This tab contains the following reports:

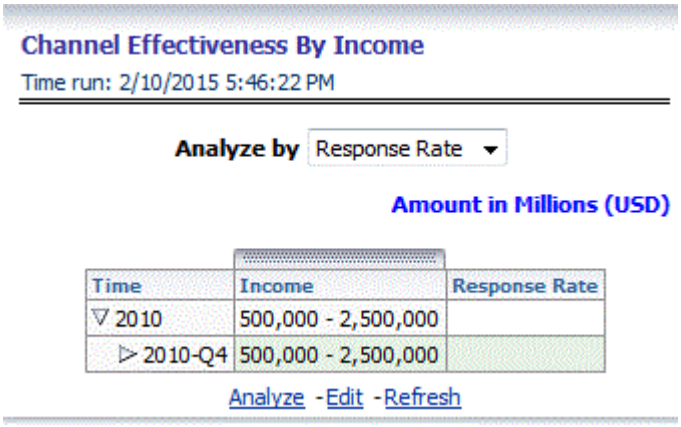
- Channel Effectiveness By Age

  This report displays the effectiveness of a channel in correspondence to customer age.



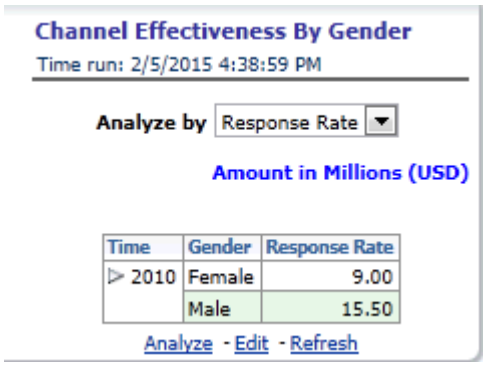
- Channel Effectiveness By Income

  This report displays the effectiveness of a channel in correspondence to customer income.



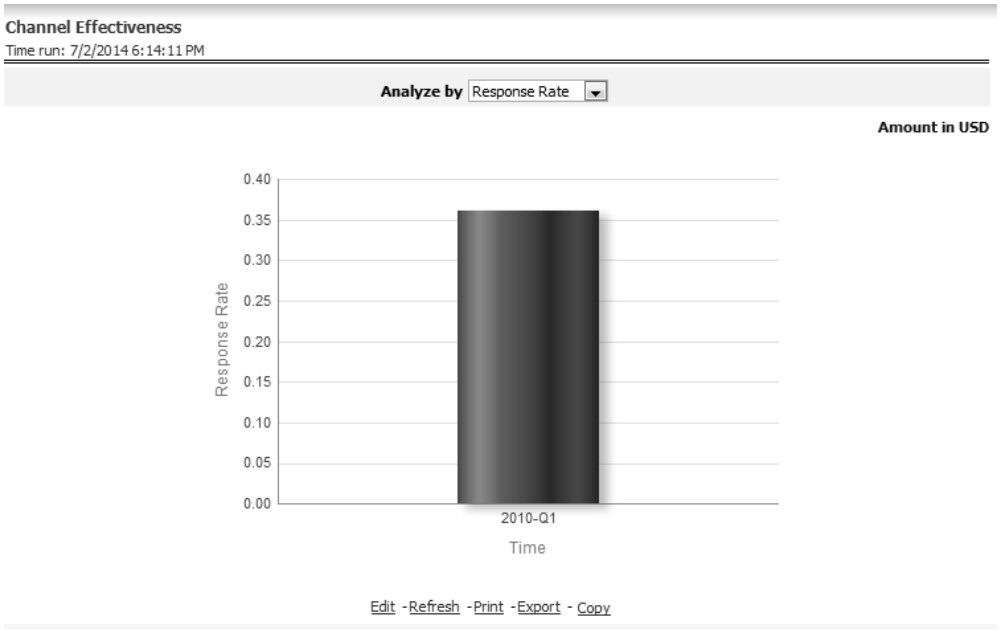
- Channel Effectiveness By Gender

  This report displays the effectiveness of a channel in correspondence to customer gender.



- Channel Effectiveness

  This report displays the effectiveness of a channel over a period of time.

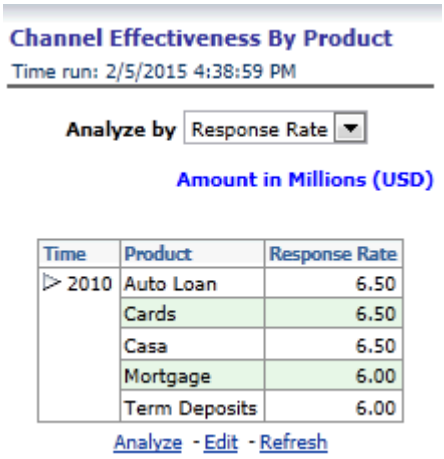


- Channel Effectiveness By LOB

  This report displays the effectiveness of a channel for a particular line of business.

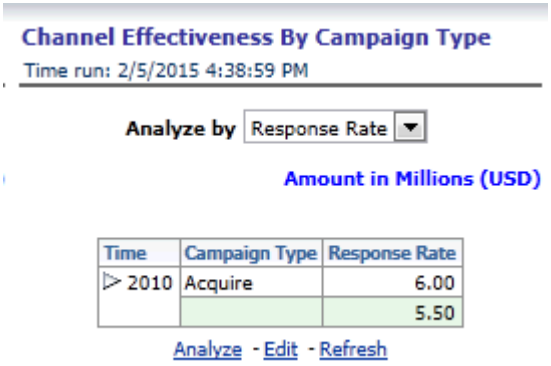
- Channel Effectiveness By Product

  This report displays the effectiveness of a channel for a particular product.



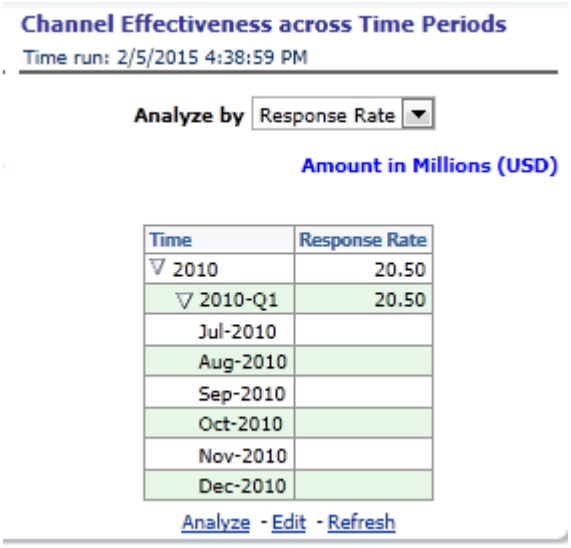
- Channel Effectiveness By Campaign Type

  This report displays the effectiveness of a channel for a particular campaign.



- Channel Effectiveness across time periods

  This report displays the effectiveness of a channel across time periods.



Customer View

The following tabs are present in the Customer View Dashboard:

- Customer Distribution
- Customer Profitability and Engagement
- Customer Trends
- Cross-sell
- Spend Analysis
- Customer Transactions
- Attrition Analysis
- Risk Summary

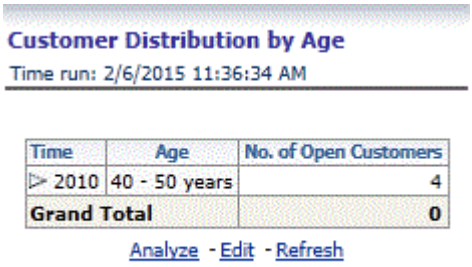
The following screenshots display the essential nature of the available reports as per each tab:

Customer Distribution

This tab contains the following reports:

- Customer Distribution by Age

  This report provides the details of distribution of number of open customers with respect to age.



Customer Distribution by Age

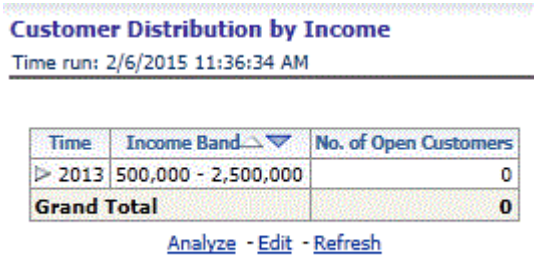
Time run: 2/6/2015 11:36:34 AM

Time	Age	No. of Open Customers
▷ 2010	40 - 50 years	4
Grand Total		**0**

Analyze - Edit - Refresh

- Customer Distribution by Income

  This report provides the details of distribution of number of open customers with respect to their income.



Customer Distribution by Income

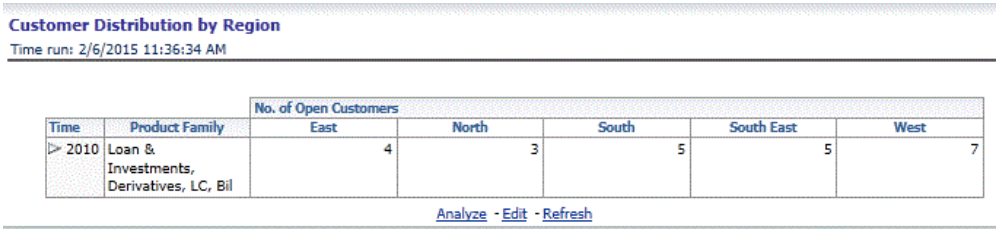
Time run: 2/6/2015 11:36:34 AM

Time	Income Band	No. of Open Customers
▷ 2013	500,000 - 2,500,000	0
Grand Total		**0**

Analyze - Edit - Refresh

- Customer Distribution by Region

  This report gives details of distribution of open customers for a product across different regions.



Customer Distribution by Region

Time run: 2/6/2015 11:36:34 AM

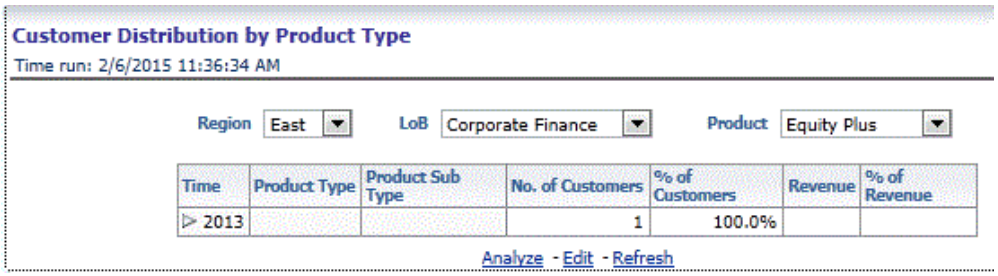
		No. of Open Customers				
Time	Product Family	East	North	South	South East	West
▷ 2010	Loan & Investments, Derivatives, LC, Bil	4	3	5	5	7

Analyze - Edit - Refresh

- Customer Distribution by Product Type

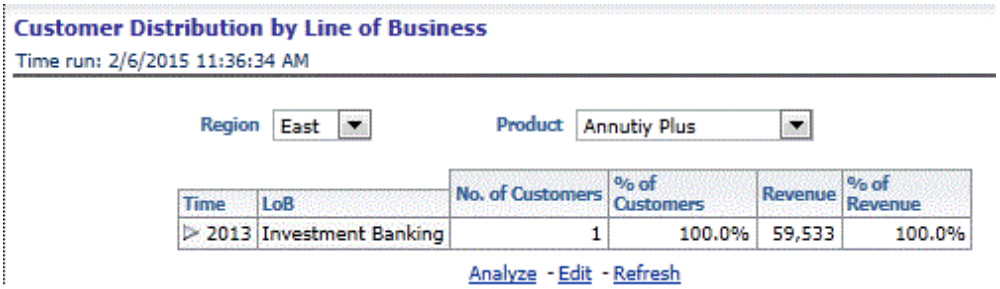
  This report provides details of distribution of customers for product types across

regions, LoB and products.



