Oracle Financial Services Retail Customer Analytics User Guide

Release 8.0.1.0.0
September 2015

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Oracle Financial Services Retail Customer Analytics User Guide

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Preface

Intended Audience

Welcome to Release 8.0 of the Oracle Financial Services Retail Customer Analytics User Guide.

This user guide is intended for the users of Oracle Financial Services Retail Customer Analytics application.

See *Related Information Sources* for more Oracle product information.

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Structure

This user guide has been segregated into the following chapters:

Related Information Sources

- Oracle Financial Services Advanced Analytical Applications Infrastructure Installation and Configuration Guide
- Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide
- Oracle Financial Services Institutional Performance Analytics (OFSIPA) User Guide
- Oracle Financial Services Retail Customer Analyrics (OFSRPA) User Guide

CHAPTER 1

Introduction

Overview of Oracle Financial Services Retail Customer Analytics (OFSRCA)

This guide explains the concepts of Oracle Financial Services Retail Customer Analytics, and provides step-by-step instructions for navigating the Retail Customer Analytics user interface. Oracle Financial Services Retail Customer Analytics (OFSRCA) is a complete end-to-end web-based Business Intelligence solution which provides a 360 degree view of the customer relationship for key insights into the customer life-cycle.

OFSRCA 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 also provide you deep insights into customer engagements across target segments and products/Line Of Business (LOB) including lending, credit cards, and so on. It proactively manage the growth through strategic insights into the retail business performance. OFSRCA helps you to monitor customer distribution across credit and delinquency bands and related exposures.

The OFSRCA solution is packaged along with AAI 8.0 and other applications. This OFSRCA is supported for Oracle 11g and 12c.
OFSRCA solution is built using:

- OBIEE 11.1.1.7.1 for Dashboard and Reports activities
- Essbase 11.1.2.3+ for 12c database

This manual deals with essential Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) required for OFSRCA activities, process flow for the data transformation, 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.

CHAPTER 2

Overview of Process Flow

This chapter discusses the following topics:

Introduction

Oracle Financial Services Retail Customer Analytics (OFSRCA) 8.0.1.0.0 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:

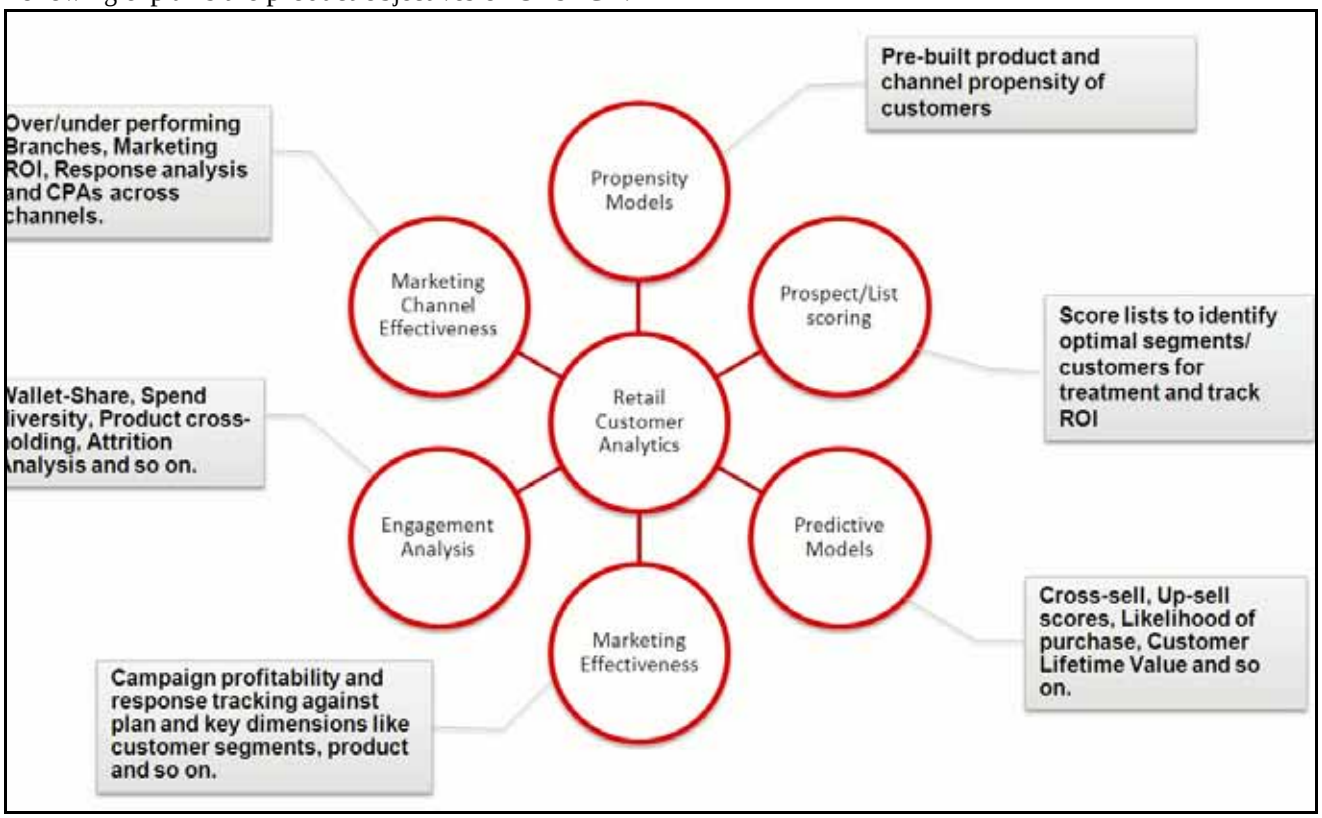


Figure 1. Product Objectives

For details on OFSRCA reports and how OBIEE is being utilized, see *Overview of OFSRCA Reports.*

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 8.0.1.0.0 can be independently licensed and installed to work on top of the OFSAA 8.0.1.0.0 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.

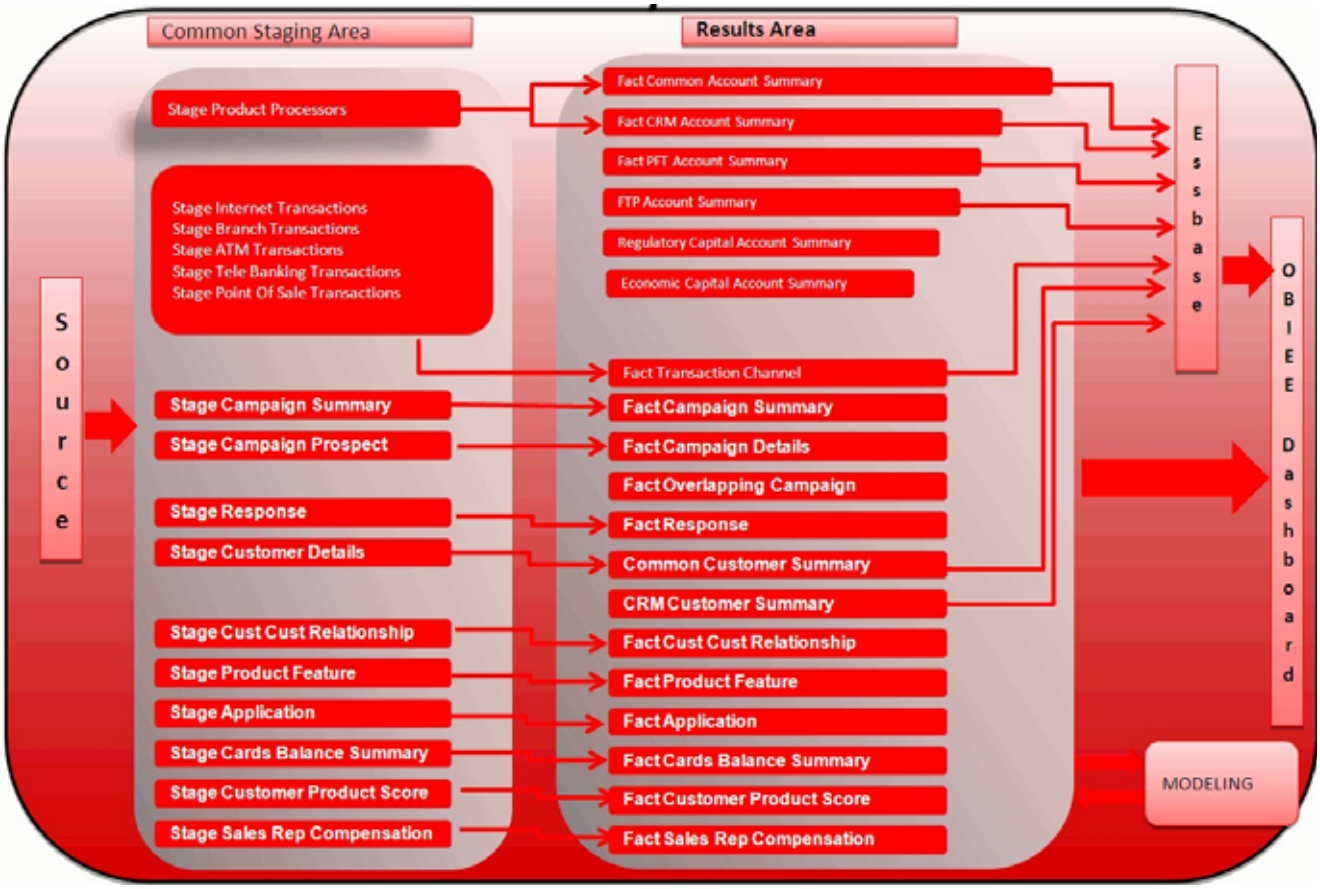


Figure 2. Staging Tables

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:

Table 1. OFSRCA Dimensions

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
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	tage 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
Request Type Dimension	Stage Request Type Dimension	SCD
Survey Dimension	tage 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
Txn Failure Reason Dimension	Stage Txn Failure Reason Dimension	SCD
Transaction Status Dimension	Stage Transaction Status Dimension	SCD
Vendor Dimension	Stage Vendor Dimension	SCD

Table 1. OFSRCA Dimensions

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
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
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
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

Table 1. OFSRCA Dimensions

Dimension Entity Name	Staging Entity Name(s)	Loading/Maintenance method
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.

The Report `Cross-sell Scores` in Customer Central will be available only in the presence of RCA Application. The Table `FCT_XSELL_SCORE` will be populated by the T2T `<Infodom>_XSell_Score`.

In the absence of RCA application, this table needs to manually or directly loaded, for the reports to be displayed.

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

Table 2. FACT Table Flow

Fact Entity Name	Source	Source Entities	Method of populating measures
Fact Common Account Summary	Stage	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 Stage Term Deposit Contracts Stage Trusts	T2T
Fact CRM Account Summary	Stage	Stage Commitment Contracts Stage Mutual Funds 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	T2T
Fact PFT Account Summary	Instrument	Annuity Contracts Borrowings Checking and Savings Account Credit Cards Credit Lines Guarantees Investments Leases Loan Contracts Mortgages Term Deposits Trusts	T2T

Table 2. FACT Table Flow

Fact Entity Name	Source	Source Entities	Method of populating measures
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 Common Customer Summary	Stage	Stage Commitment Contracts Stage Mutual Funds Stage Customer Details Stage Party Rating Details Stage Party Financials	T2T
Fact CRM Customer Summary	Stage and Fact	Stage Customer Master Stage Customer Details Fact Common Account Summary Fact Transaction Channel	T2T/DT
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
Campaign Summary Facts	Stage	Stage Campaign Summary	T2T
Fact Overlapping Campaign	Stage	Fact Campaign Details	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