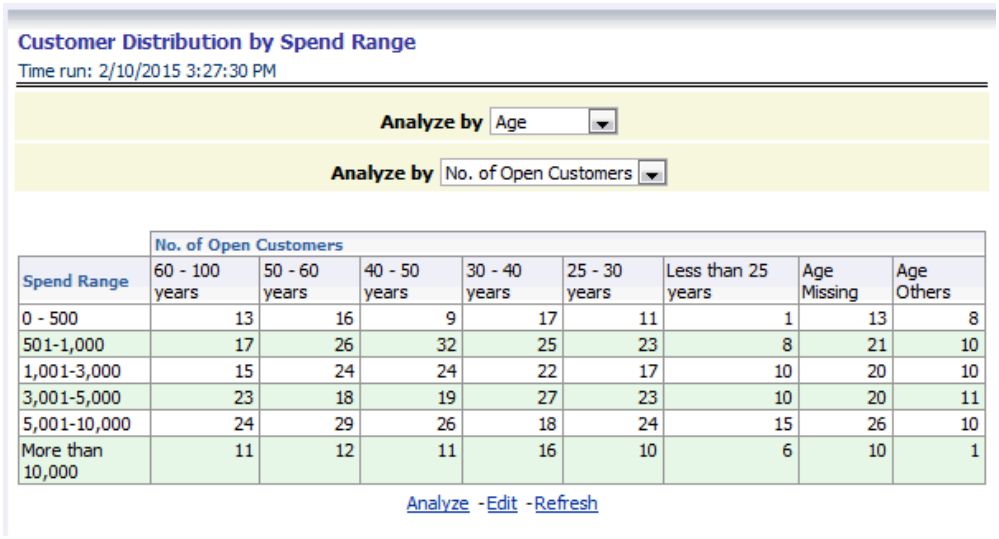
- Customer Distribution by Line of Business

  This report provides details of distribution of customers for LoB across regions and products.



- Customer Distribution by Spend Range

  This report shows the distribution of customer/accounts across spend range with respect to customer dimensions.



Customer Distribution by Spend Range

Time run: 2/10/2015 3:27:30 PM

Analyze by Age

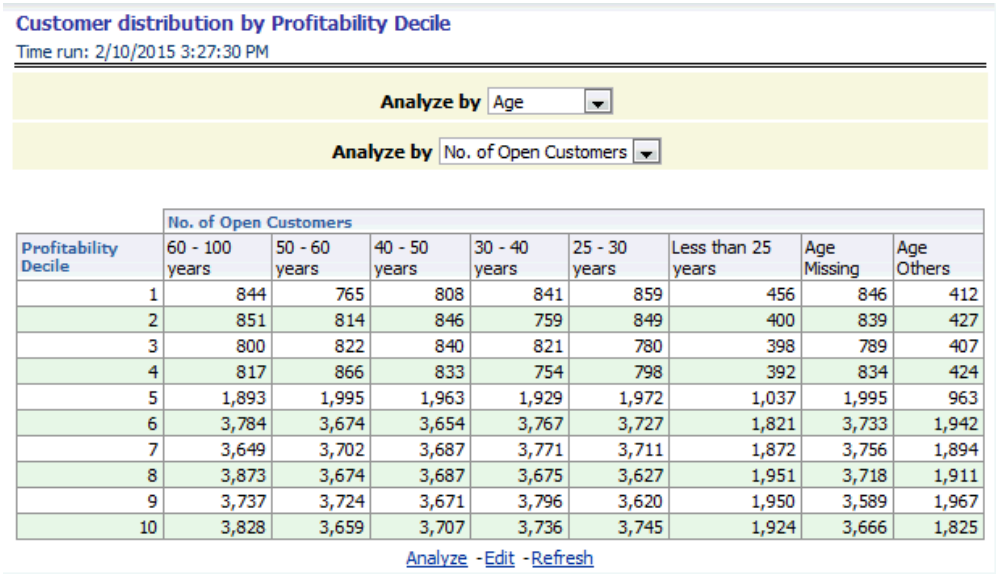
Analyze by No. of Open Customers

	No. of Open Customers							
Spend Range	60 - 100 years	50 - 60 years	40 - 50 years	30 - 40 years	25 - 30 years	Less than 25 years	Age Missing	Age Others
0 - 500	13	16	9	17	11	1	13	8
501-1,000	17	26	32	25	23	8	21	10
1,001-3,000	15	24	24	22	17	10	20	10
3,001-5,000	23	18	19	27	23	10	20	11
5,001-10,000	24	29	26	18	24	15	26	10
More than 10,000	11	12	11	16	10	6	10	1

Analyze -Edit -Refresh

- Customer distribution by Profitability Decile

  This report shows the distribution of customer/accounts across profitability decile with respect to customer dimensions.



Customer distribution by Profitability Decile

Time run: 2/10/2015 3:27:30 PM

Analyze by Age

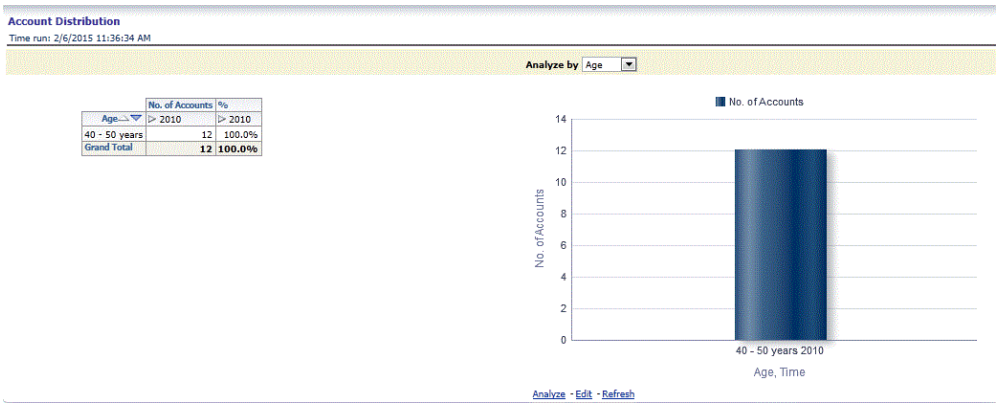
Analyze by No. of Open Customers

	No. of Open Customers							
Profitability Decile	60 - 100 years	50 - 60 years	40 - 50 years	30 - 40 years	25 - 30 years	Less than 25 years	Age Missing	Age Others
1	844	765	808	841	859	456	846	412
2	851	814	846	759	849	400	839	427
3	800	822	840	821	780	398	789	407
4	817	866	833	754	798	392	834	424
5	1,893	1,995	1,963	1,929	1,972	1,037	1,995	963
6	3,784	3,674	3,654	3,767	3,727	1,821	3,733	1,942
7	3,649	3,702	3,687	3,771	3,711	1,872	3,756	1,894
8	3,873	3,674	3,687	3,675	3,627	1,951	3,718	1,911
9	3,737	3,724	3,671	3,796	3,620	1,950	3,589	1,967
10	3,828	3,659	3,707	3,736	3,745	1,924	3,666	1,825

Analyze -Edit -Refresh

- Account Distribution

  The distribution of accounts across dimensions is highlighted in this report.

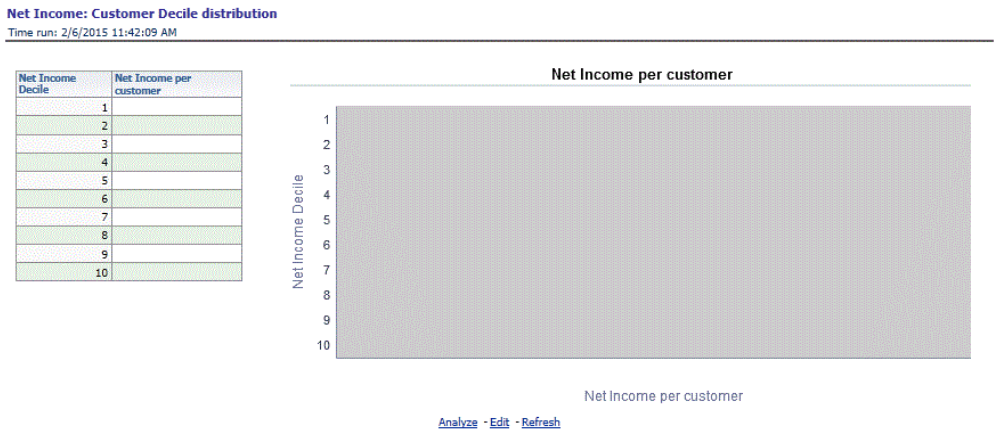


Customer Profitability and Engagement

This tab contains the following reports:

- Net Income Customer Decile Distribution

  This report provides the average net income of customers wherein the customers are categorized based on their income.

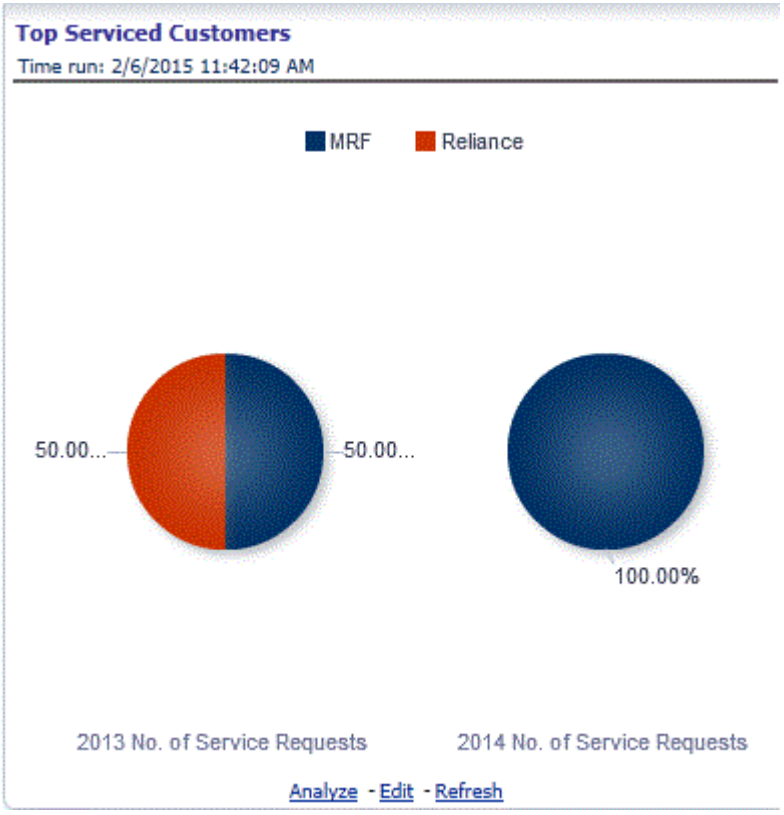


- Net Income per Customer by Segment

  This report shows the average income of a customer in a segment for different age groups.

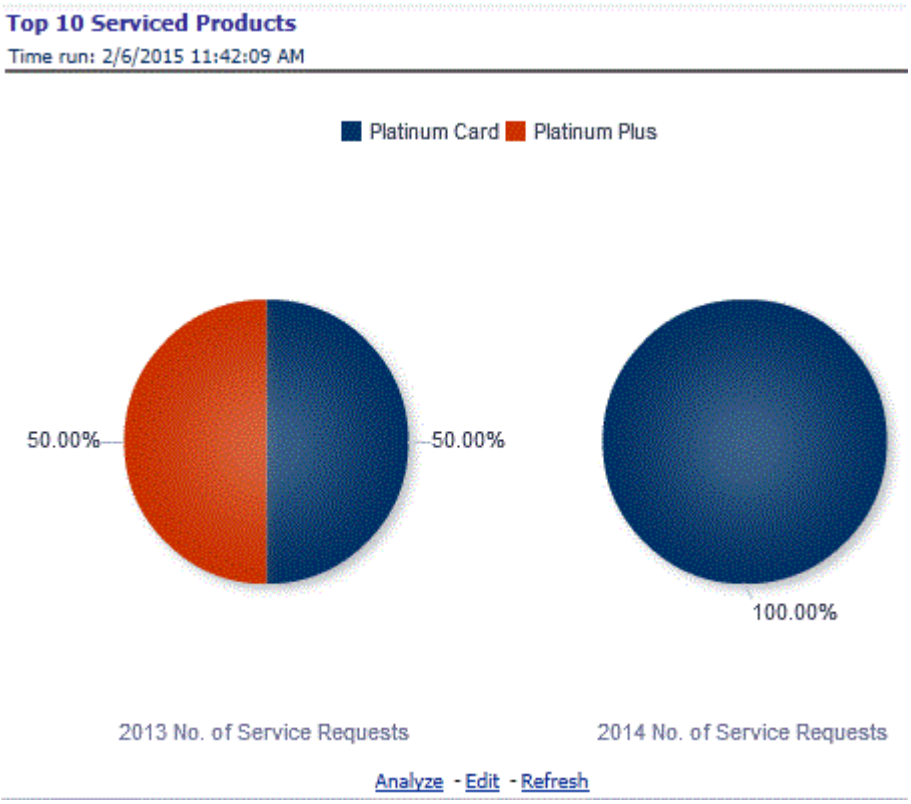
- Top Serviced Customers

  This report provides details of the most serviced customers.



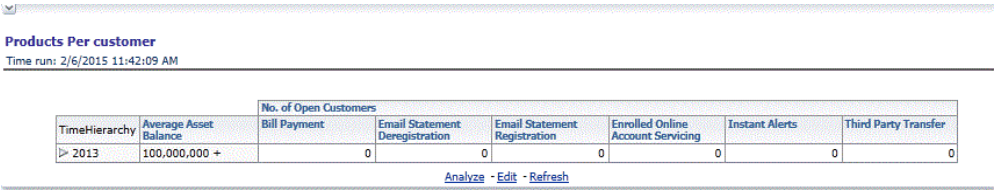
- Top 10 Serviced Products

  This report provides details of the top 10 most serviced products.



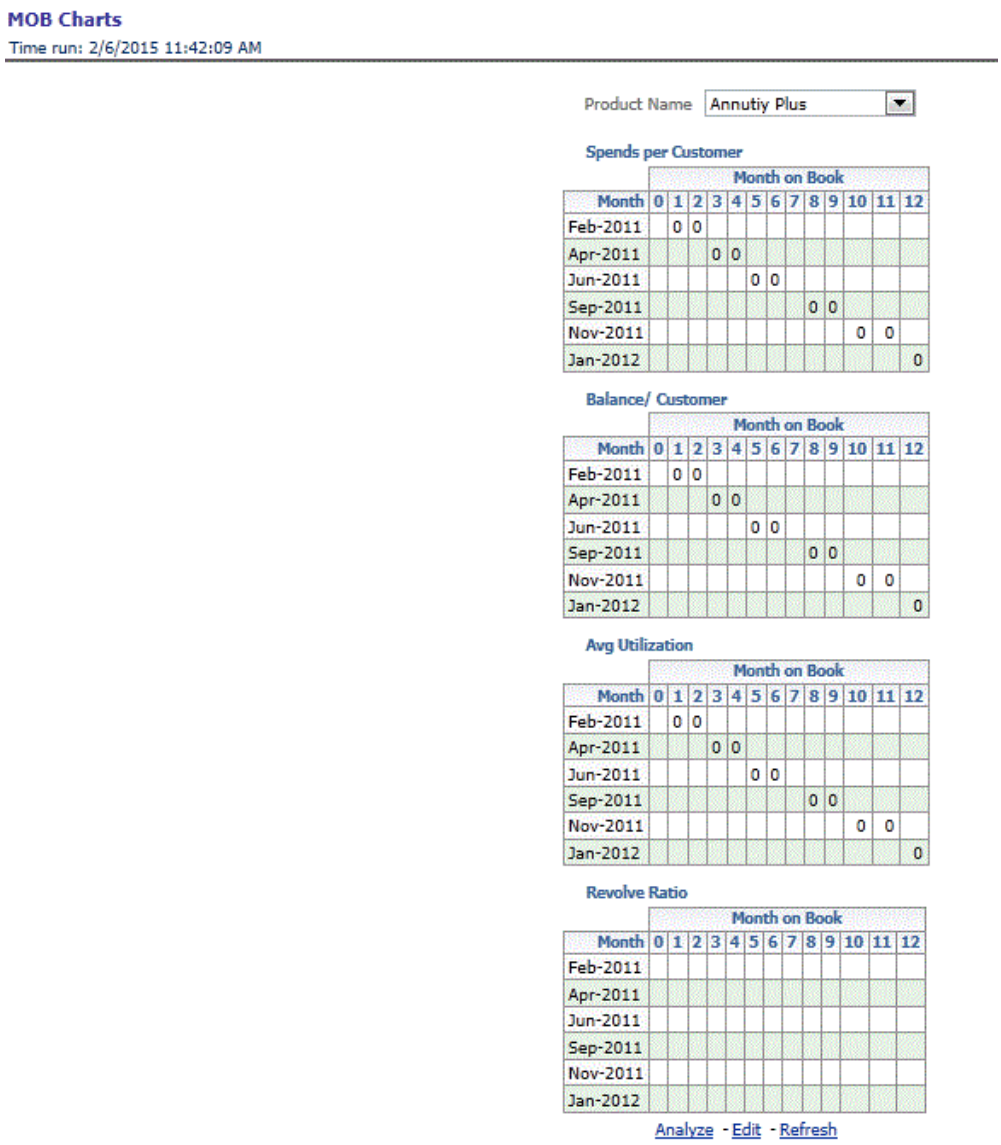
- Products per Customer

  This report displays the number of open customers who avail of certain product features with respect to the average balance held in an account, thus highlighting the most popular features of a product at different levels of engagement.



- MOB charts

  The average value of transactions for customers throughout a given period of time are detailed.



MOB Charts

Time run: 2/6/2015 11:42:09 AM

Product Name: Annutiy Plus

Spends per Customer

	Month on Book											
Month	0	1	2	3	4	5	6	7	8	9	10	11	12
Feb-2011		0	0										
Apr-2011				0	0								
Jun-2011						0	0						
Sep-2011									0	0			
Nov-2011											0	0	
Jan-2012													0

Balance/ Customer

	Month on Book											
Month	0	1	2	3	4	5	6	7	8	9	10	11	12
Feb-2011		0	0										
Apr-2011				0	0								
Jun-2011						0	0						
Sep-2011									0	0			
Nov-2011											0	0	
Jan-2012													0

Avg Utilization

	Month on Book											
Month	0	1	2	3	4	5	6	7	8	9	10	11	12
Feb-2011		0	0										
Apr-2011				0	0								
Jun-2011						0	0						
Sep-2011									0	0			
Nov-2011											0	0	
Jan-2012													0

Revolve Ratio

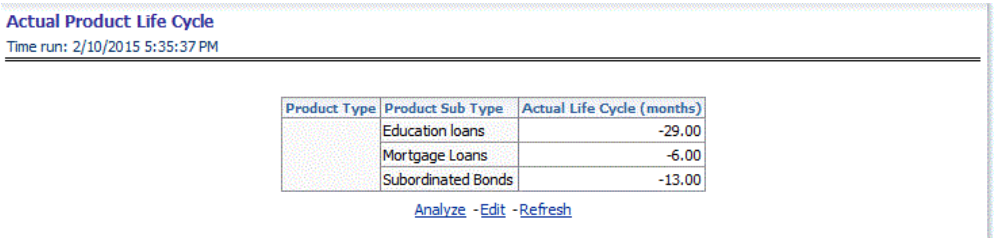
	Month on Book											
Month	0	1	2	3	4	5	6	7	8	9	10	11	12
Feb-2011													
Apr-2011													
Jun-2011													
Sep-2011													
Nov-2011													
Jan-2012													

Analyze - Edit - Refresh

Customer Trends

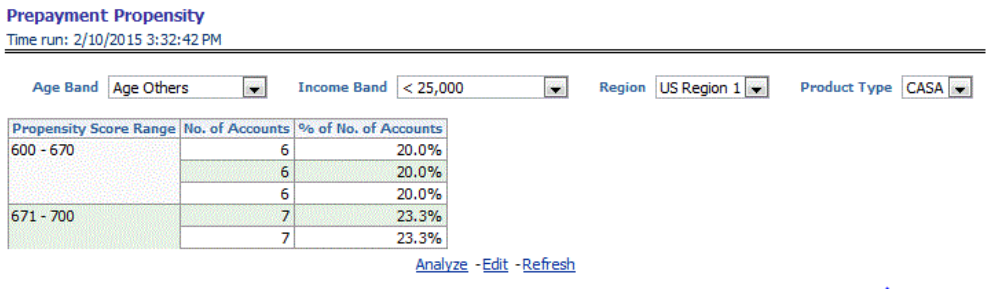
This tab contains the following reports:

- Actual product life cycle



- Pre-payment Propensity

  This report provides details of the distribution of accounts across score ranges for a particular product and customer dimensions.