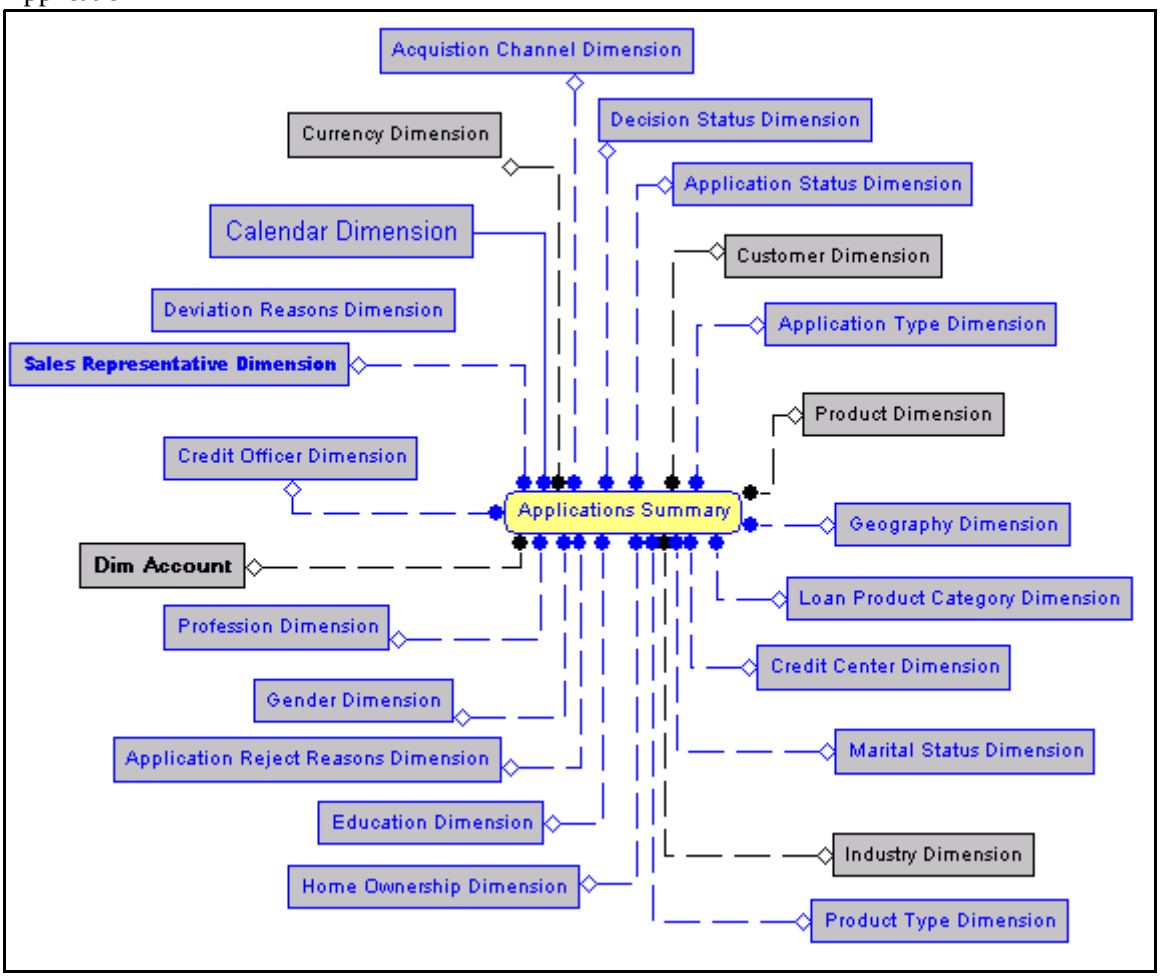


Figure 3. Application

- Campaign Details

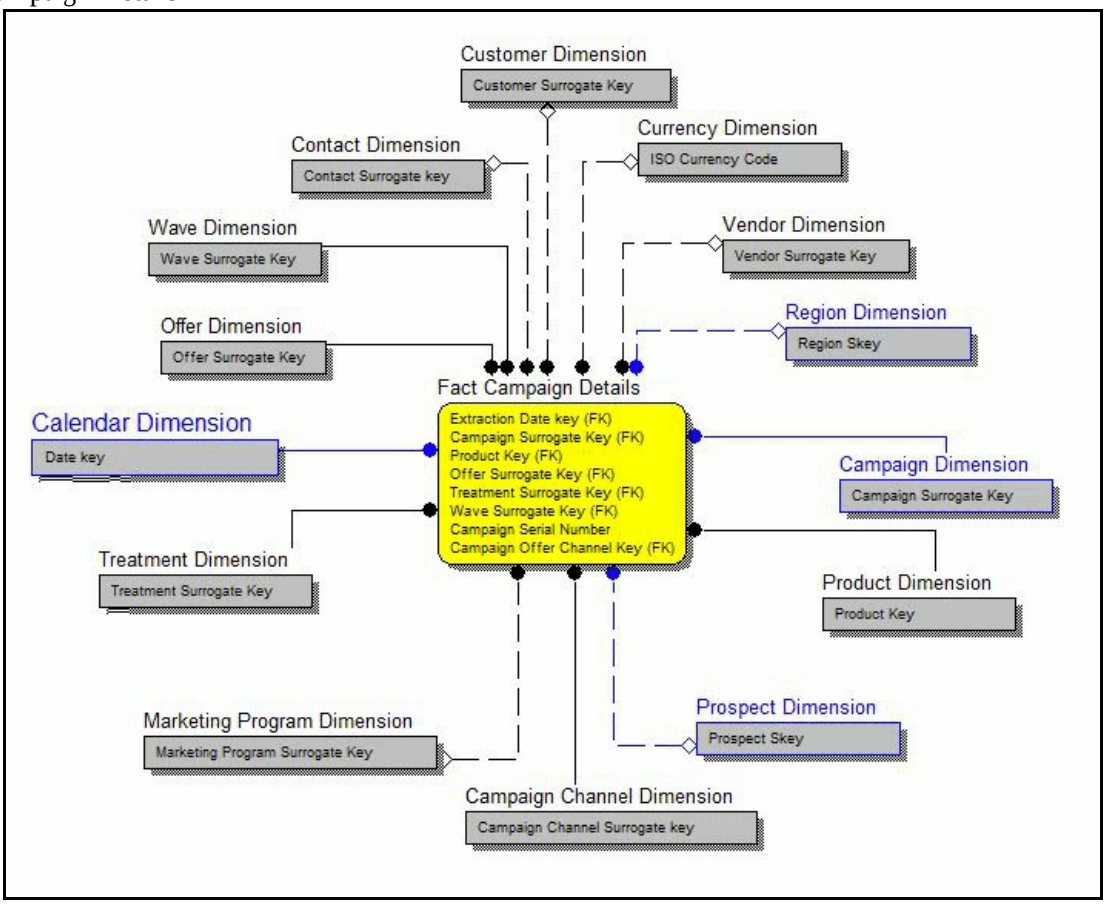


Figure 4. Campaign Details

- Campaign Execution Summary

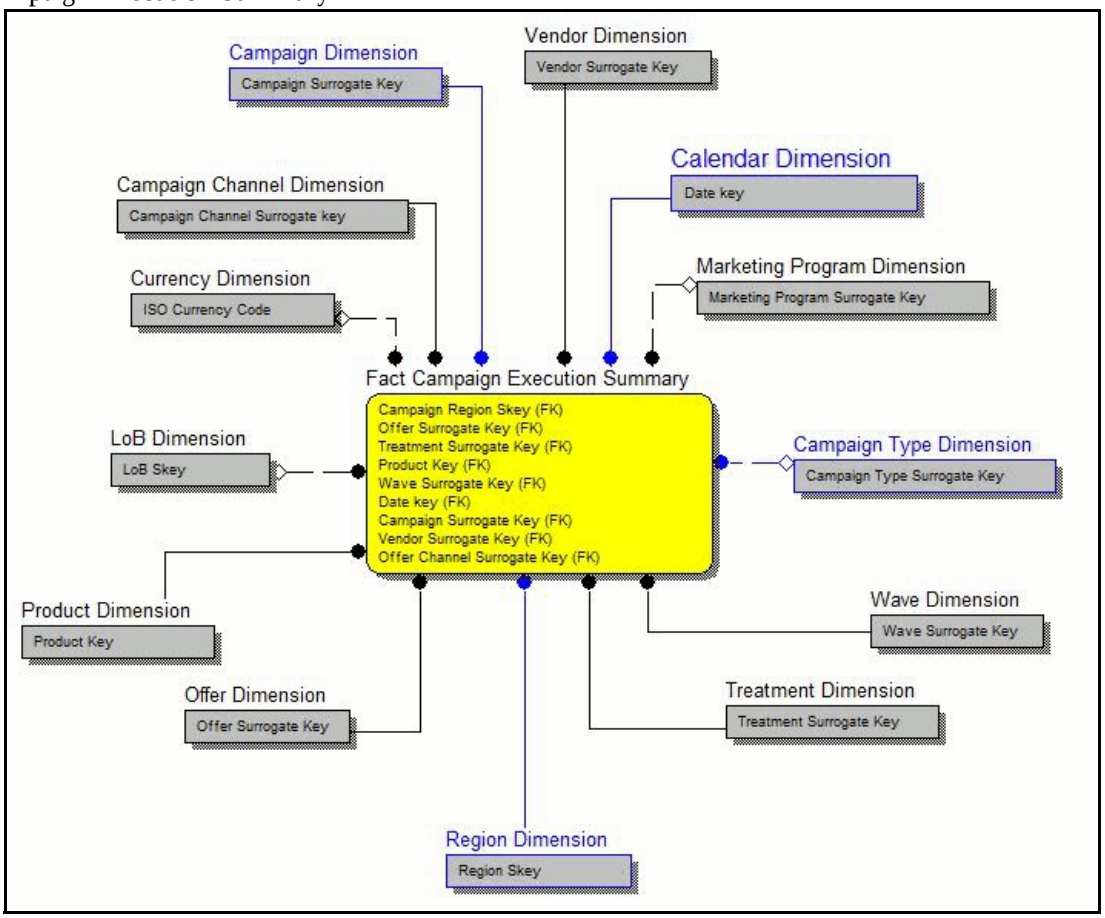


Figure 5. Campaign Execution Summary

- Campaign Response

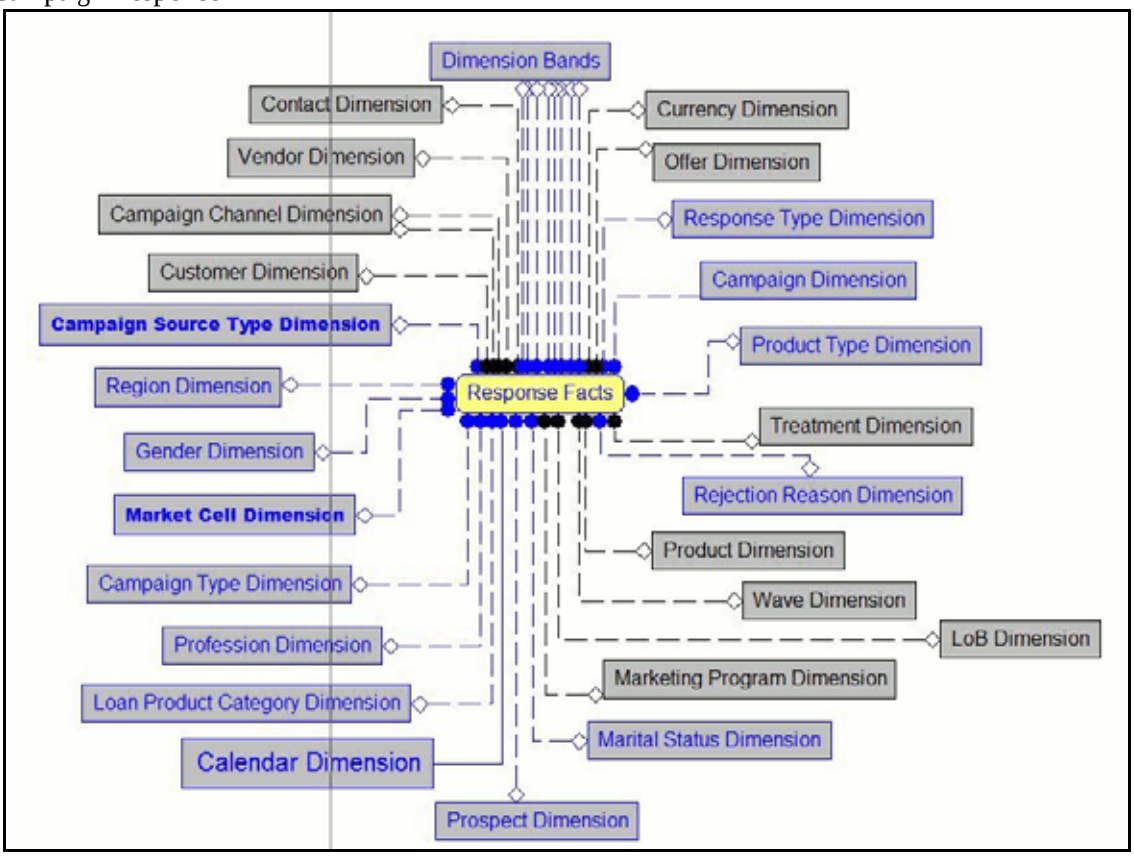


Figure 6. Campaign Response

- Campaign Summary

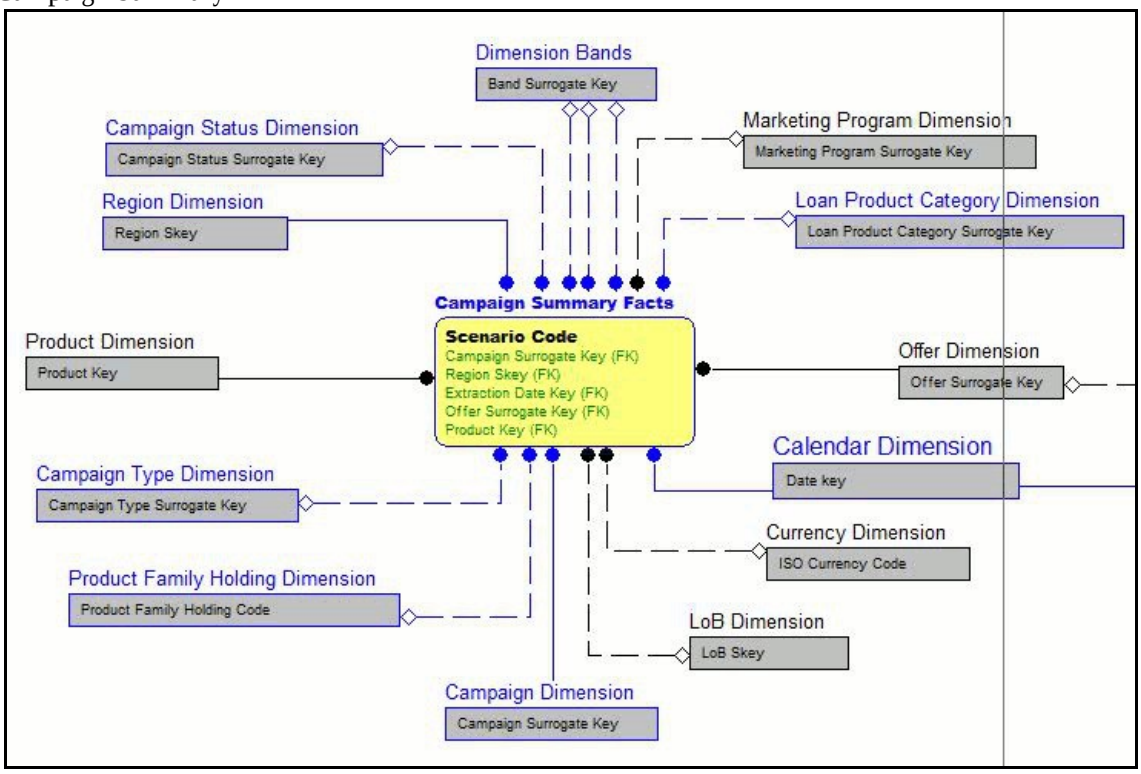


Figure 7. Campaign Summary

- Cross Sell Score

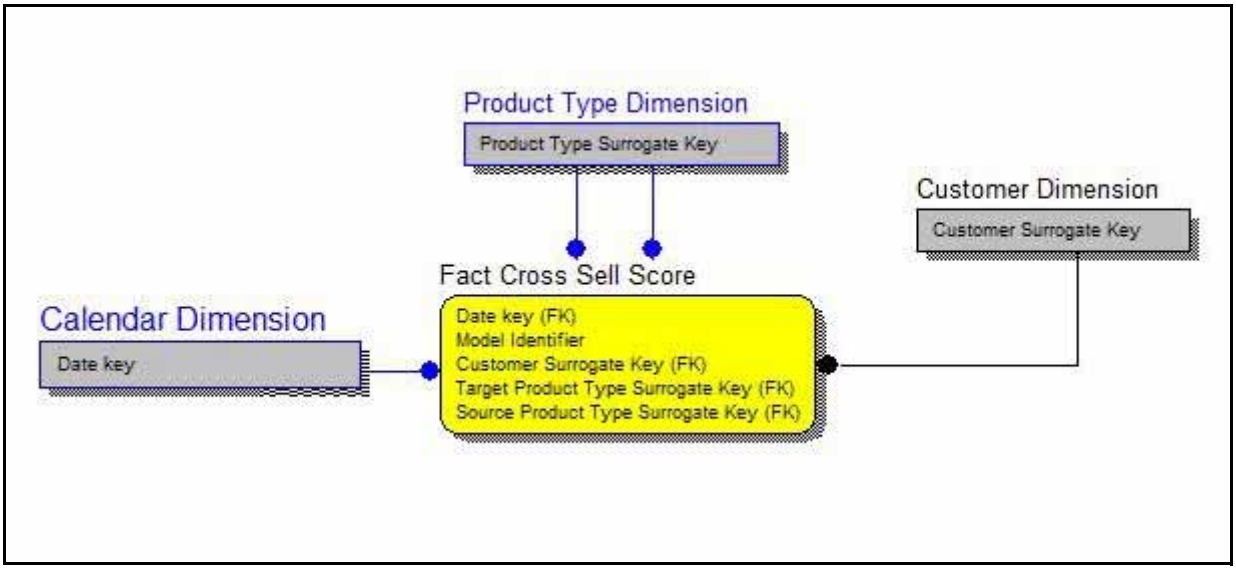


Figure 8. Cross Sell Score

- Customer to Customer Relationship

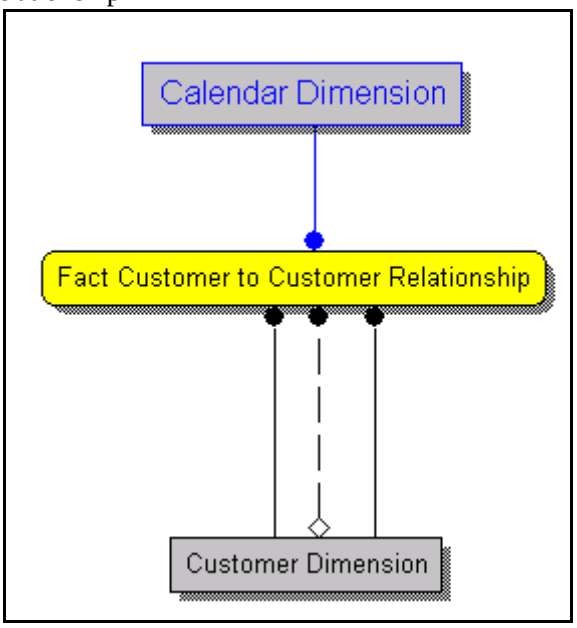


Figure 9. Customer to Customer Relationship

- FTP Account Summary

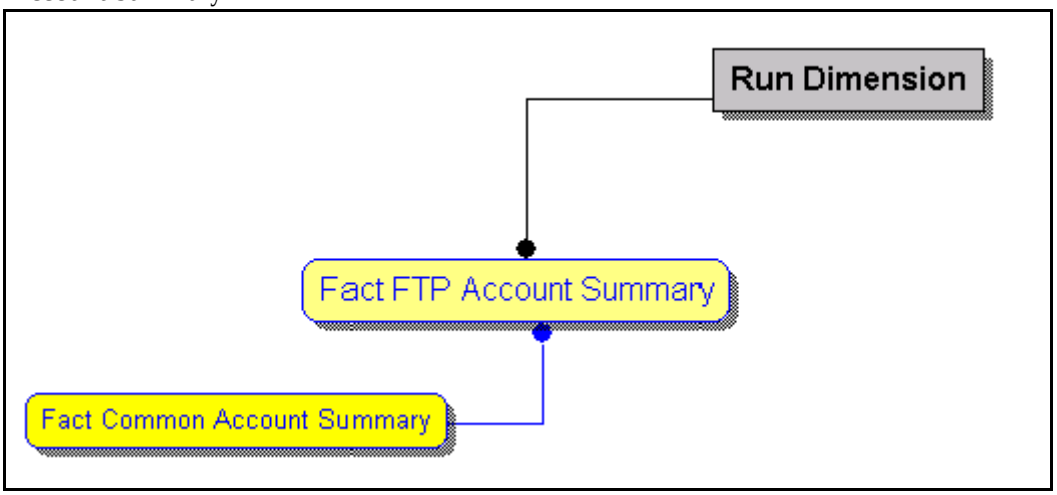


Figure 10. FTP Account Summary

- Overlapping Campaign

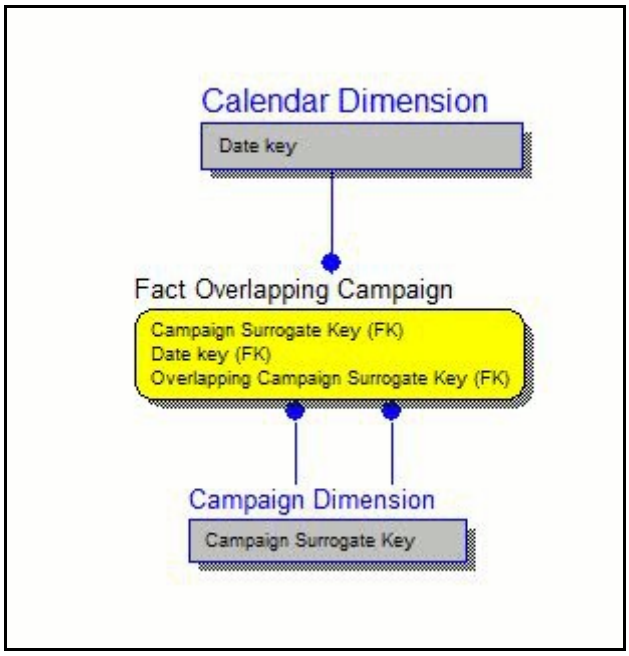


Figure 11. Overlapping Campaign

- PFT Account Summary

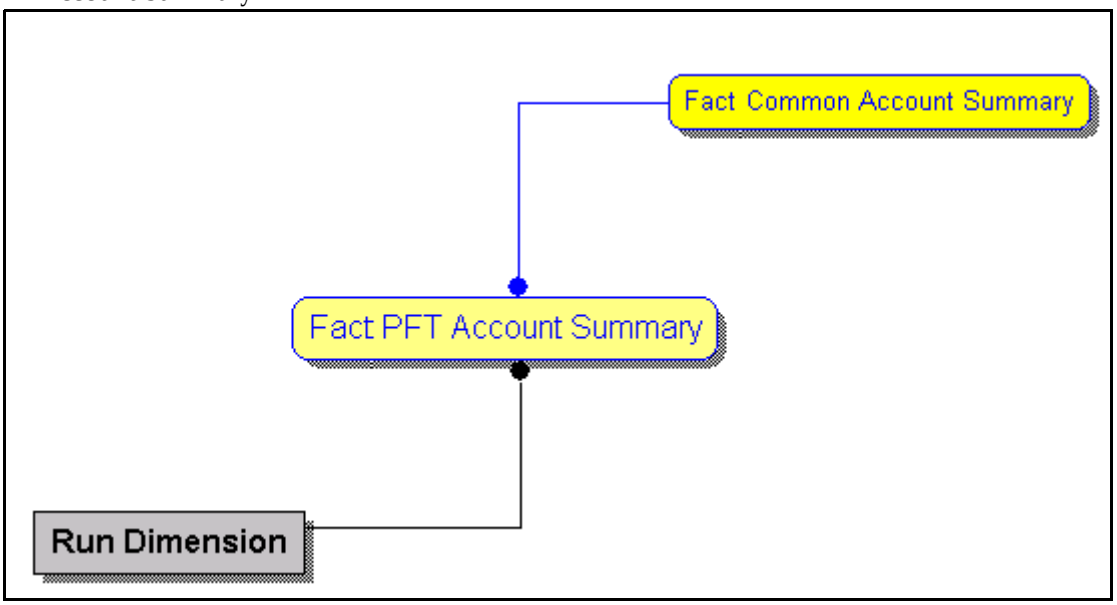


Figure 12. PFT Account Summary

- Product Feature

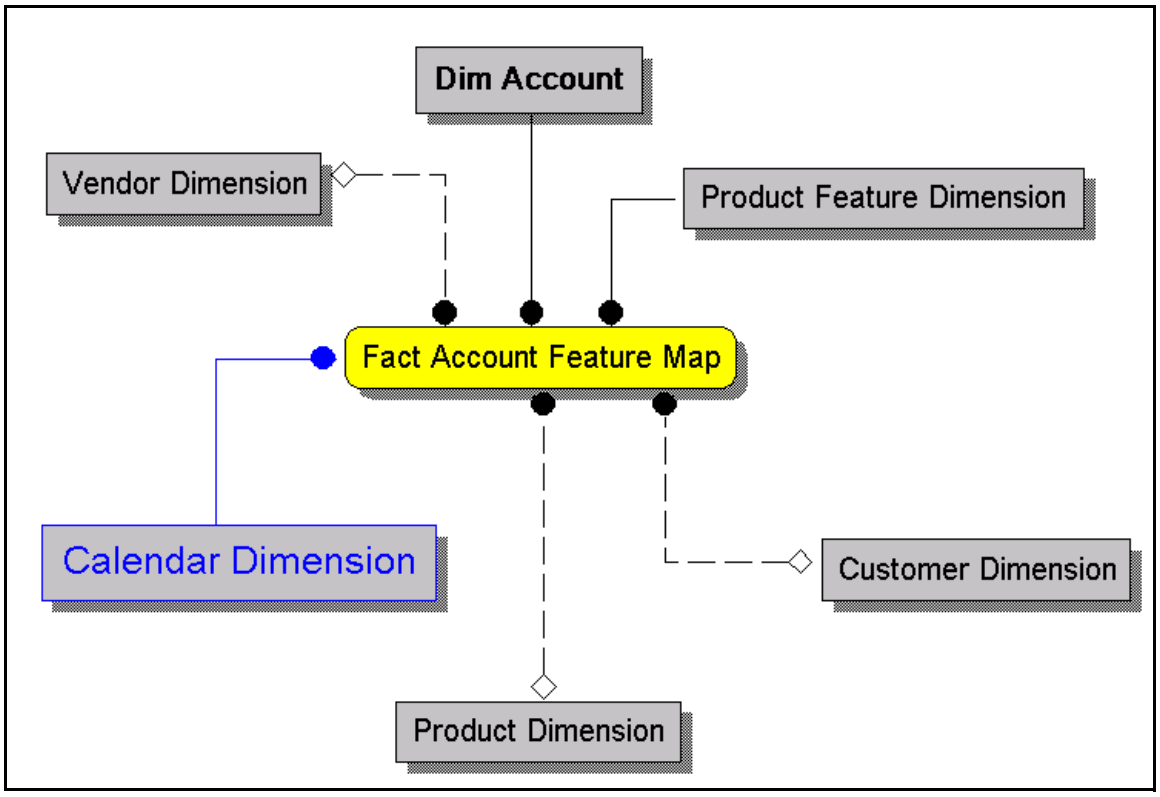


Figure 13. Product Feature

- Transaction Channel

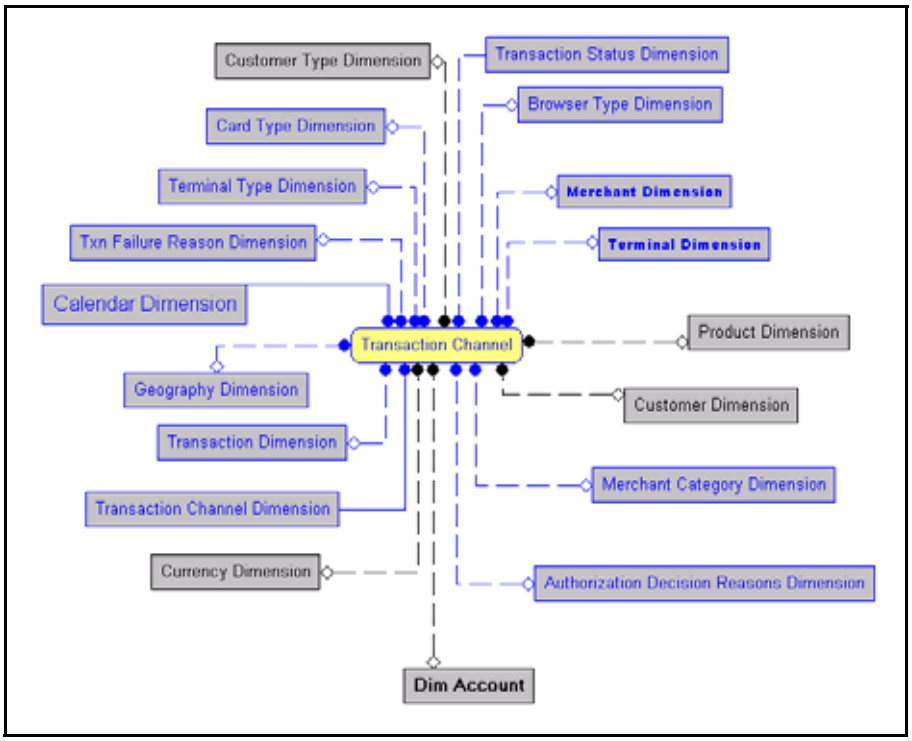


Figure 14. Transaction Channel

- Fact Account Profitability

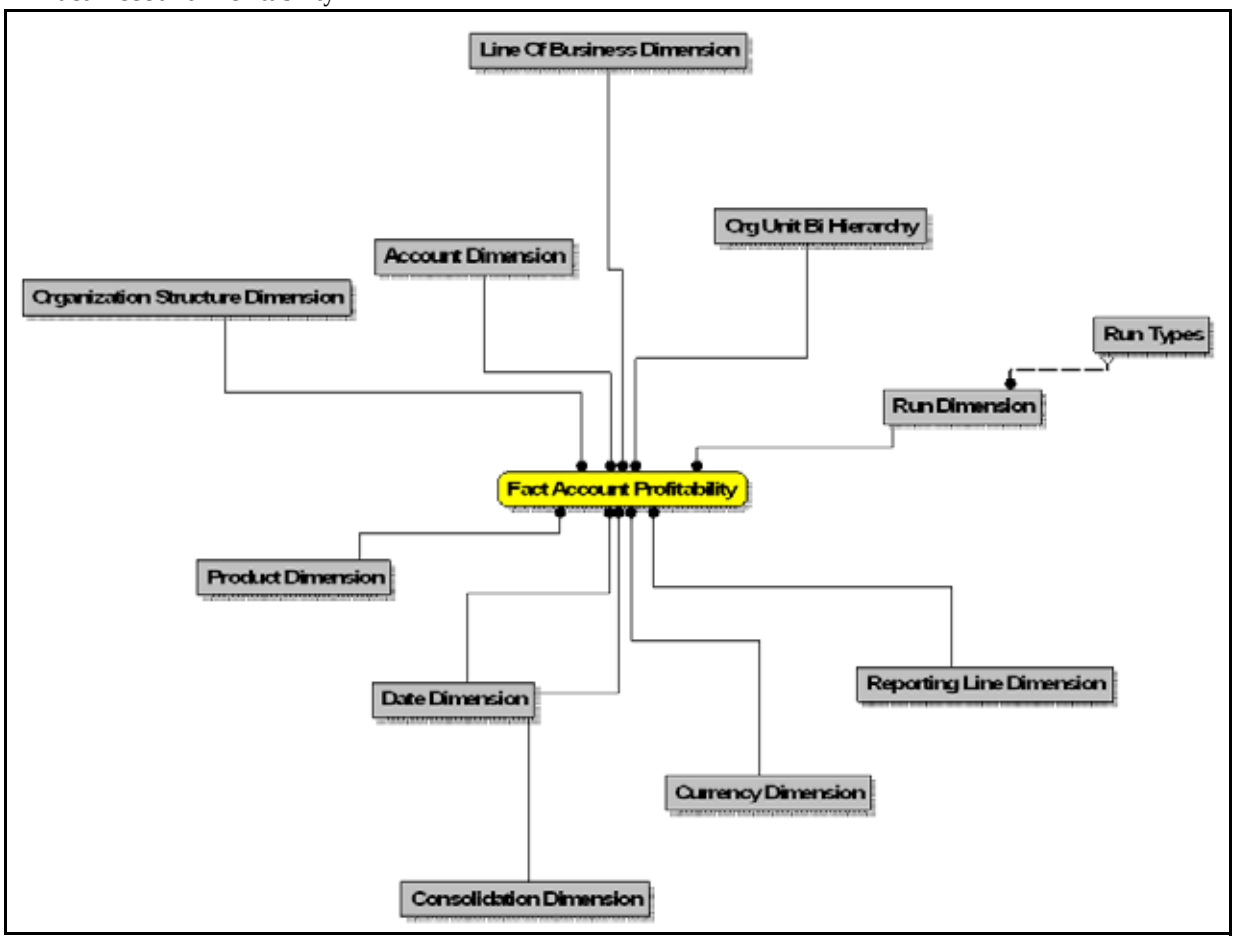


Figure 15. Fact Account Profitability

- Fact Common Account Summary

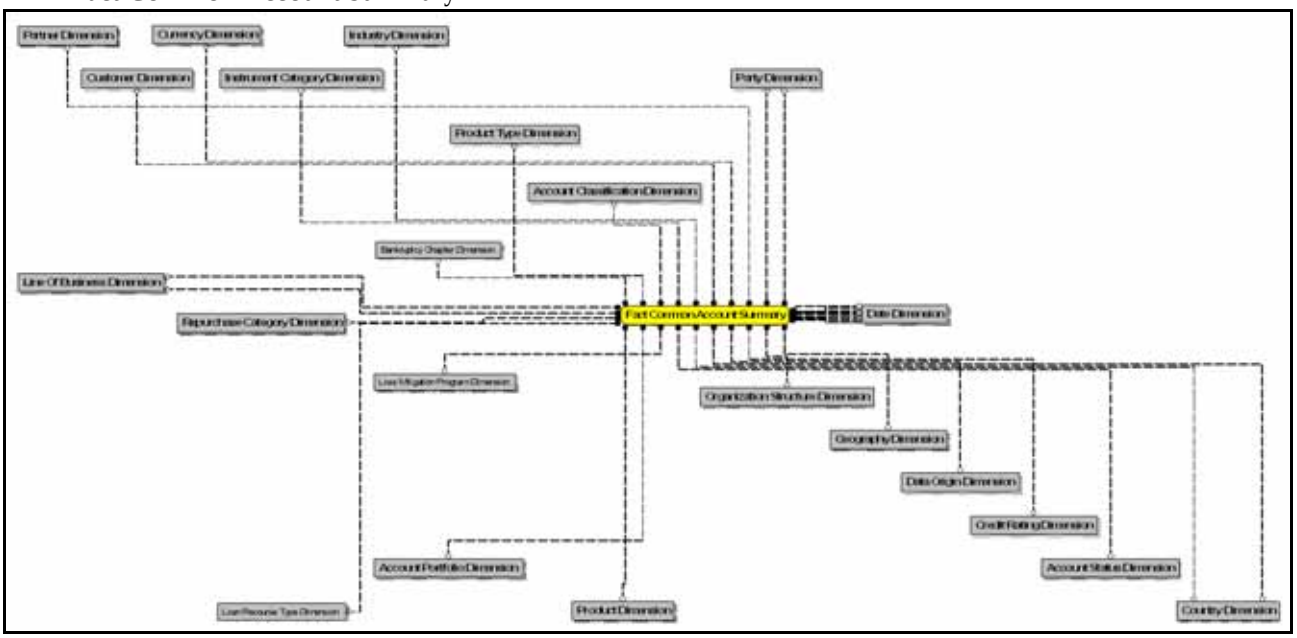


Figure 16. Fact Common Account Summary

- Fact Common Customer Summary

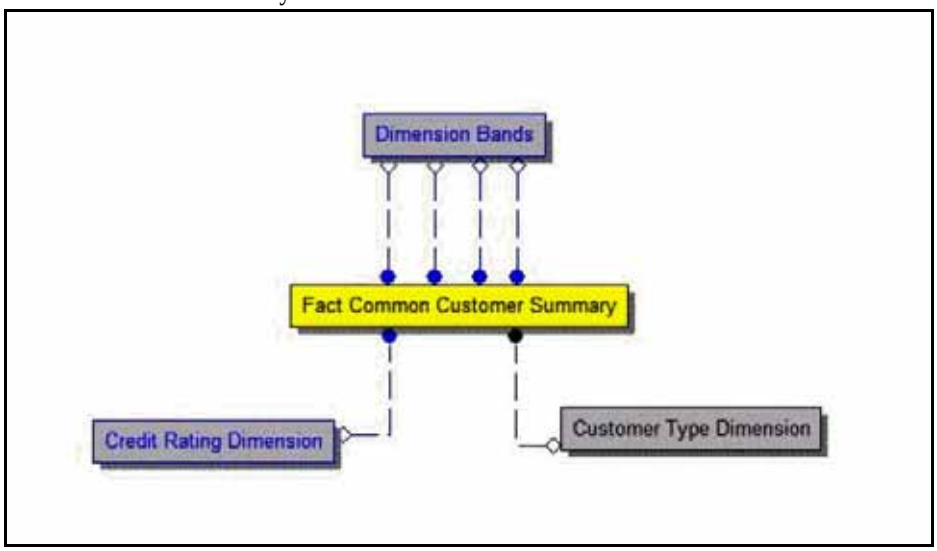


Figure 17. Fact Common Customer Summary

- Fact CRM Account Summary

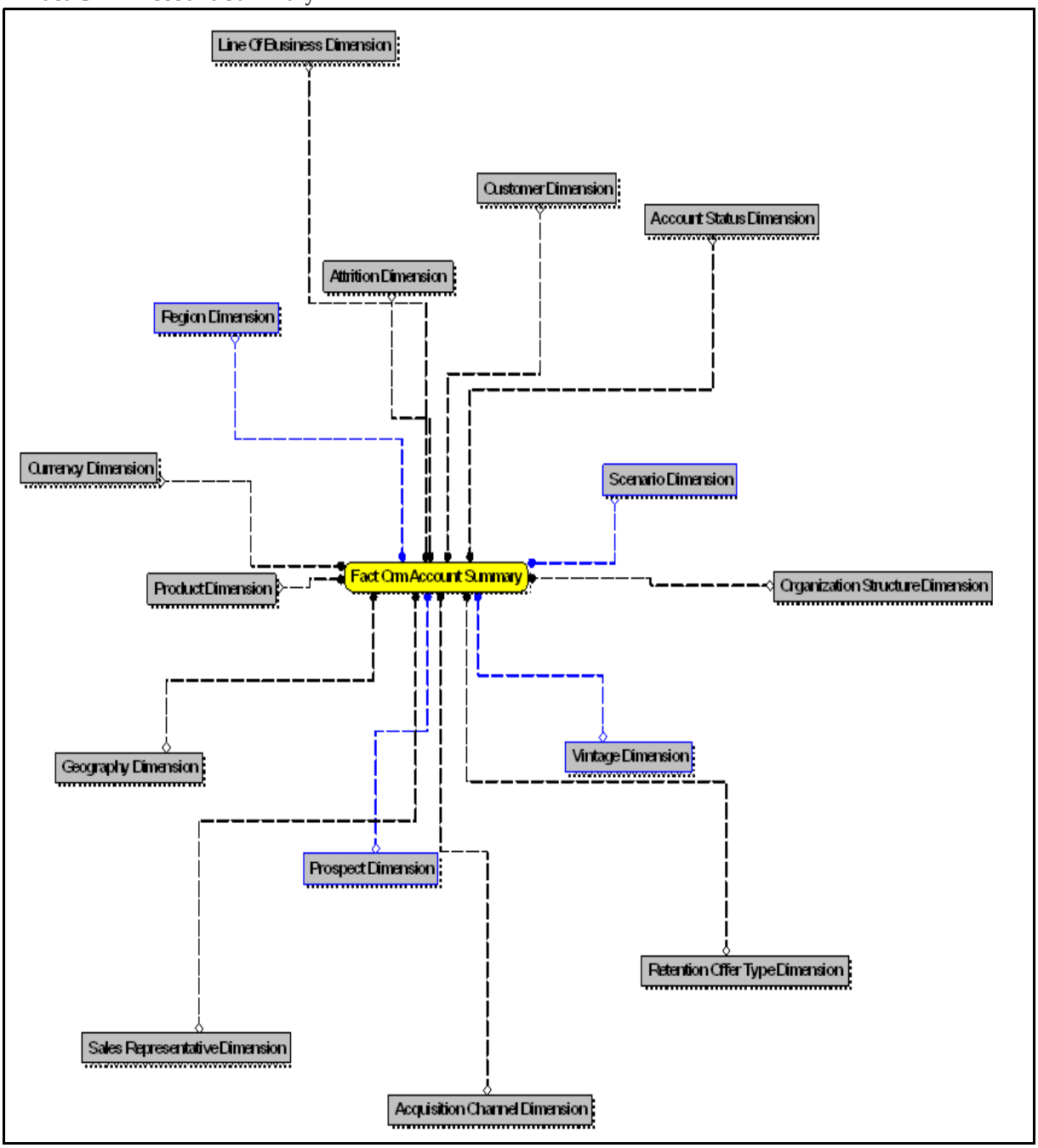


Figure 18. Fact CRM Account Summary

CHAPTER 3 Dimension Loading Process

This chapter discusses the following topics:

Dimension Tables Population

OFSRCA solution uses 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-bestpractices-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/owb10gr2_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 OFSRCA solution are Type 1 and Type 2.

Prerequisites

- The SCD executable should be present under <installation home>ficdb/bin. The file name is scd.
- The user executing the SCD component should have execute rights on the file mentioned as prerequisite in point 2.

- 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.

Table 3. SYS_TBL_MASTER 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.
TBL_NM	VARCHAR2(30) NOT NULL	Dimension Table Name