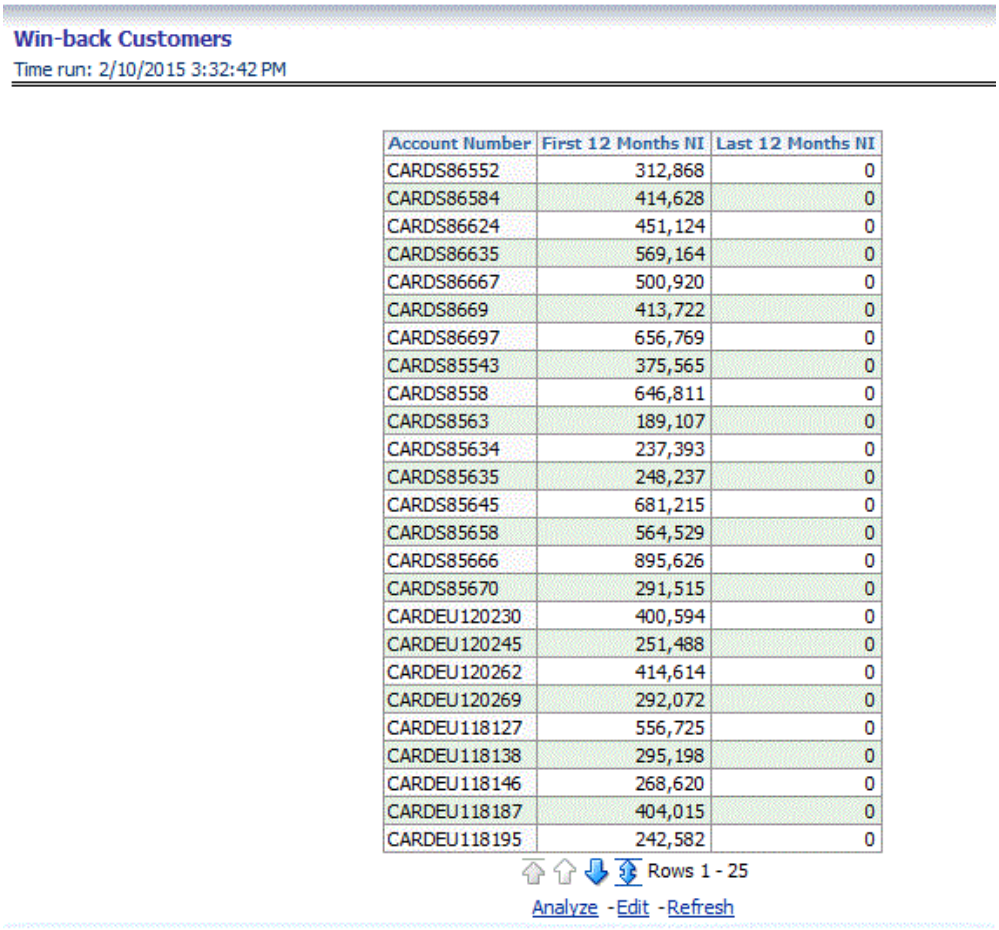


- Pre-payment indicator over life cycle

  This report shows the principal amount that is prepaid in a given period of time for a particular product across certain customer dimensions.

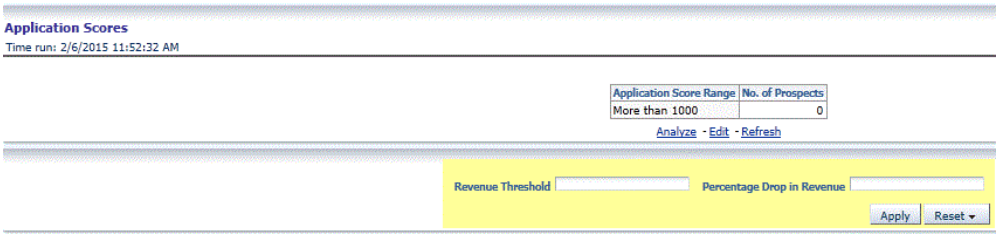
- Win-back Customers

  This report based on a certain criteria of change in net income selects certain accounts and shows the income from those accounts in the first 12 months of the account and the final 12 months.



- Application Scores

  This report provides the distribution of prospects for the bank across application scores.

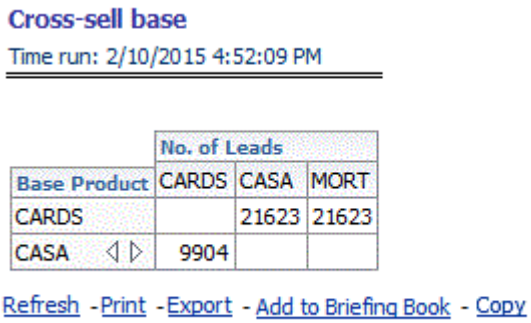


Cross-sell

This tab contains the following reports:

- Cross-sell base

  This report shows the number of leads that are available for every source product and target product combination.



Cross-sell base

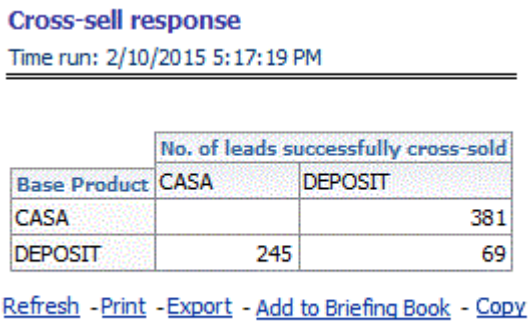
Time run: 2/10/2015 4:52:09 PM

	No. of Leads		
Base Product	CARDS	CASA	MORT
CARDS		21623	21623
CASA	9904		

Refresh - Print - Export - Add to Briefing Book - Copy

- Cross-sell response

  This report shows the number of leads that are successfully cross-sold for every source product and target product combination.



Cross-sell response

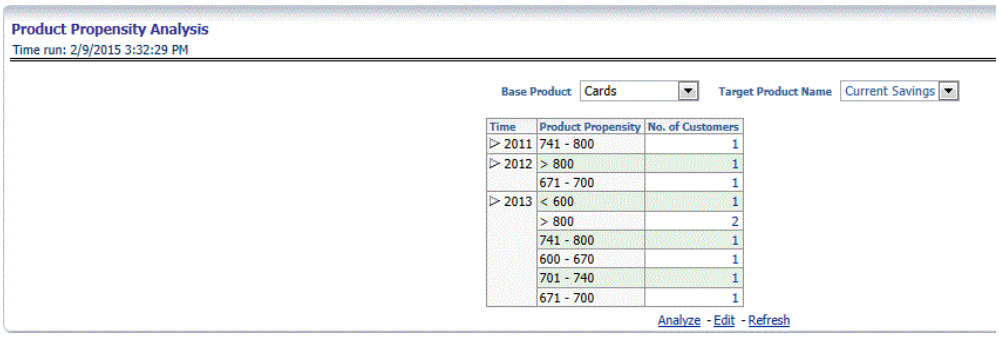
Time run: 2/10/2015 5:17:19 PM

	No. of leads successfully cross-sold	
Base Product	CASA	DEPOSIT
CASA		381
DEPOSIT	245	69

Refresh - Print - Export - Add to Briefing Book - Copy

- Product propensity analysis

  This report shows the likelihood of a customer having one particular product purchasing another product. The likelihood is expressed in terms of propensity score between the base product and target product.

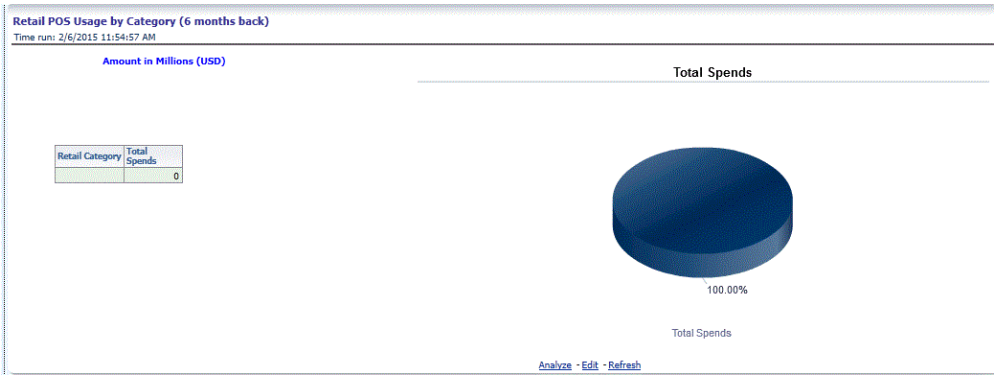


Spend Analysis

This tab contains the following reports:

- Retail POS Usage by Category (6 months back)

  This report shows the total spend for a POS usage category in last 6 months.

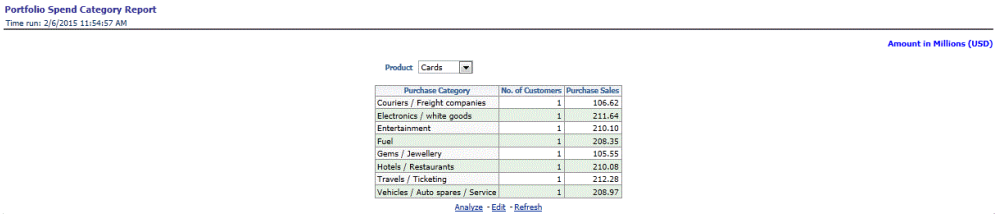


- Retail POS Usage by Category (12 months back)

  This report shows the total spend for a POS usage category in last 12 months.

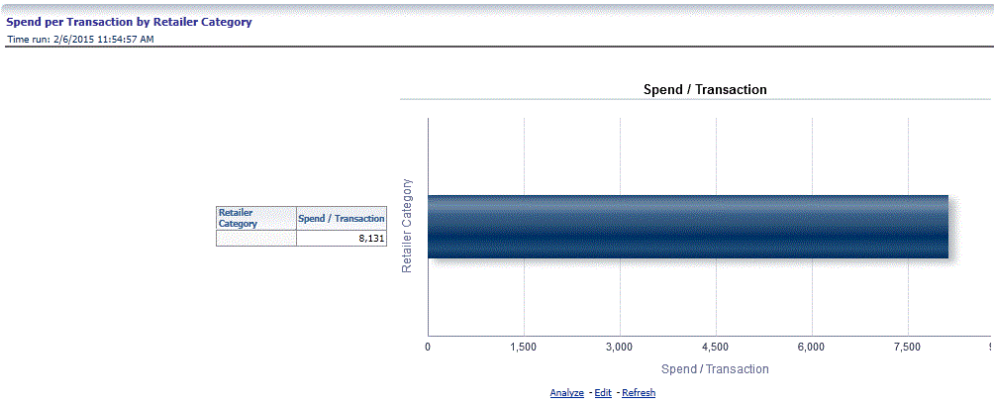
- Portfolio Spend Category Report

  This report shows the total spends for a purchase category and the number of customers responsible for that spend.



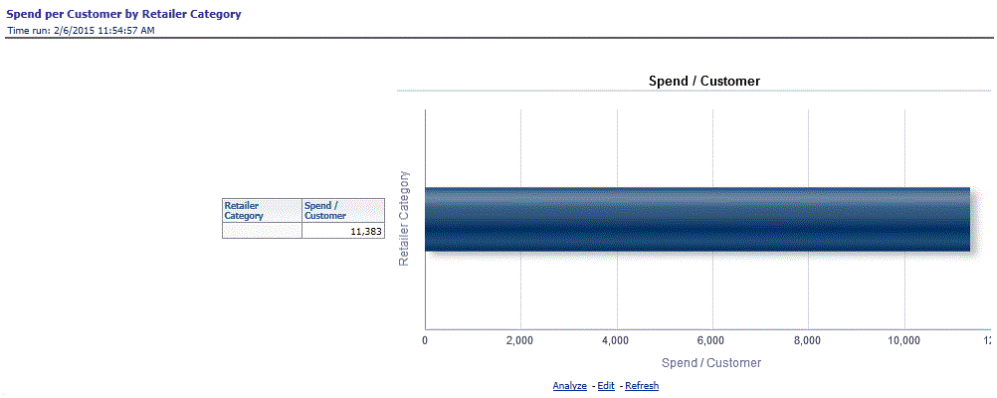
- Spend per Transaction by Retailer Category

  This report gives details of the average spend by a customer per transaction for a retailer category.



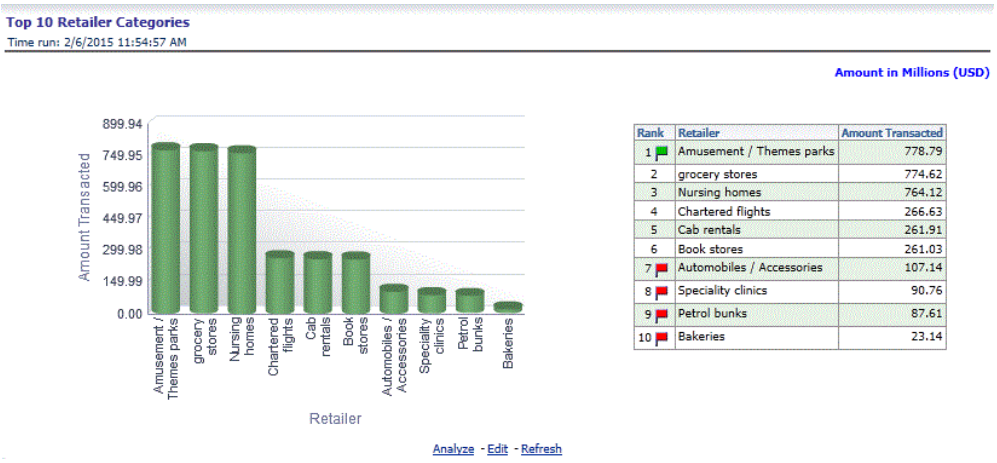
- Spend per Customer by Retailer Category

  This report gives details of the average spend by a customer for a retailer category.



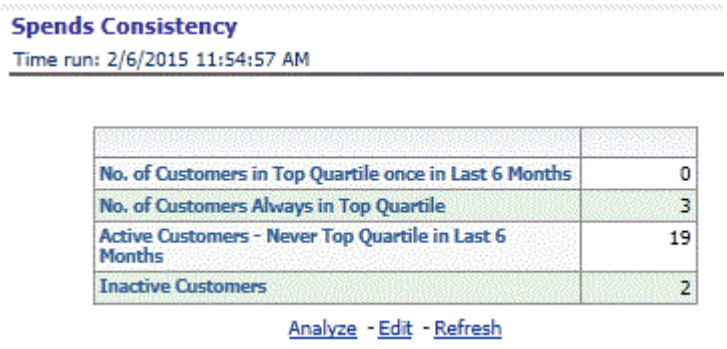
- Top 10 Retailer Categories

  This report ranks the retailer categories based on the total spends made within that category.



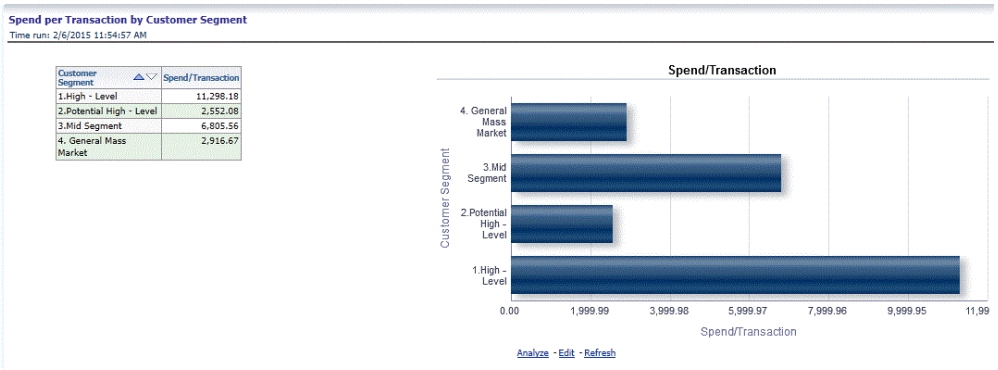
- Spends Consistency

  This report categorizes the customers based on the consistency they have maintained in spend amount.



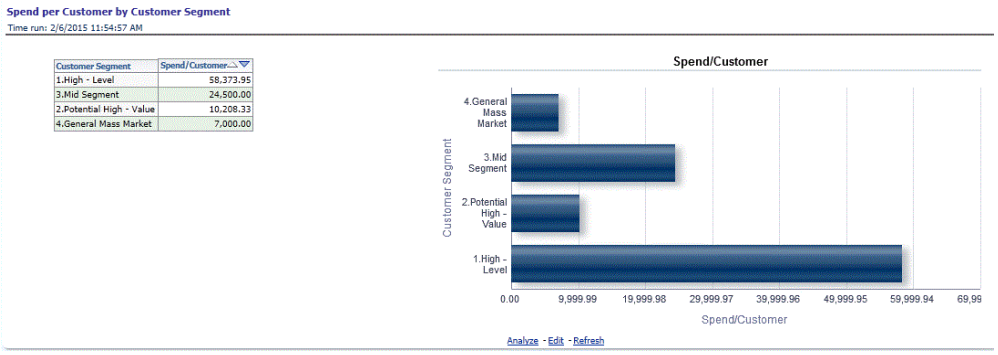
- Spend per Transaction by Customer Segment

  This report gives details of the average spend by a customer per transaction within a customer segment.



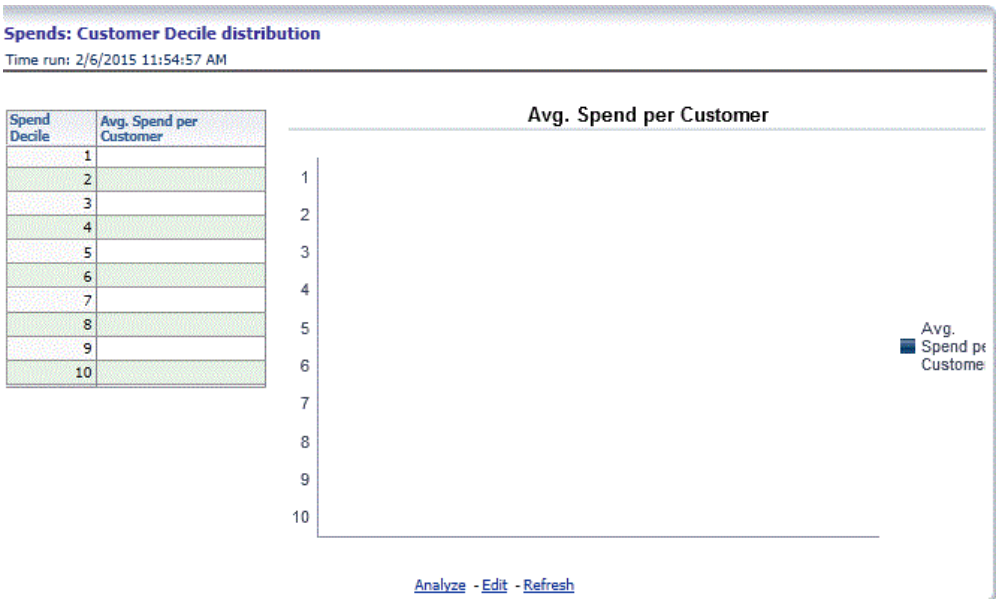
- Spend per Customer by Customer Segment

  This report gives details of the average spend by a customer within a customer segment.



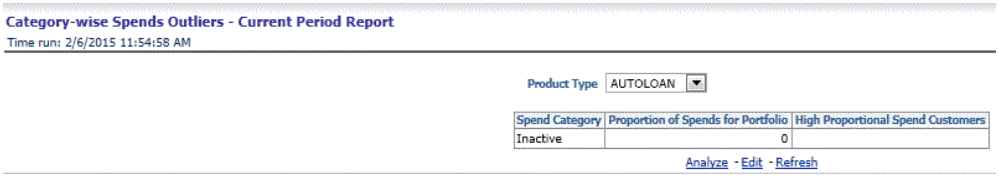
- Spends: Customer Decile distribution

  This reports shows the average spends of a customer for each decile created based on spend amount.



- Category-wise Spends Outliers - Current Period Report

  For a particular product this report shows the average spends and the number of outliers within the category based on pre-defined criteria.