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.

Table 4. SYS_STG_JOIN_MASTER 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.
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: ● PK - Primary Dimension Value (may be multiple for a given "Mapping Reference Number") ● SK - Surrogate Key ● DA - Dimensional Attribute (may be multiple for a given "Mapping Reference Number") ● SD - Start Date ● ED - End Date ● LRI - Latest Record Indicator (Current Flag) ● CSK - Current Surrogate Key ● PSK - Previous Surrogate Key ● SS - Source Key ● LUD - Last Updated Date / Time ● LUB - Last Updated By

Table 4. SYS_STG_JOIN_MASTER Dimensions

Column Name	Data Type	Column Description
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*.

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 created in the earlier step by clicking the check box in the Batch Name container.
5. Click New Task ('+' symbol in Task Details container).

6. Enter the Task ID and Description.
7. Select Run Executable, from the Component ID list.
8. 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.

9. 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:

1. 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.

CHAPTER 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

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:

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

Prerequisites

- 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.
- Application User must be mapped to a role that has seeded batch execution function (BATPRO).
- 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*).
  - Iccserver
  - Router
  - AM Server
  - Messageserver
- Batches will have to be created for executing the function. For more details see, *Executing the Time dimension population transformation*.

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
     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:
   - 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.
   - 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.

CHAPTER 5 Exchange Rate History Population

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:

Table 5. Table to Table defintion

T2T Definition Name	Source Table(s)	Destination Table
T2T_EXCHANGE_RATE_HI ST	STG_EXCHANGE_RATE_HIS T	FSI_EXCHANGE_RATE_HI ST

This chapter discusses the following topics:

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 refersto 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.

CHAPTER 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

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 the following 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:

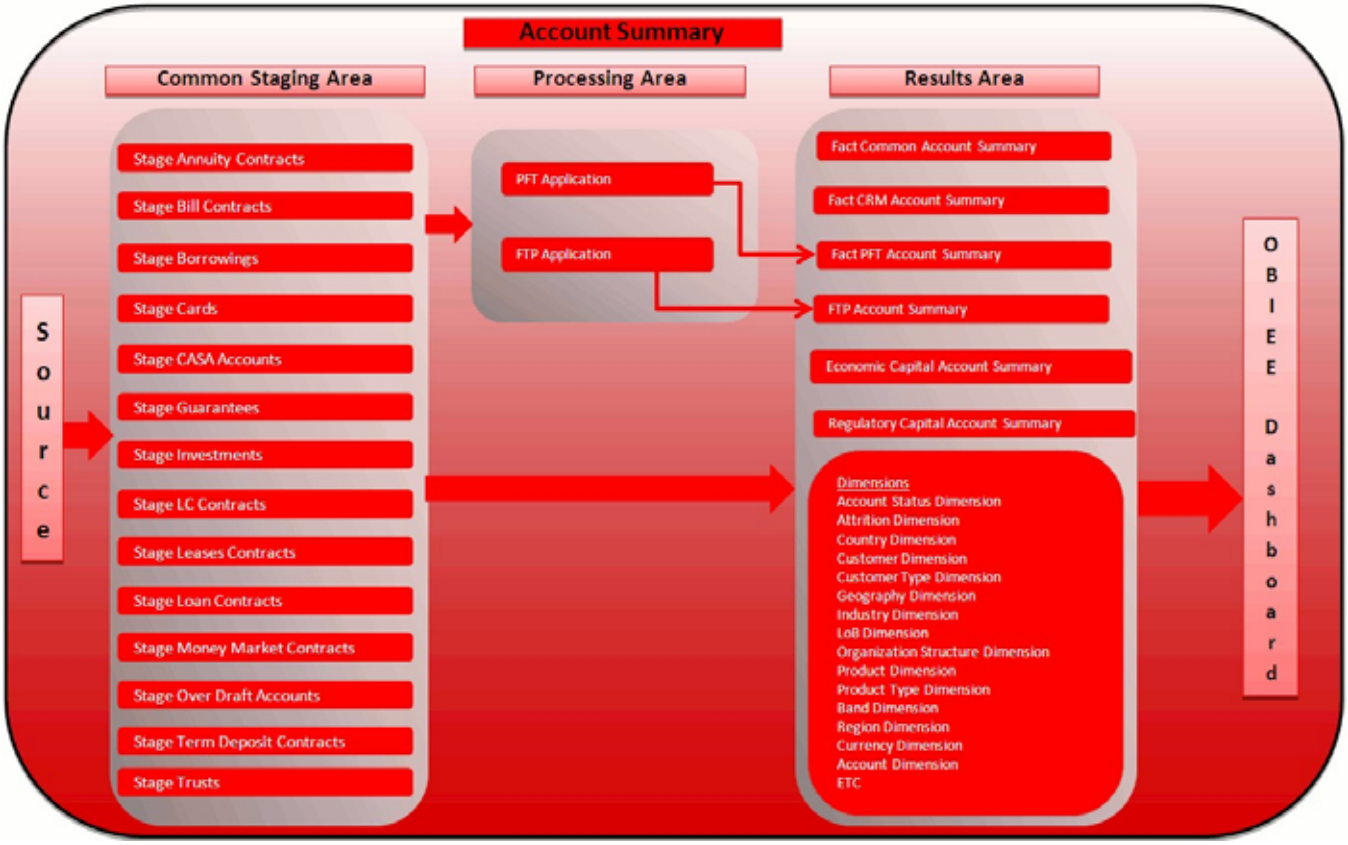


Figure 19. Account Summary Data Flow

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

Table 6. Common Account Summary Definitions

SL	Source Table	T2T Definition Name	Destination Table No
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

Table 6. Common Account Summary Definitions

SL	Source Table	T2T Definition Name	Destination Table No
4	STG_CARDS	T2T_STG_CARDS_CAS	FCT_COMMON_ACCOUNT_SUMMARY
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

Table 7. CRM Account Summary Definitions

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_CONTR ACTS	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

Table 7. CRM Account Summary Definitions

Sl No.	Source Table	T2T Definition Name	Destination Table
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	CT_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
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

- 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.
- Application User must be mapped to a role that has seeded batch execution function (BATPRO).
- 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*.)
  - Iccserver
  - Router
  - AM Server
  - Messageserver
- Batches will have to be created for executing. This is explained in *Executing the Account Summary Population T2T* section.

- 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 Populatio*n 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 Datamode*l.

Executing the Account Summary Population T2T

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

Fact Common Account Summary

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen)a seeded batch, `<Infodom>_aCRM_Comm_Acc_Summ` has to be executed for the required MIS Date.

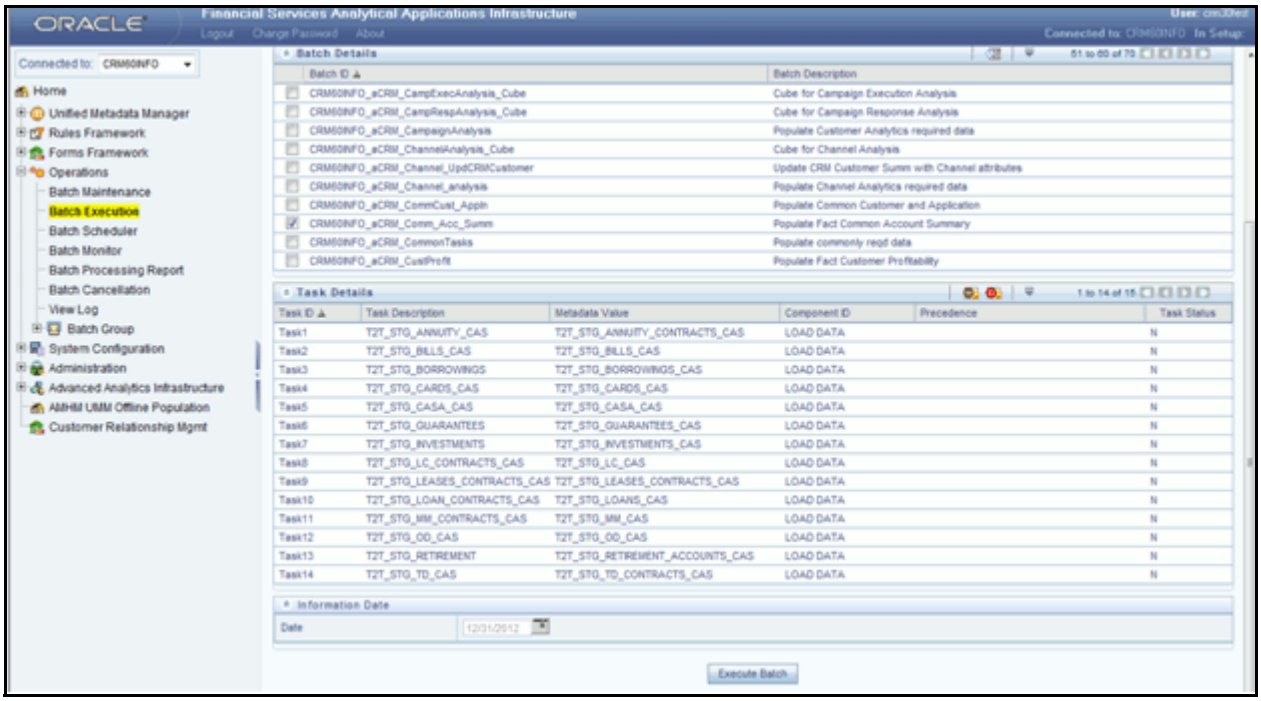


Figure 20. Batch Operations

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

To execute the T2T component from OFSAA Infrastructure ICC framework (accessed through the application Batch Operations screen)a seeded batch, `<Infodom>_aCRM_CRM_Acc_Summ` has to be executed for the required MIS Date.