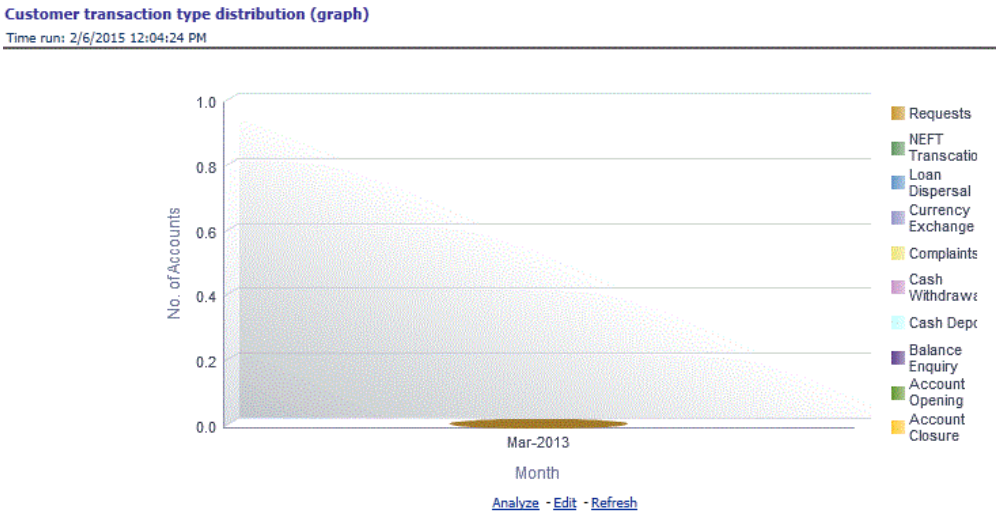


Customer Transactions

This tab contains the following reports:

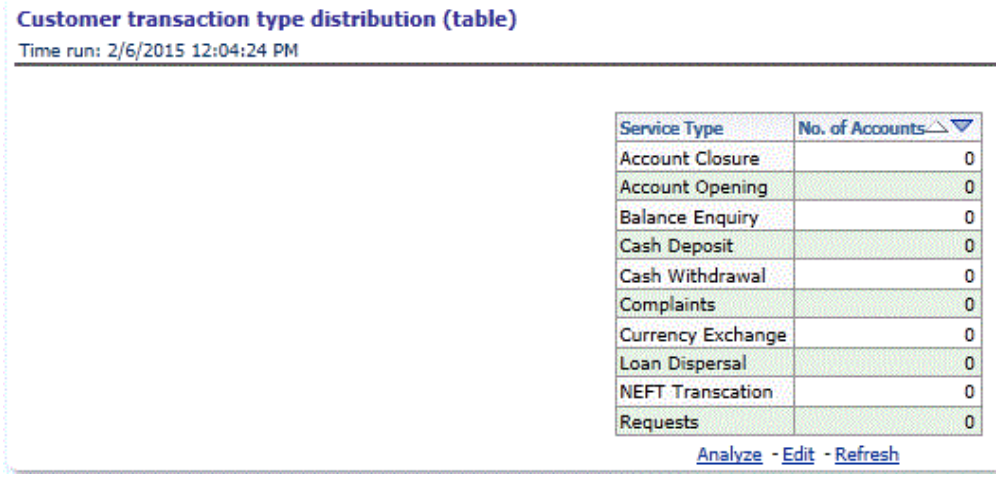
- Customer transaction type distribution (graph)

  This report provides the number of accounts for which specific services are provided.



- Customer transaction type distribution (table)

  This report highlights details of the number of accounts that have availed of a service type.



Customer transaction type distribution (table)

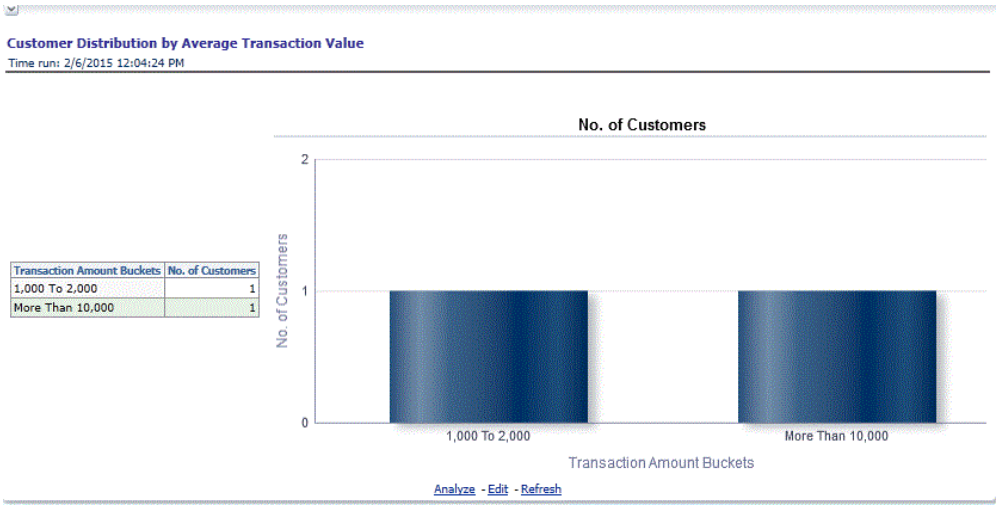
Time run: 2/6/2015 12:04:24 PM

Service Type	No. of Accounts
Account Closure	0
Account Opening	0
Balance Enquiry	0
Cash Deposit	0
Cash Withdrawal	0
Complaints	0
Currency Exchange	0
Loan Dispersal	0
NEFT Transcation	0
Requests	0

Analyze - Edit - Refresh

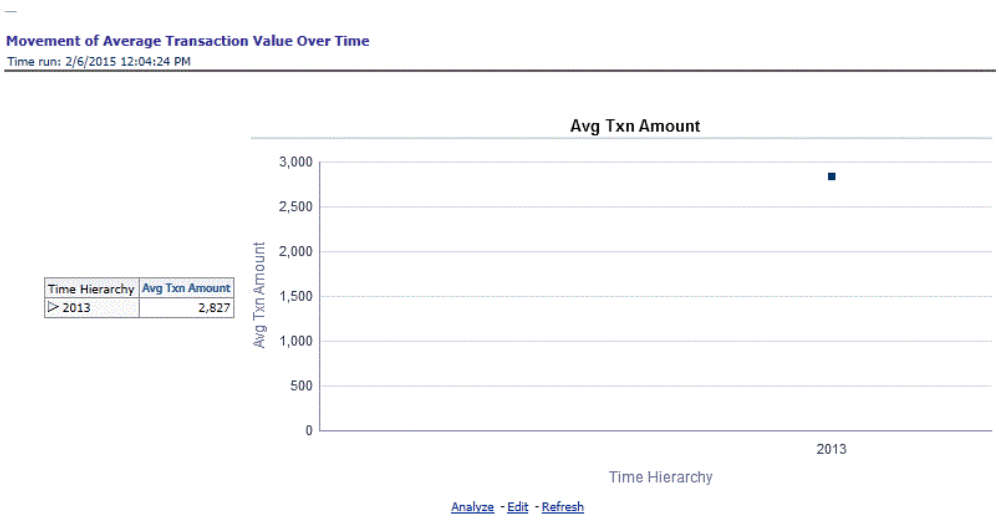
- Customer Distribution by Average Transaction Value

  This report provides the details of distribution of customers with respect to transaction amount.



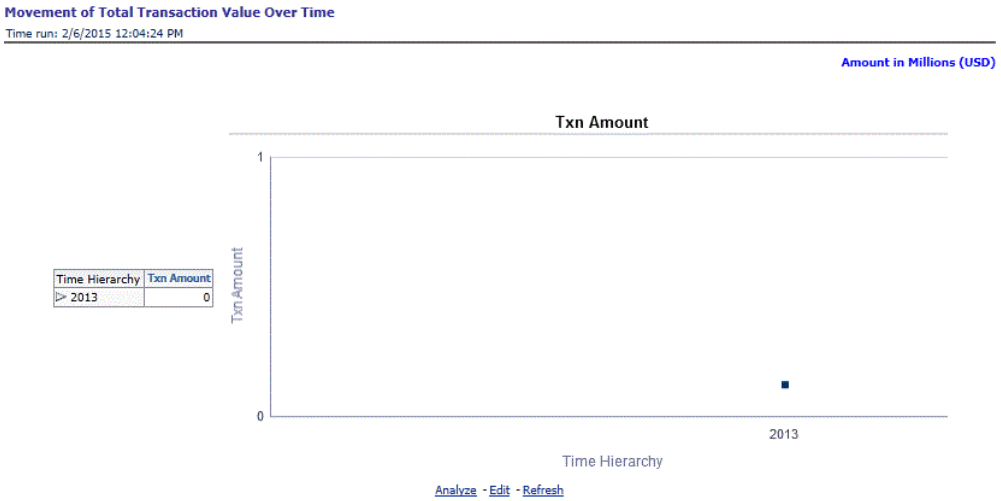
- Movement of average transaction value over time

  This report highlights the fluctuations in the average transaction value over a period of time.



- Movement of total transaction value over time

  This report highlights the fluctuations in the total transaction value over a period of time.

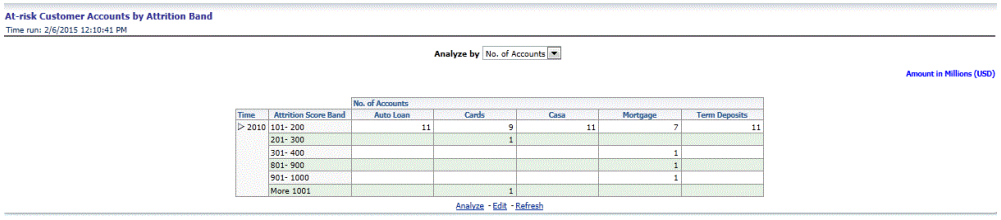


Attrition Analysis

This tab contains the following reports:

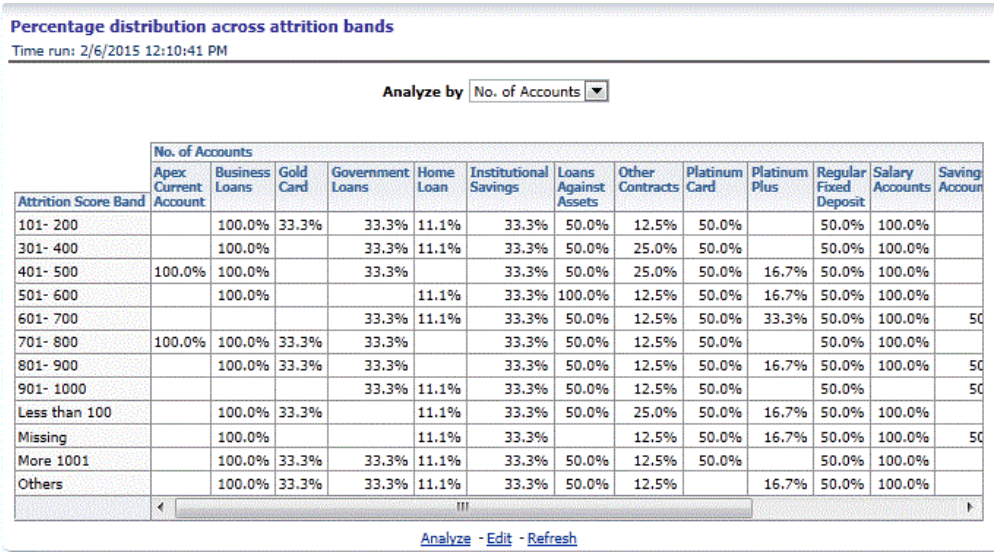
- At-risk Customer Accounts by Attrition Band

  This report displays the distribution of accounts within each attrition band for each product type.



- Percentage distribution across attrition bands

  This report provides the details of distribution of accounts for different products across the attrition bands.



Percentage distribution across attrition bands

Time run: 2/6/2015 12:10:41 PM

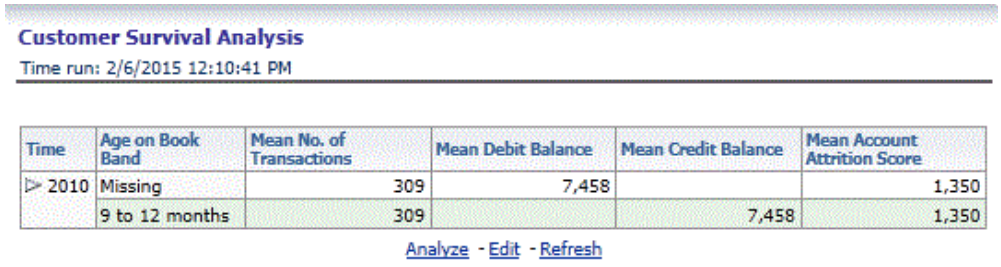
Analyze by No. of Accounts

	No. of Accounts												
Attrition Score Band	Apex Current Account	Business Loans	Gold Card	Government Loans	Home Loan	Institutional Savings	Loans Against Assets	Other Contracts	Platinum Card	Platinum Plus	Regular Fixed Deposit	Salary Accounts	Saving Accoun
101- 200		100.0%	33.3%	33.3%	11.1%	33.3%	50.0%	12.5%	50.0%		50.0%	100.0%	
301- 400		100.0%		33.3%	11.1%	33.3%	50.0%	25.0%	50.0%		50.0%	100.0%	
401- 500	100.0%	100.0%		33.3%		33.3%	50.0%	25.0%	50.0%	16.7%	50.0%	100.0%	
501- 600		100.0%			11.1%	33.3%	100.0%	12.5%	50.0%	16.7%	50.0%	100.0%	
601- 700				33.3%	11.1%	33.3%	50.0%	12.5%	50.0%	33.3%	50.0%	100.0%	50
701- 800	100.0%	100.0%	33.3%	33.3%		33.3%	50.0%	12.5%	50.0%		50.0%	100.0%	
801- 900		100.0%	33.3%	33.3%		33.3%	50.0%	12.5%	50.0%	16.7%	50.0%	100.0%	50
901- 1000				33.3%	11.1%	33.3%	50.0%	12.5%	50.0%		50.0%		50
Less than 100		100.0%	33.3%		11.1%	33.3%	50.0%	25.0%	50.0%	16.7%	50.0%	100.0%	
Missing		100.0%			11.1%	33.3%		12.5%	50.0%	16.7%	50.0%	100.0%	50
More 1001		100.0%	33.3%	33.3%	11.1%	33.3%	50.0%	12.5%	50.0%		50.0%	100.0%	
Others		100.0%	33.3%	33.3%	11.1%	33.3%	50.0%	12.5%		16.7%	50.0%	100.0%	

Analyze - Edit - Refresh

- Customer Survival Analysis

  This report provides the details of the transaction for a segment of existing customers with active accounts.



Customer Survival Analysis

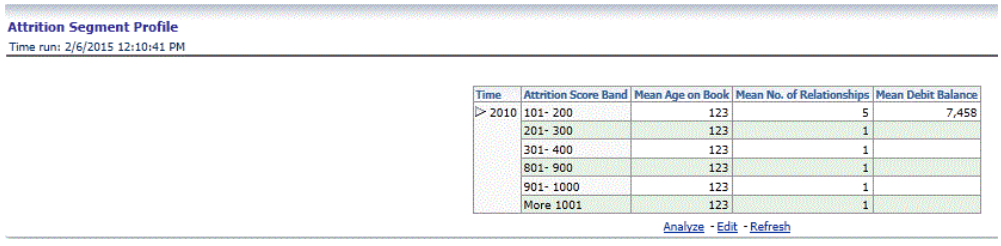
Time run: 2/6/2015 12:10:41 PM

Time	Age on Book Band	Mean No. of Transactions	Mean Debit Balance	Mean Credit Balance	Mean Account Attrition Score
▷ 2010	Missing	309	7,458		1,350
	9 to 12 months	309		7,458	1,350

Analyze - Edit - Refresh

- Attrition Segment Profile

  This report provides details of the profile of segment of customers in a particular attrition band.



Attrition Segment Profile

Time run: 2/6/2015 12:10:41 PM

Time	Attrition Score Band	Mean Age on Book	Mean No. of Relationships	Mean Debit Balance
▷ 2010	101- 200	123	5	7,458
	201- 300	123	1	
	301- 400	123	1	
	801- 900	123	1	
	901- 1000	123	1	
	More 1001	123	1	

Analyze - Edit - Refresh

- Attrition Report Aggregate

  This report provides the percentage of accounts and customers attriting across products.

Attrition Report Aggregate

Time run: 2/6/2015 12:10:41 PM

Time	Product	No. of Accounts	No. of Closed Accounts	% Closed Accounts to Total	No. of Customers	No. of Closed Customers	% Closed Customers to Total	No. of Open Customers	No. of Open Customers with Closed Accounts	% Open Customers with Closed Accounts
▷ 2010	Auto Loan	14	1	7.00%	11	2	18.00%	9	6	66.00%
	Cards	15	2	13.00%	11	4	36.00%	7	3	42.00%
	Casa	15	3	20.00%	12	8	66.00%	4	3	75.00%
	Mortgage	15	3	20.00%	12	8	66.00%	4	2	50.00%
	Term Deposits	15	2	13.00%	12	4	33.00%	8	4	50.00%

Analyze - Edit - Refresh

- Attrition Report by Geography

  This report provides the details of attrition for a particular region.

Attrition Report by Geography

Time run: 2/6/2015 12:10:41 PM

Branch Name Chennai Branch Code OBIB4

Time	Line of Business	Pro____ Name	No. of Closed Accounts	% of No. of Closed Accounts	No. of Closed Customers	% of No. of Closed Customers	Attrition Score
▷ 2011	Government Finance	Other Contracts	0		1	100.0%	
Grand Total			**0**		**1**	**100.0%**	

Analyze - Edit - Refresh

- Attrition by Attrition Reason

  This report provides details of the reason of attrition across products and LoBs.

Attrition by Attrition Reason

Time run: 2/6/2015 12:10:41 PM

Time	Line of Business	Attrition Reason	Product Name	No. of Closed Accounts	No. of Closed Customers
▷ 2010	Retail Banking	Product features dissatisfaction	Casa	2	1
			Mortgage	1	1
			Term Deposits	1	2
			Cards	0	1
		Transfer to subsidiary branch	Mortgage	1	2
			Casa	0	1
			Term Deposits	0	1
	Investment Banking	Deceased Customer	Cards	1	1
			Mortgage	0	1
		Service Dissatisfaction	Casa	0	1
			Mortgage	0	1
	Corporate Centre	Product features dissatisfaction	Casa	1	2
			Auto Loan	0	1
			Cards	0	1
			Term Deposits	0	1

Rows 1 - 15

Analyze - Edit - Refresh

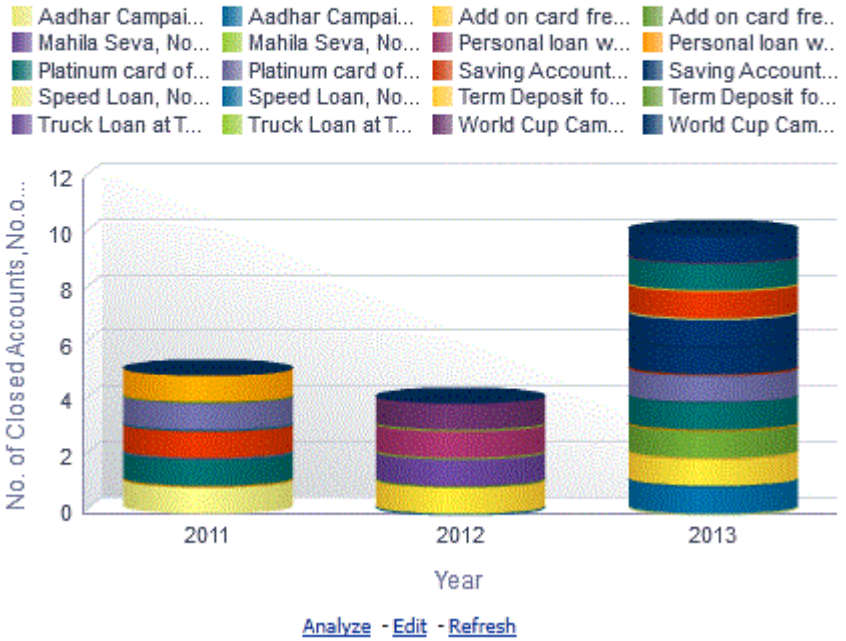
- Attrition Over last 5 Years - Current Report Period

  This report details the weightage of attrition of each product in the last 5 years.

Attrition Over last 5 Years - Current Period Report

Time run: 2/6/2015 12:10:41 PM

Analyze by No. of Closed Customers



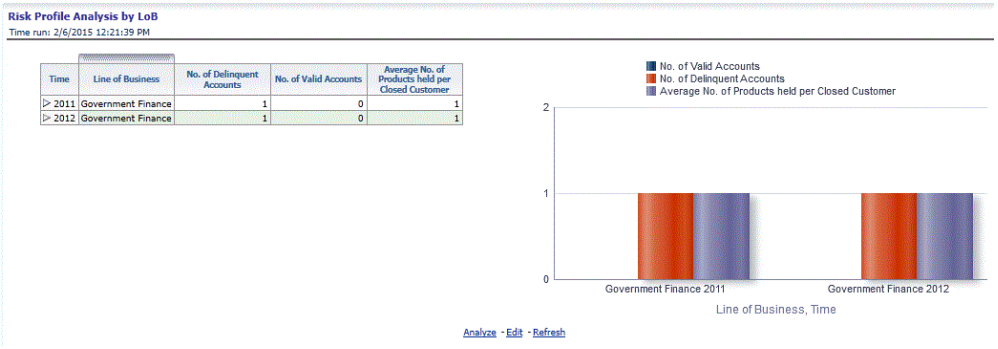
Analyze - Edit - Refresh

Risk Summary

This tab contains the following reports:

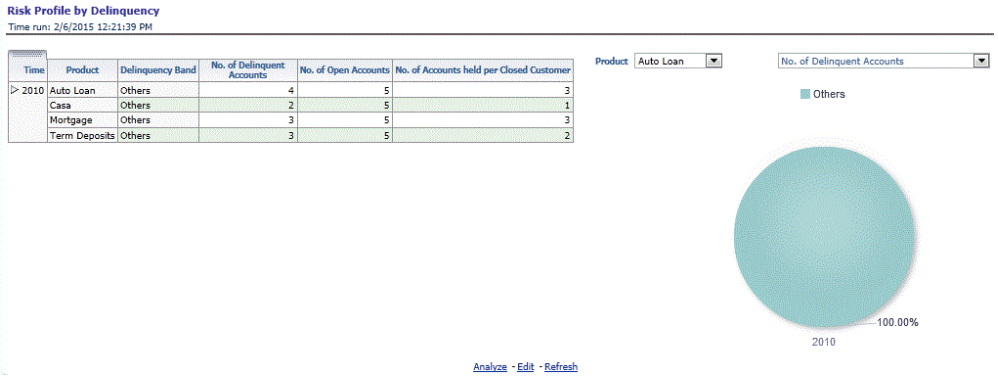
- Risk Profile Analysis by LoB

  This report shows the number of delinquent accounts in each line of business.