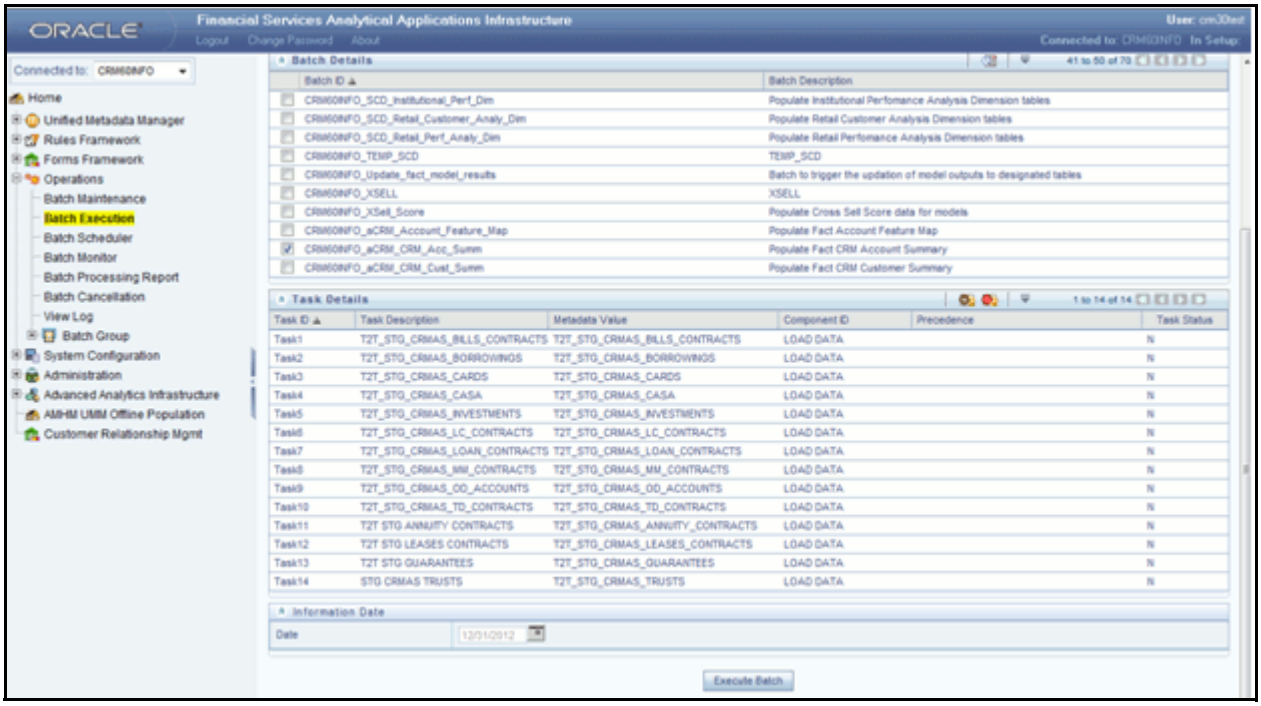


Figure 21. Fact CRM Account Summary

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.

CHAPTER 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
- 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:

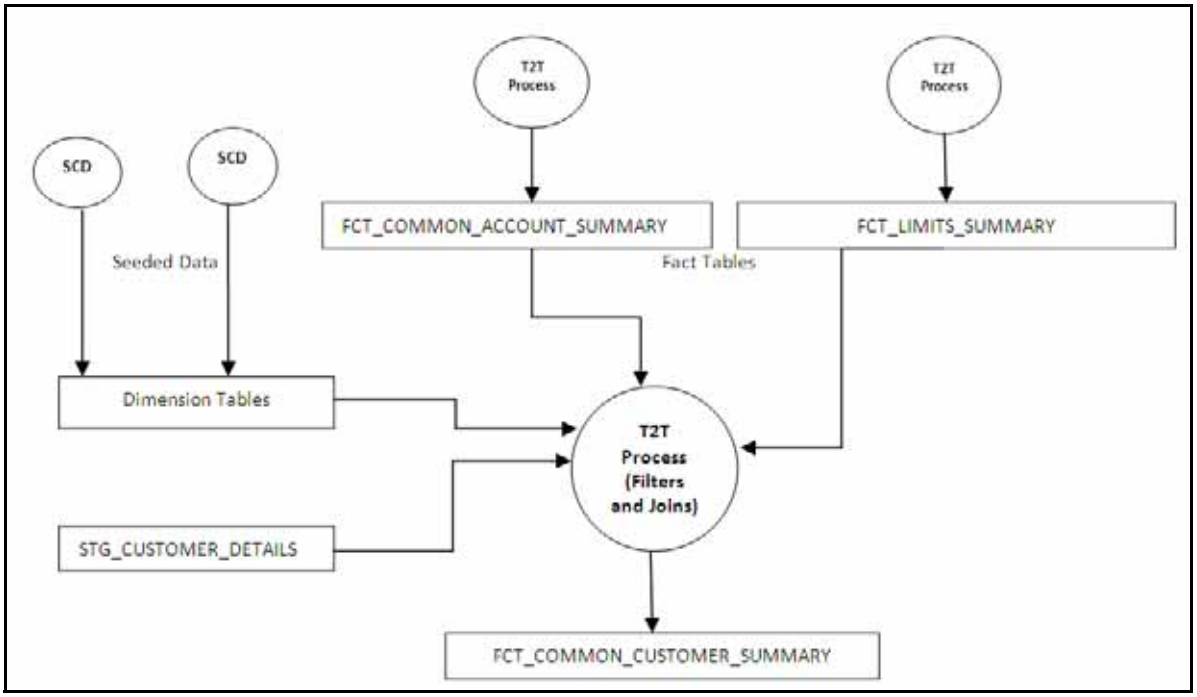


Figure 22. Fact Common Customer Summary data flow

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.

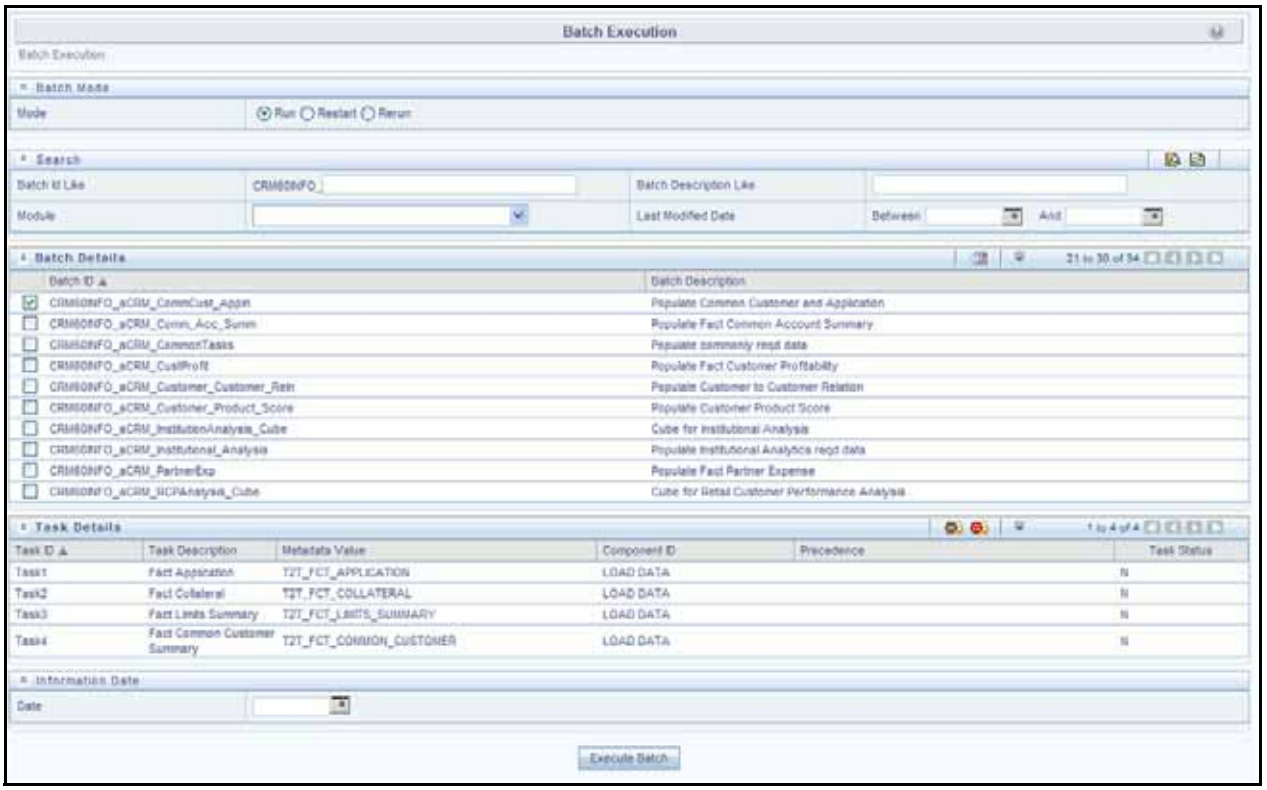


Figure 23. Batch Monitor

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.

CHAPTER 8 Fact Data Population

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.

This chapter covers the following topics:

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:

Table 8. Fact CRM Customer Summary Definitions

T2T Definition Name	Source Table(s)	Destination Table
T2T_FCT_CRM_CUSTOMER_SUMMARY	STG_CUSTOMER_MASTER STG_CUSTOMER_DETAILS FCT_COMMON_ACCOUNT_SUMMARY FCT_CRM_ACCOUNT_SUMMARY	FCT_CRM_CUSTOMER_SUMMARY

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 Specificatio*n 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.

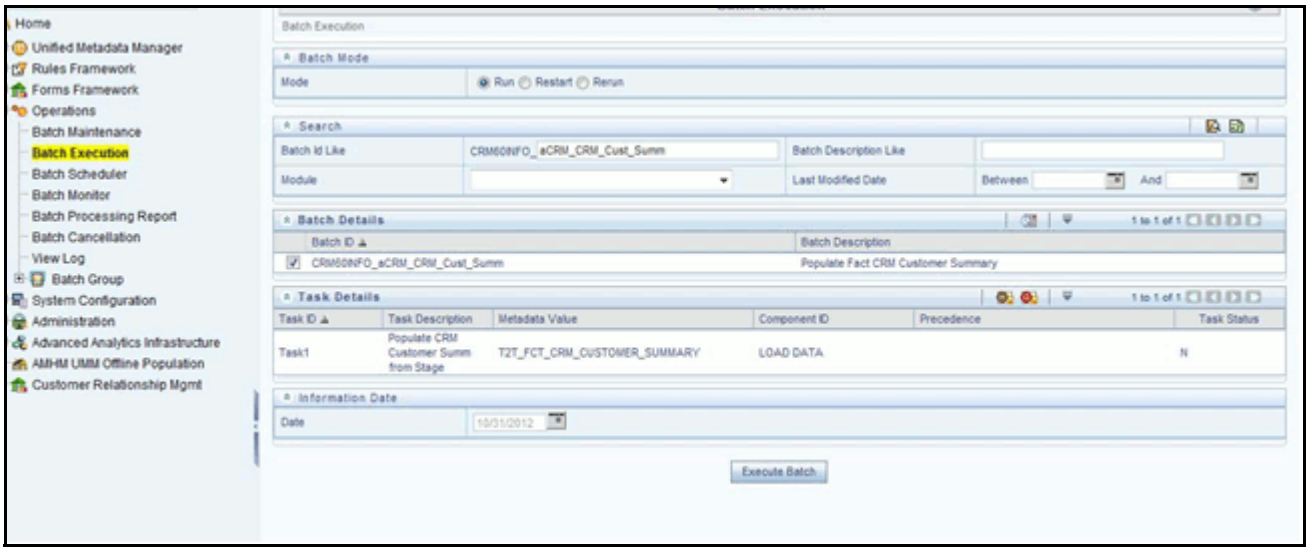


Figure 24. Fact CRM Customer Summary Population

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 Guid*e.

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:

Table 9. Post Load Transformation Definition

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.

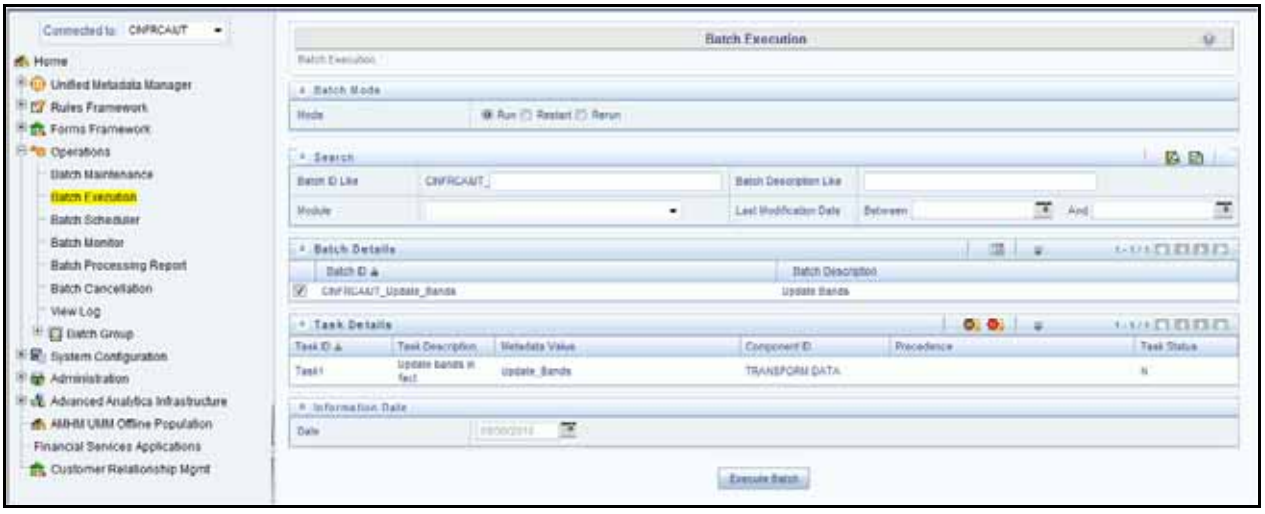


Figure 25. Execute <Infodom>_aCRM_Channel_UpdCRMCustomer

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.

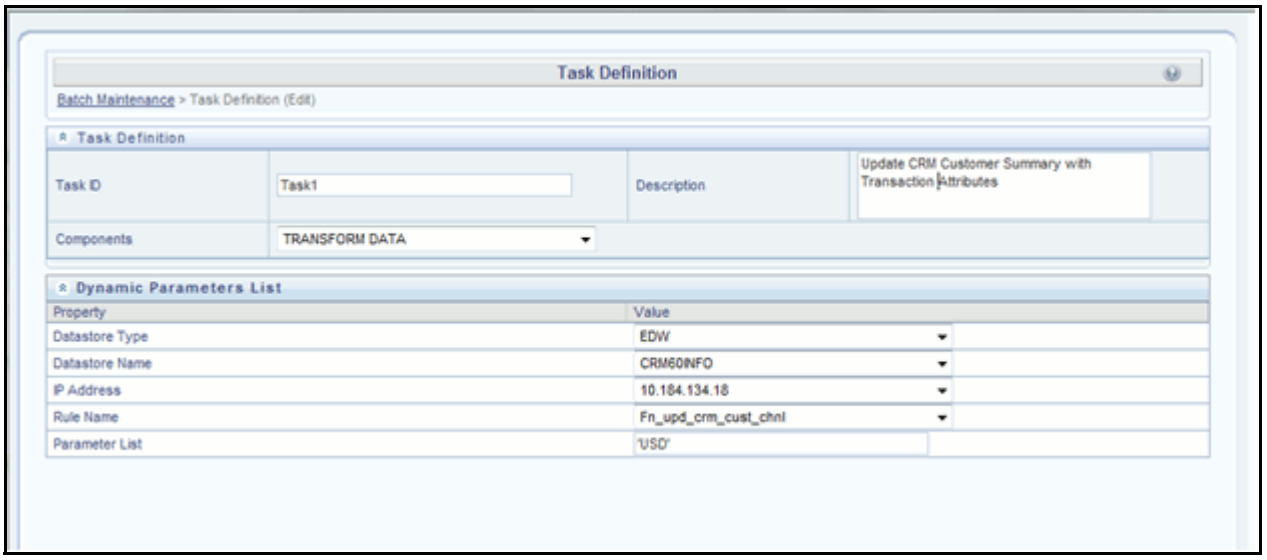


Figure 26. Task Defintion

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:

Table 10. Fact Account Feature Map T2T Definitions

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.

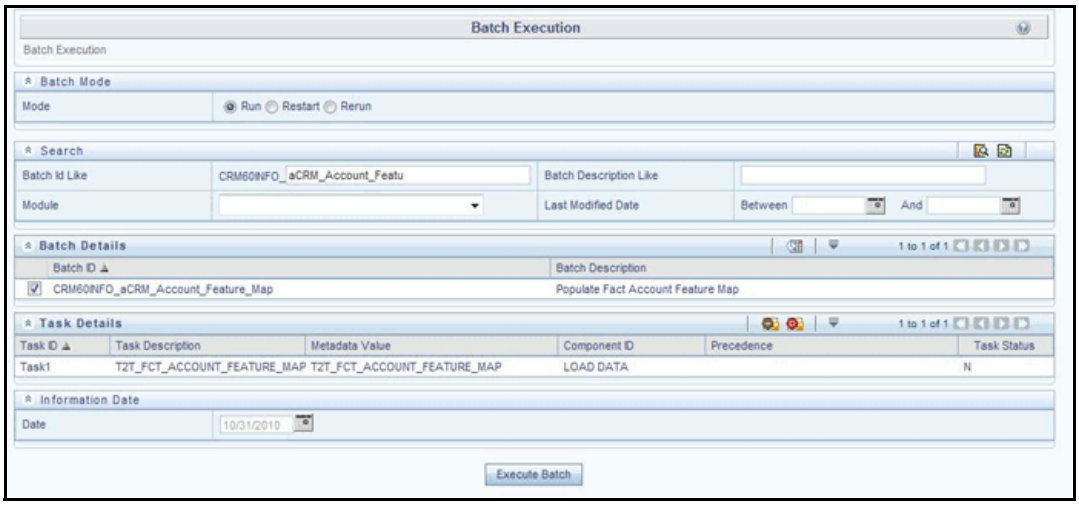


Figure 27. aCRM_Account_Feature_Map

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 table can be queried for errors:

`FCT_ACCOUNT_FEATURE_MAP$`

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:

Table 11. Fact Customer to Customer Relationship T2T Definitions

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.

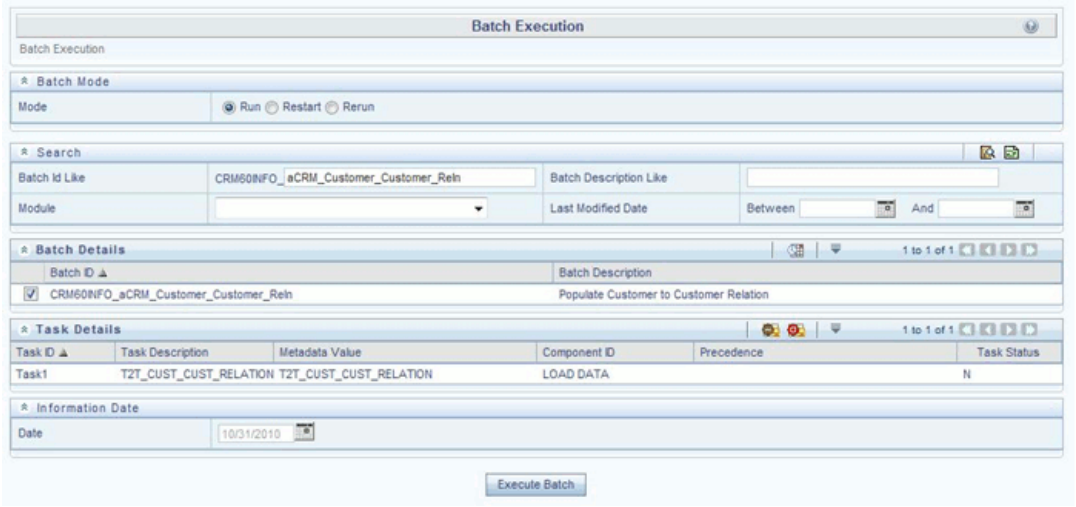


Figure 28. aCRM_Customer_Customer_Reln - Task1

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:

Table 12.

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>_aCRM_Txn_Channel Task1 to Task5,` has to be executed for the required MIS Date.

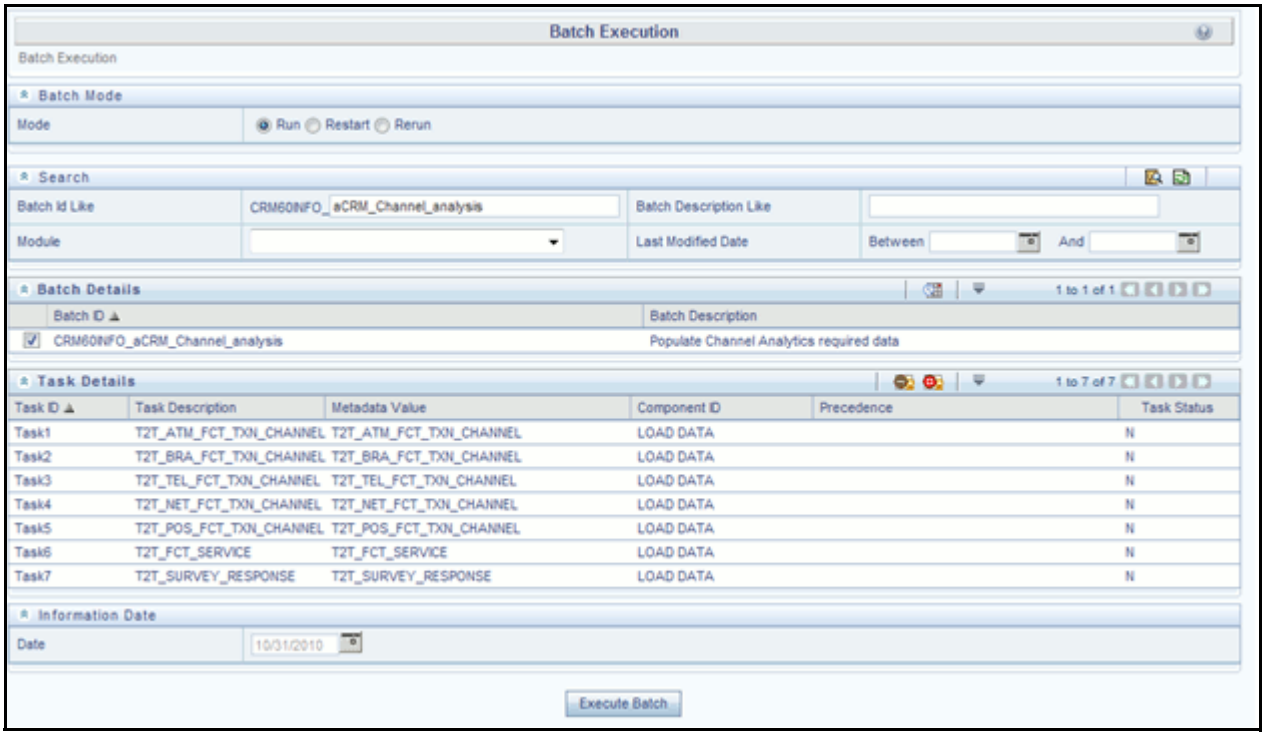


Figure 29. aCRM_Txn_Channel Task1 to Task5

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:

Table 13. Fact Application T2T Definition

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.

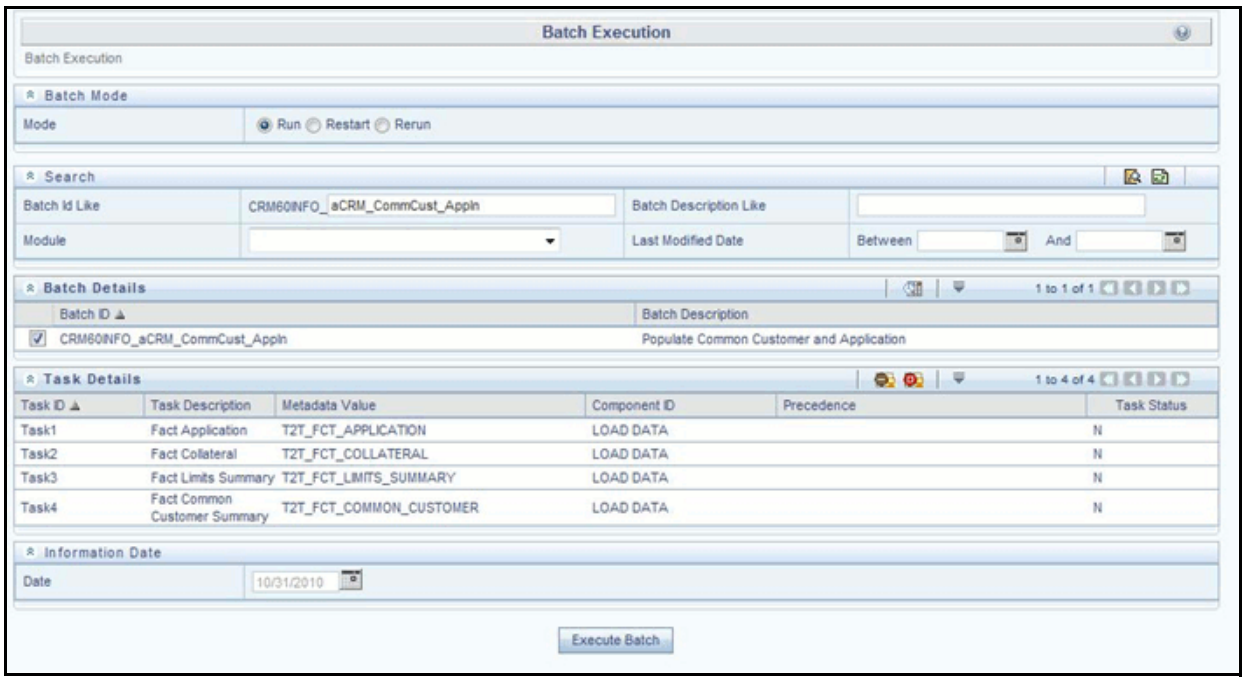


Figure 30. aCRM_CommCust_Appln - Task1

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 executionID. 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:

Table 14. Fact Campaign Details T2T Defintions

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.

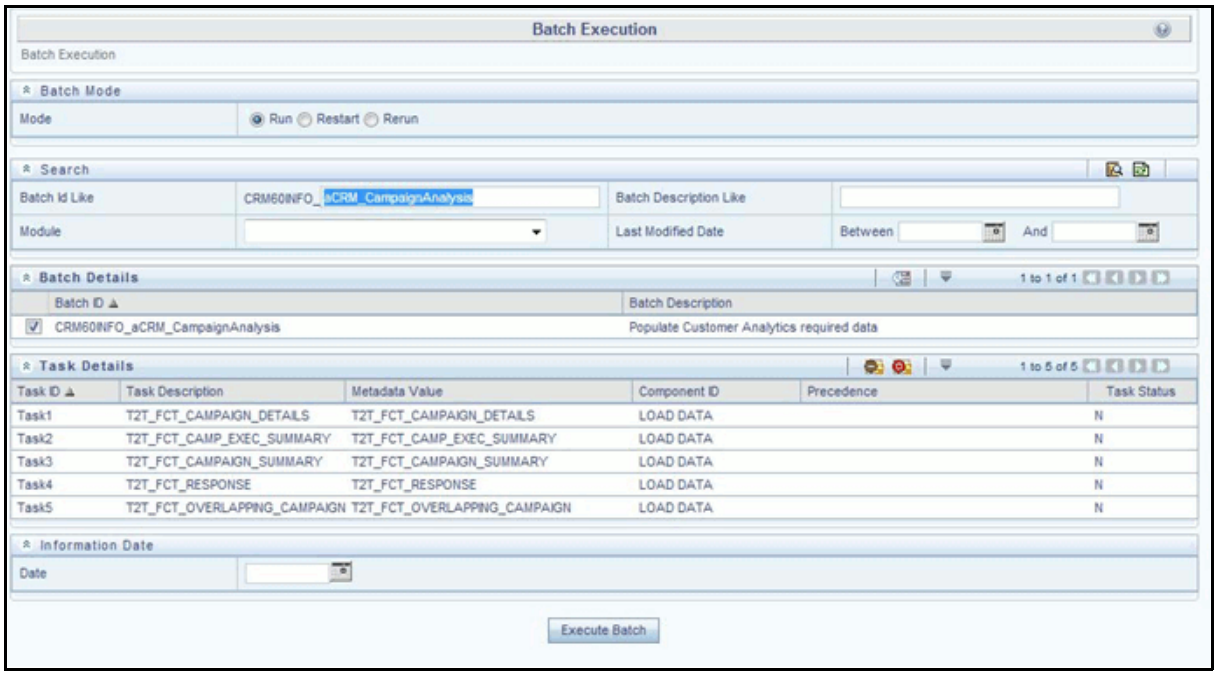


Figure 31. <Infodom>_aCRM_CampaignAnalysis - Task1

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 executionID. 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:

Table 15. Fact Campaign Execution Summary T2T Definition

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.