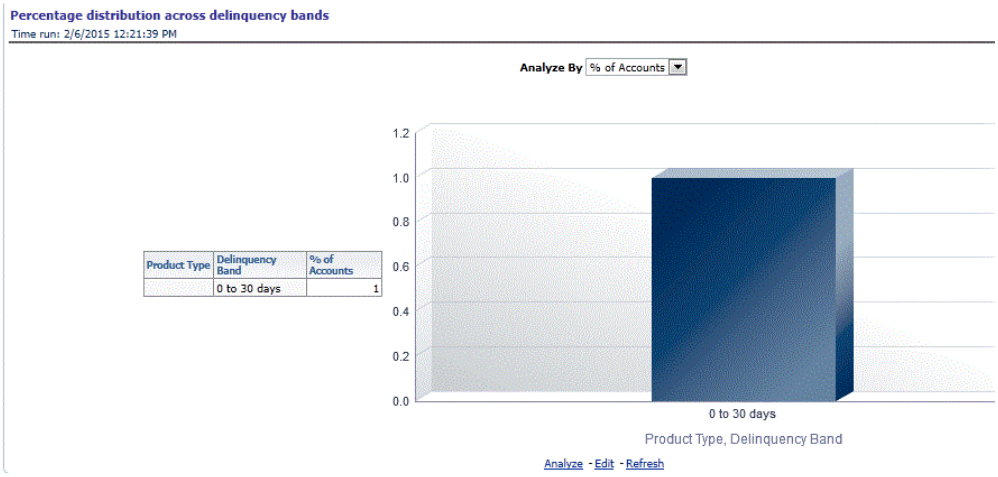
- Risk Profile by Delinquency

  This report shows the number of delinquent accounts for a product type.



- Percentage distribution across delinquency bands

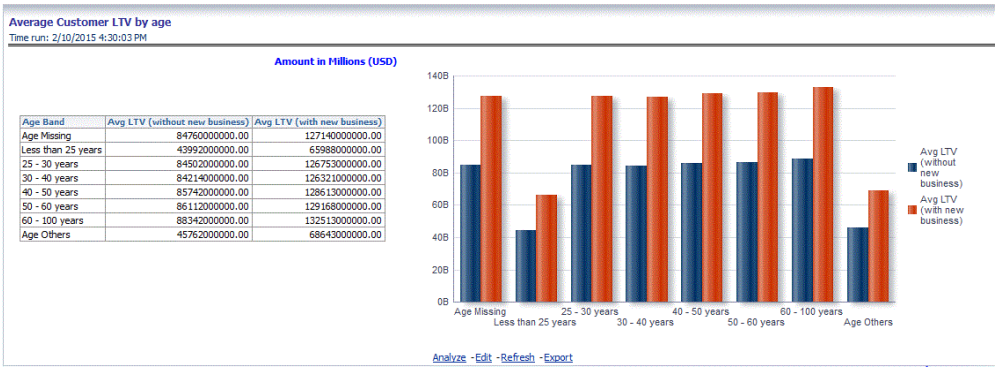
  This report shows details of the number of accounts that are delinquent and the period for which they have been delinquent for a product type.



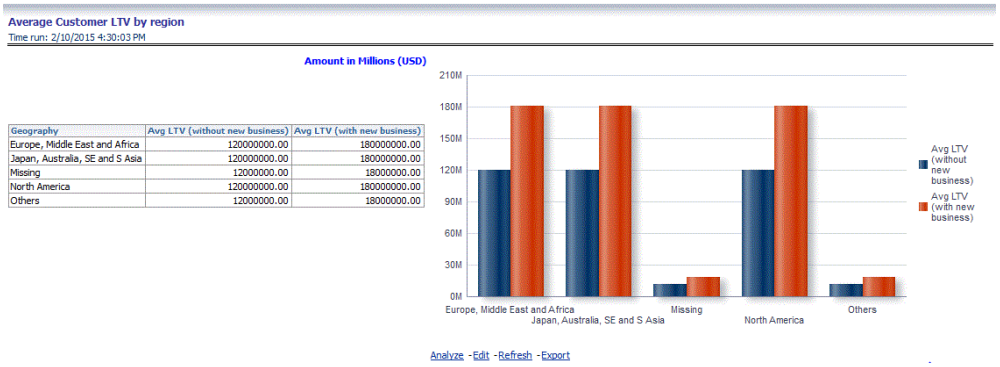
Predictive Models

The following tabs are present in the Predictive Models dashboard:

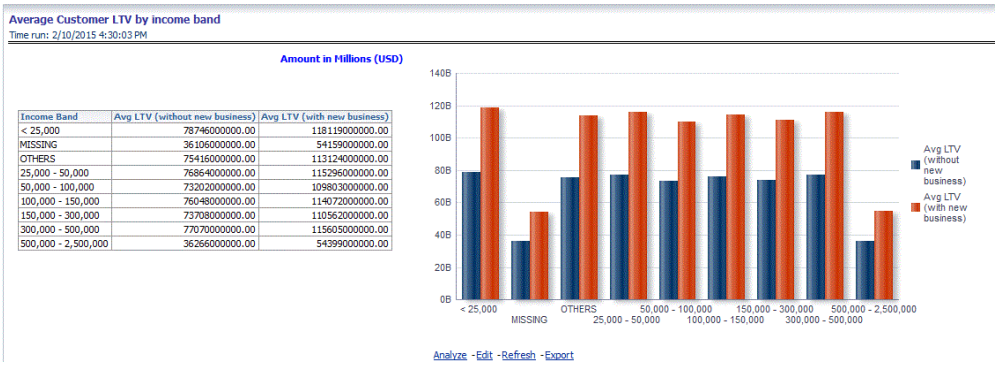
- Average Customer LTV by Age



- Average Customer LTV by Region

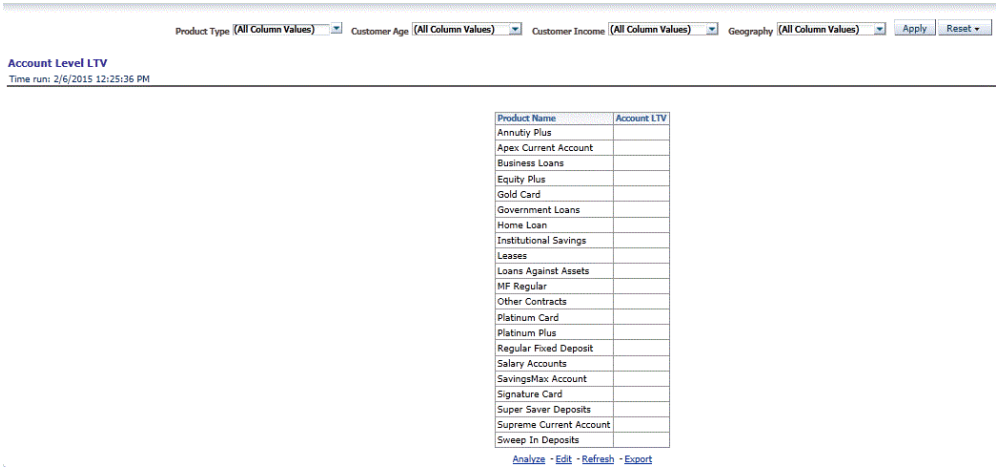


- Average Customer LTV by Income Band

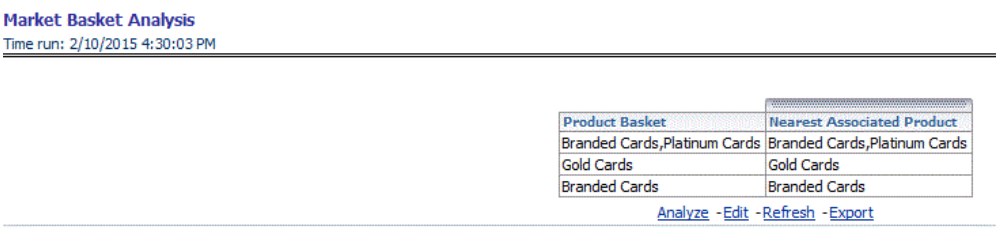


- Average Customer LTV by gender

- Account Level LTV



- Market Basket Analysis



A

Sandbox Population

Requesting and Authorizing to populate Sandbox

This option is not available for logical sandbox.

To request and authorize to populate sandbox in the Sandbox Maintenance window, follow these steps:

1. Select the sandbox which you want to populate and click the **Edit** button in the Sandbox Maintenance toolbar. The Edit button is disabled if you have selected multiple checkboxes. **The Sandbox Maintenance Edit** window is displayed.

2. In the *Request Action* tab, select **Complete for Populate Sandbox** to copy the required table data from the Production infodom to the Sandbox infodom based on the sandbox definition.

3. Click the *Authorize* tab, and select the Populate Sandbox – Complete/ Incremental checkbox to authorize sandbox population. This tab will be enabled only if your user role is mapped to the function SANDBXAUTH.

4. Click **Save** to confirm changes.

   On authorization, a Sandbox-Populate batch is registered in the OFSAA Infrastructure Operations. The batch will be available in the *Batch Scheduling* window with the Sandbox ID. This batch must be triggered from the *Batch Scheduling* window to complete the data population.

B

How to Define a Batch

Introduction

Batch refers to a set of executable processes based on a specified rule. Batch Maintenance framework within OFSAAI facilitates you to create and maintain the Batch Definitions. You can process the Batch scheduled for execution from Batch Maintenance and also from other modules.

You need to have Data Centre Manager function role mapped to access the Operations framework within OFSAAI. You can access Batch Maintenance by expanding Operations section within the tree structure of LHS menu. The Batch Maintenance window displays a list of Batches scheduled for maintenance with the other details such as Batch ID, Batch Description, and the editable state of the Batch.

Batch Creation

You can create a batch from the Batch Maintenance screen as mentioned below:

1. From the OFSAAI **Home** menu, navigate to **Operations>Batch Maintenance**.
2. In the *Batch Maintenance* window, Select '+' button from the Batch Name toolbar. The *New Batch Definition* window is displayed.
3. Enter the Batch details as tabulated.

Field	Description
Batch Name	The Batch Name is auto generated by the system. You can edit to specify a Batch name based on the following conditions: • The Batch Name should be unique across the Information Domain. • The Batch Name must be alpha-numeric and should not start with a number. • The Batch Name should not exceed 41 characters in length. • The Batch Name should not contain special characters "." and "-".
Batch Description	Enter a description for the Batch based on the Batch Name.
Duplicate Batch	(Optional) Select the checkbox to create a new Batch by duplicating the existing Batch details. On selection, the **Batch ID** field is enabled.
Batch ID (If duplicate Batch is selected)	It is mandatory to specify the Batch ID if Duplicate Batch option is selected. Select the required **Batch ID** from the list.
Sequential Batch	Select the check box if the Batch has to be created sequentially based on the task specified. For example, if there are 3 tasks defined in a Batch, task 3 should have precedence as task 2, and task 2 should have precedence as task 1.