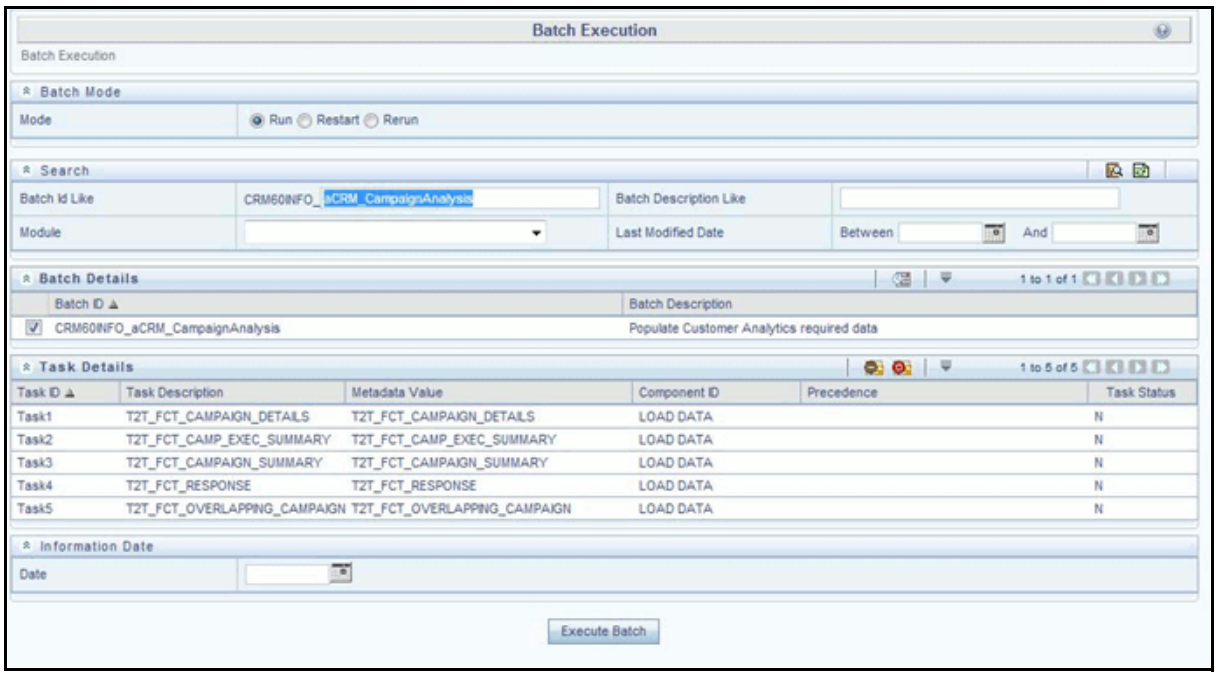


Figure 32. aCRM_CampaignAnalysis - Task2

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:

Table 16. Fact Response T2T Definitions

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.

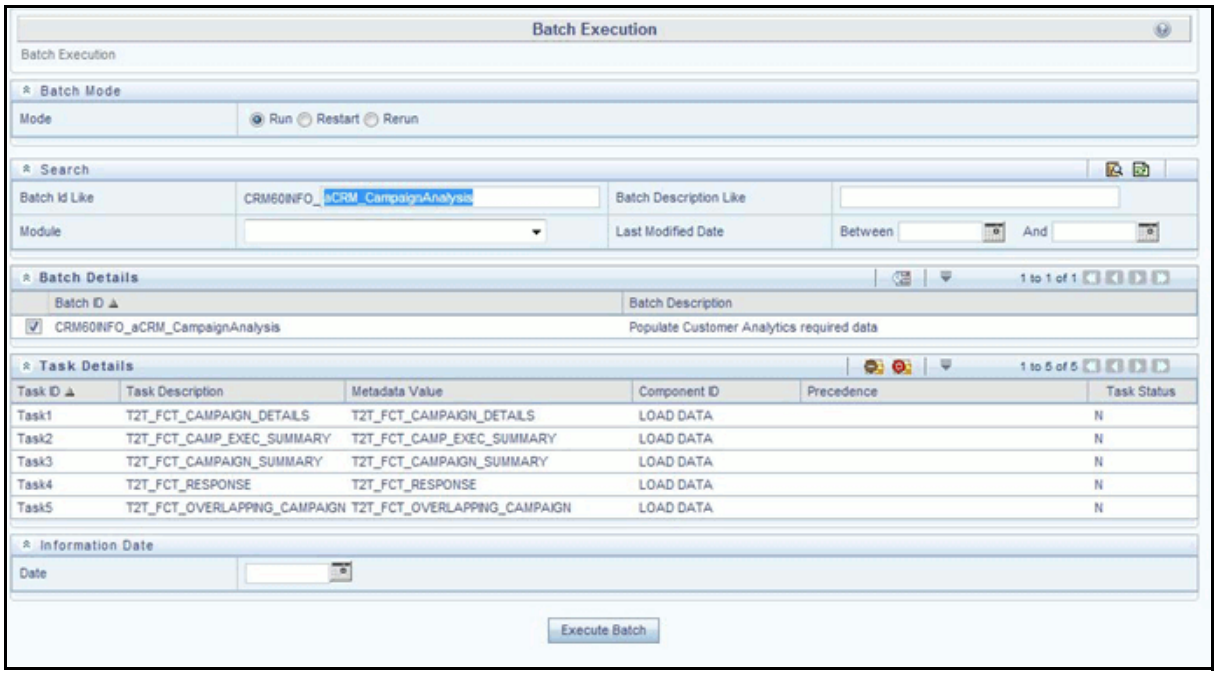


Figure 33. aCRM_CampaignAnalysis - Task4

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:

Table 17. Fact Overlapping Campaign T2T Definitions

T2T Definition Name	Source Staging Table	Destination Table
T2T_OVERLAPPING_CAM PAIGN	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.

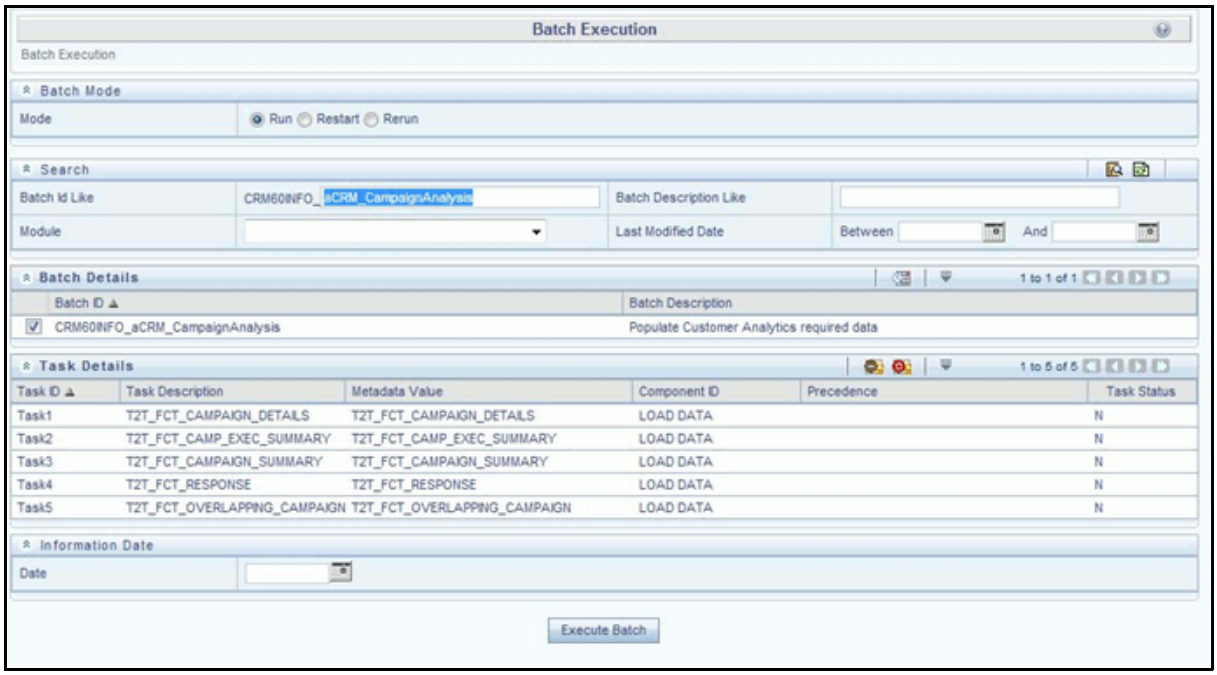


Figure 34. aCRM_CampaignAnalysis - Task5

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:

Table 18. Fact Cross Sell Score T2T Definitions

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_T O_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_T O_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* 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.

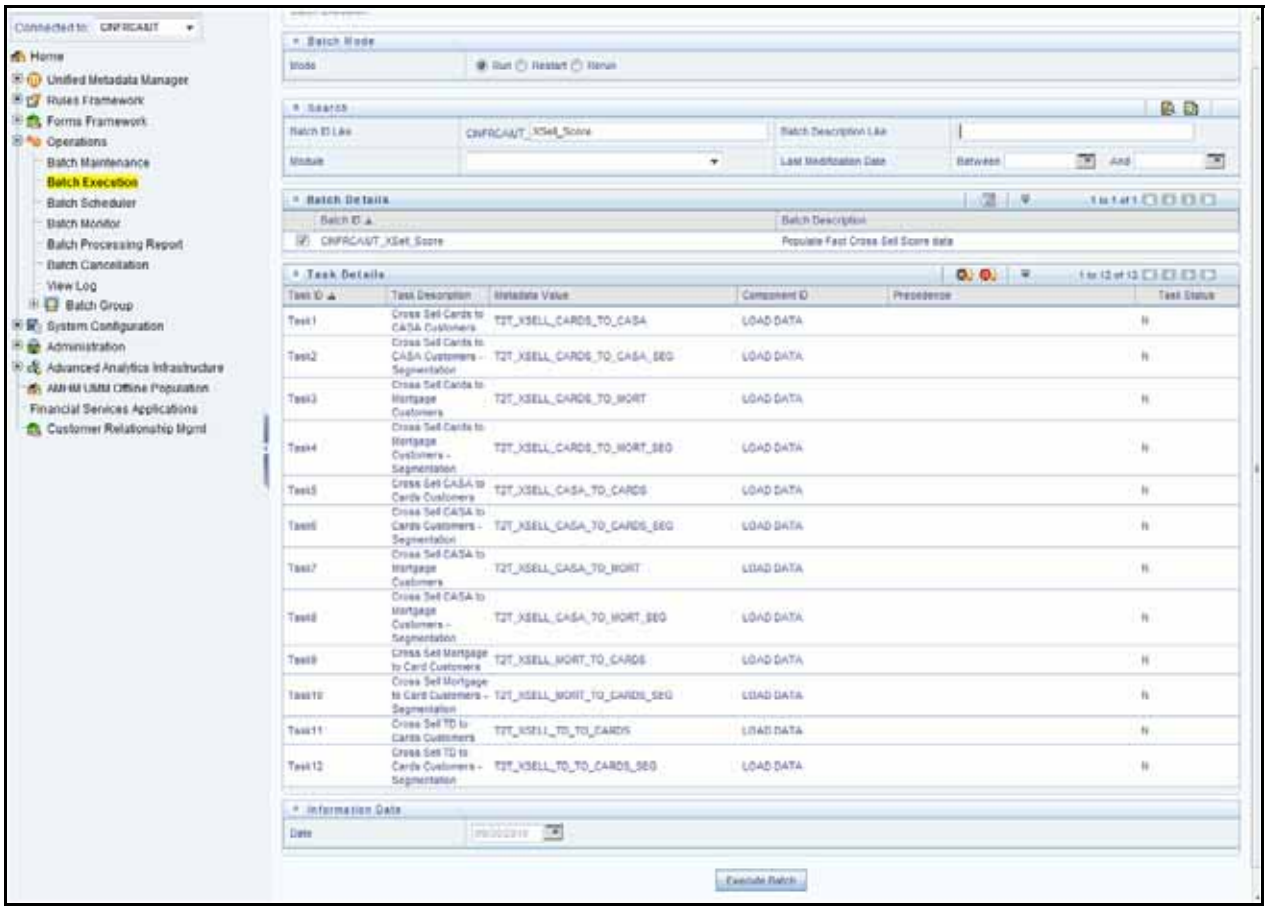


Figure 35. XSell_Score

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.*

Fact Account Profitability

Fact Account Profitability entity stores fact data for reporting line items of revenue, costs, and expense related to each customer account. The data into this table is populated from other fact tables like FCT_COMMON_ACCOUNT_SUMMARY, FCT_PFT_ACCOUNT_SUMMARY, FCT_FTP_ACCOUNT_SUMMARY, FCT_REG_CAP_ACCOUNT_SUMMARY, and FCT_ECO_CAP_ACCOUNT_SUMMARY.

The following table lists the seededseeded Post Load Transformation Definition with related Source Table and Destination tables

Table 19. Fact Account ProfitabilityDefinition

T2T Definition Name	Source Staging Table	Destination Table
FN_FCT_ACCOUNT_PFT	FCT_COMMON_ACCOUNT_SUMMARY FCT_PFT_ACCOUNT_SUMMARY FCT_FTP_ACCOUNT_SUMMARY FCT_REG_CAP_ACCOUNT_SUMMARY FCT_ECO_CAP_ACCOUNT_SUMMARY	FCT_ACCOUNT_PROFITABILITY

For more information and to view the detailed structure of the tables, see *Oracle Financial Services Analytical Applications Data Model Data Dictionary* and the *Erwin Data Model*.

Information from account summary fact tables are populated to Fact Account Profitability through a mapping process. Reporting line dimension is mapped to measures present in account summary. A PL/SQL procedure then populates the fact table by reading the mapping definition.

Reporting line dimension is created/maintained from Attribute Member Hierarchy Maintenance (AMHM) component of OFSAAI. A Reporting line item represents a revenue, costs, or expenses. Rollup signage is set as an attribute for a reporting line item. To know more about AMHM, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide.*

The Account summary tables contain the revenue, costs, or expenses measures pertaining to an Account. Map Maintenance component of OFSAAI is used to map the measures of account summary tables (represented in a measure hierarchy) to reporting line hierarchy. A pre-defined mapping "Reporting Line Mapping" is seeded along with the application installer. Reporting Line Hierarchy and Reporting Line Measure

Hierarchy are the two hierarchies which are used for the mapping. Reporting Line Hierarchy is a parent child hierarchy which is based on Reporting Line Dimension entity.

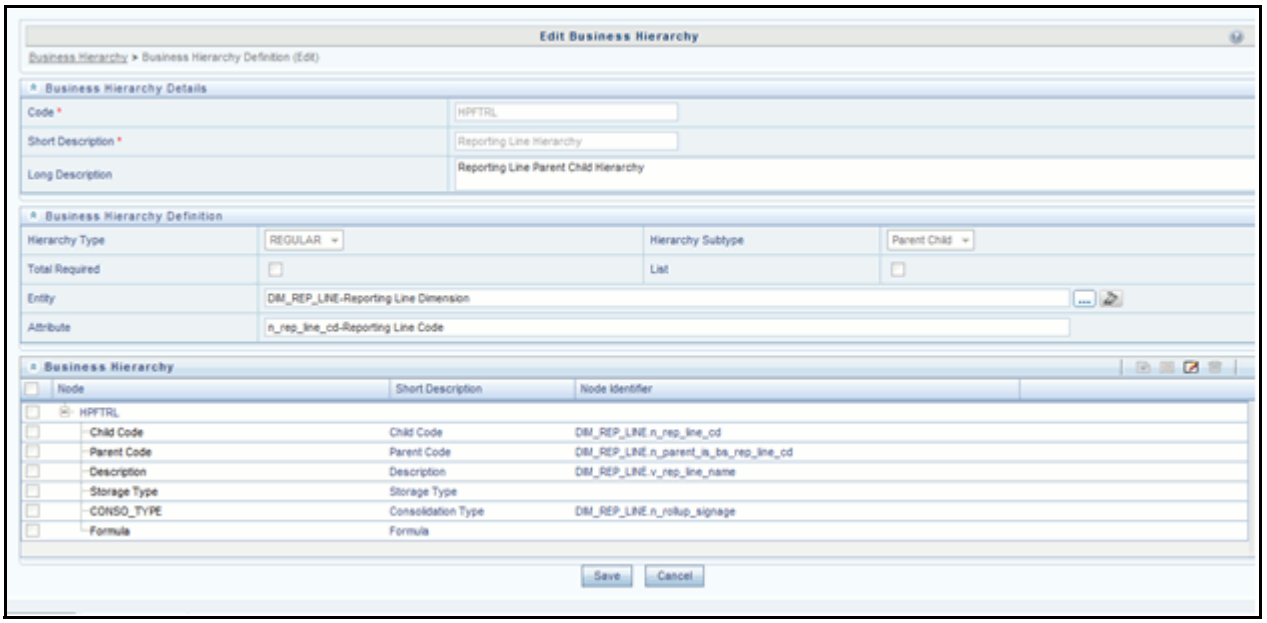


Figure 36. Reporting Line Hierarchy

Reporting Line Measure hierarchy is a Non Business Intelligence Enabled Hierarchy which is based on measures from the Account Summary tables.

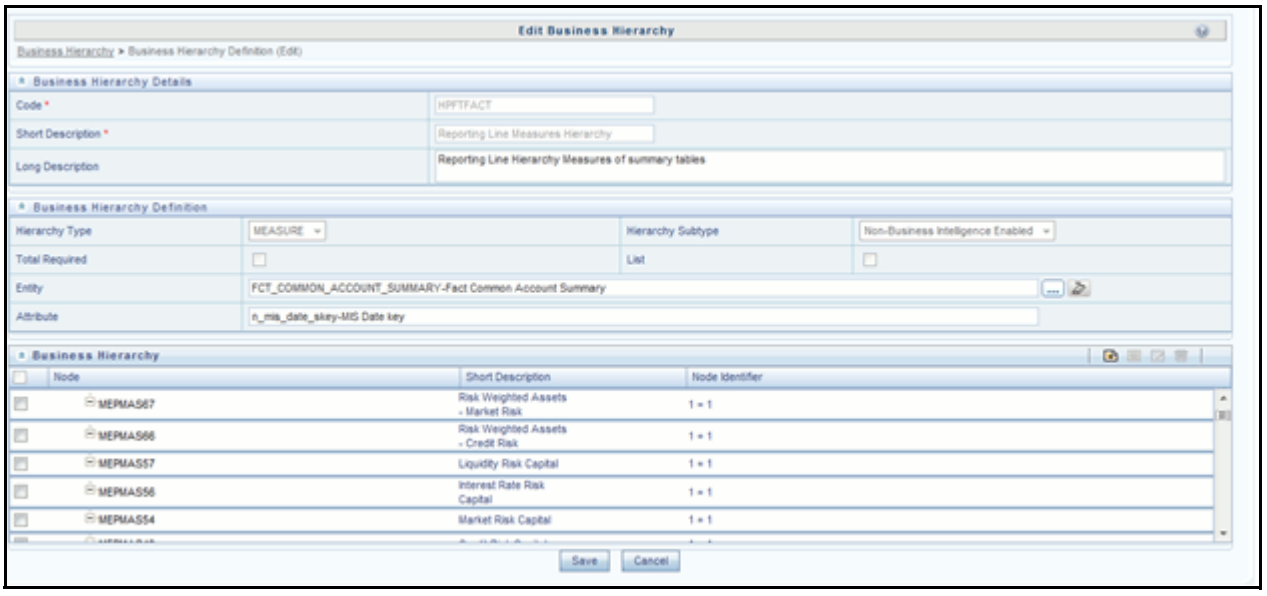


Figure 37. Reporting Line Measure hierarchy

A seeded map is configured between the Reporting Line Hierarchy and Reporting Line Measure Hierarchy from Map Maintenance of OFSAAI.

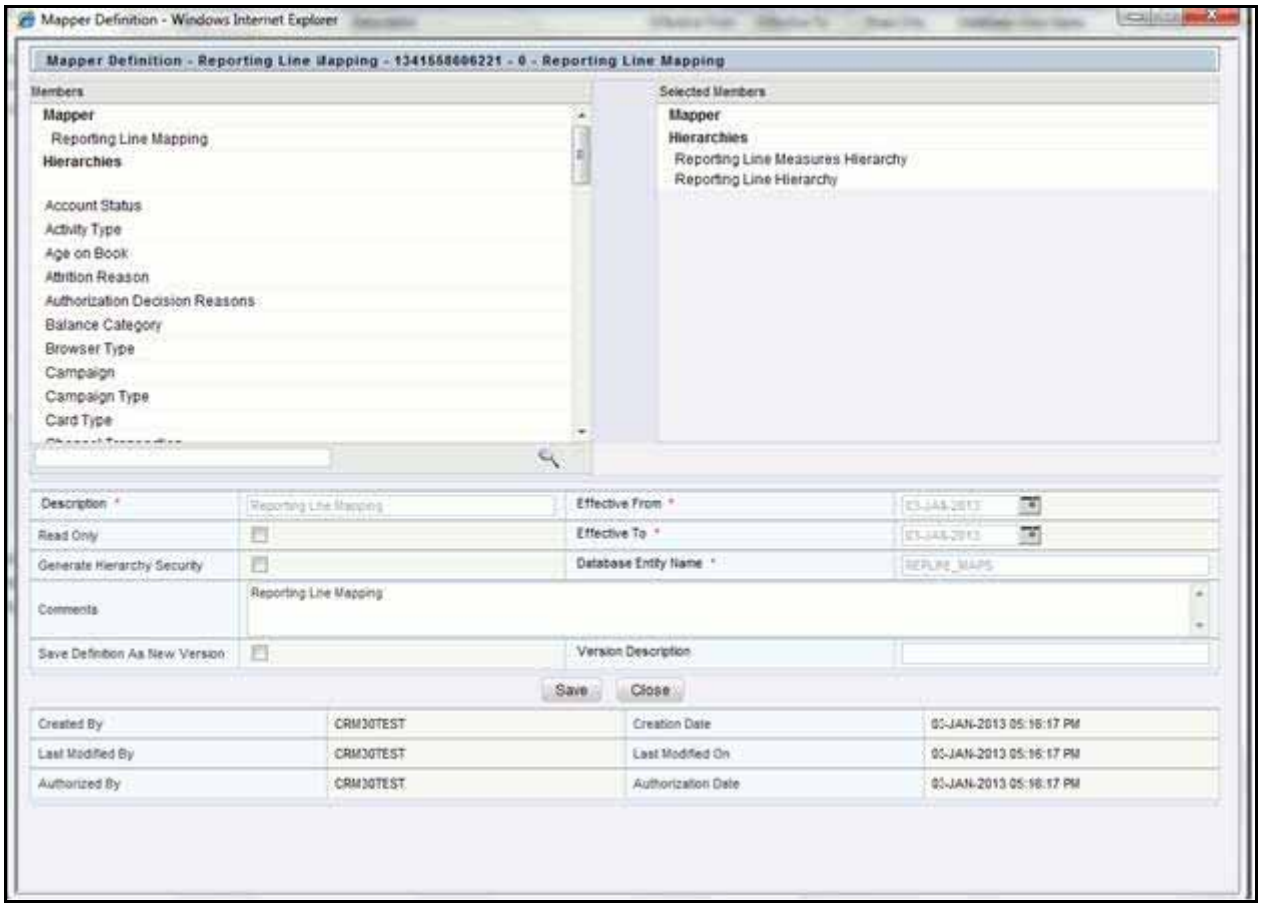


Figure 38. Reporting Line Hierarchy

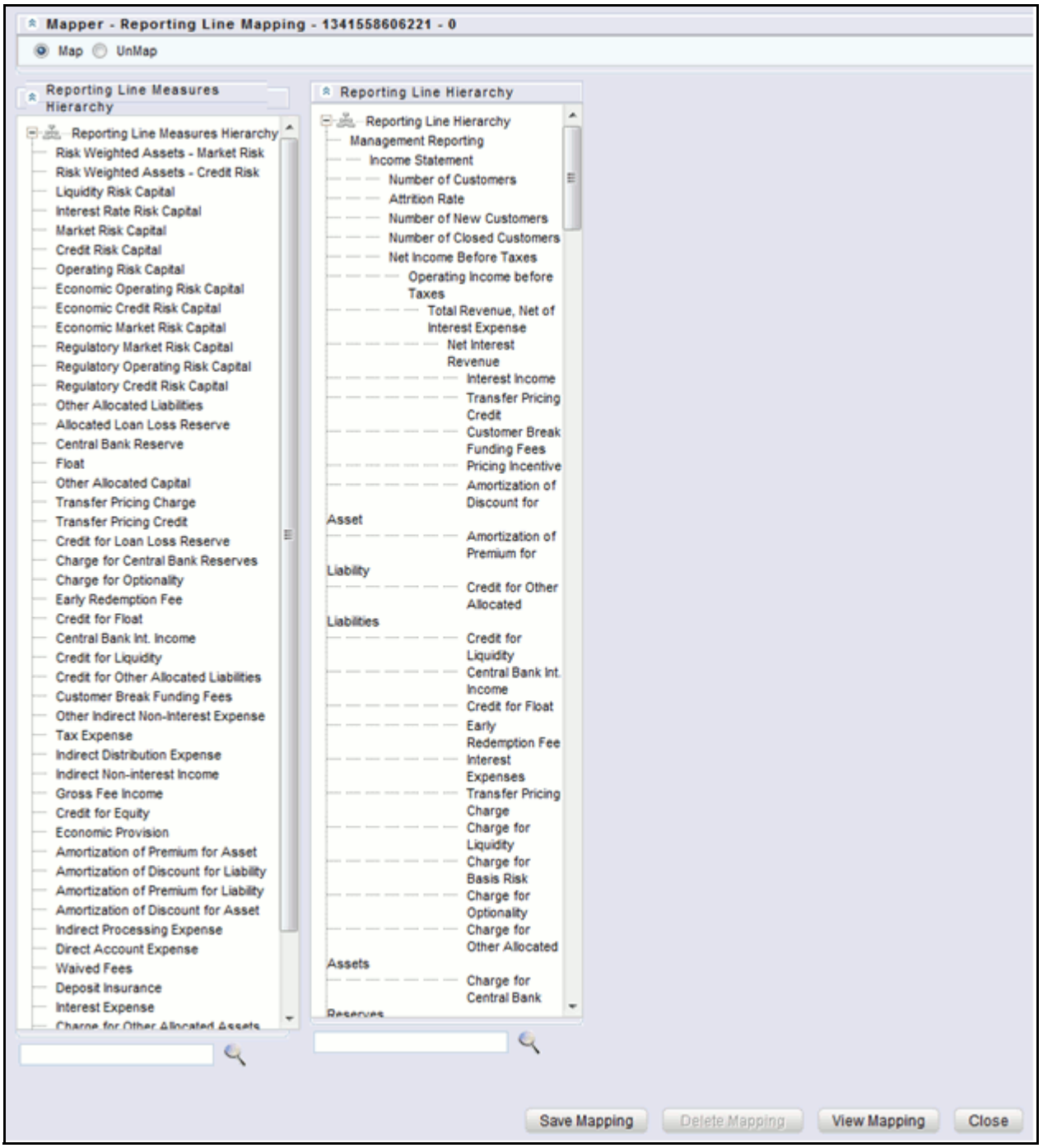


Figure 39. Reporting Line Measure Hierarchy

For more information on defining/maintaining Mapper, refer to *Oracle Financial Services Analytical Applications Infrastructure User Guide.*

Steps to Define Mapping for Custom Reporting Line Items

Follow the below steps to define mapping for Custom Reporting Line items:

1. Add Custom Reporting Line or Modify existing Reporting Line.
2. Add Custom Reporting Line Hierarchy or modify existing seeded reporting line hierarchy.
3. Execute the seeded Batch <INFODOM>_ Repline_Dimension_Update specifying the Reporting line hierarchy as parameter to Batch.
4. Modify the seeded Business Metadata.
5. Map Maintenance.

The following sections describe these steps.

Add Custom Reporting Line or Modify existing Reporting Line

Custom Reporting Lines can be added or modified from AMHM. Following are the seeded attributes of Reporting Line Dimension:

- Financial Element Code
- GL Account Code
- Rollup Signage

Figure 40. Reporting Line Attributes

A Reporting line can be added or modified from the Members screen as shown below. To modify the existing reporting line, select the member by selecting the adjacent check box and select the Edit button on the menu bar.

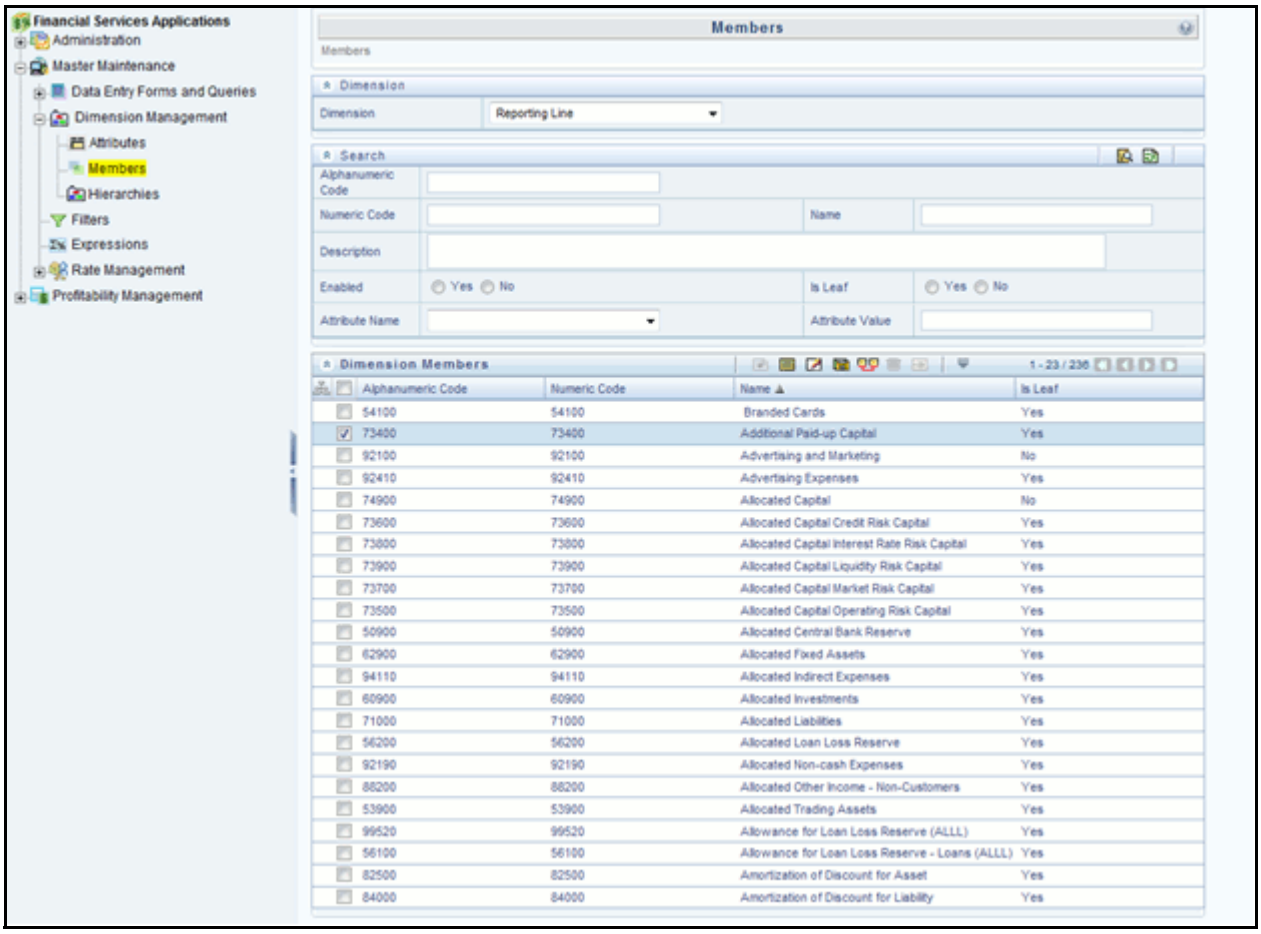


Figure 41. Reporting Line Members

To add a new reporting line:

1. Select Add button from the Members screen. The Member Definition (New Mode) screen is displayed.

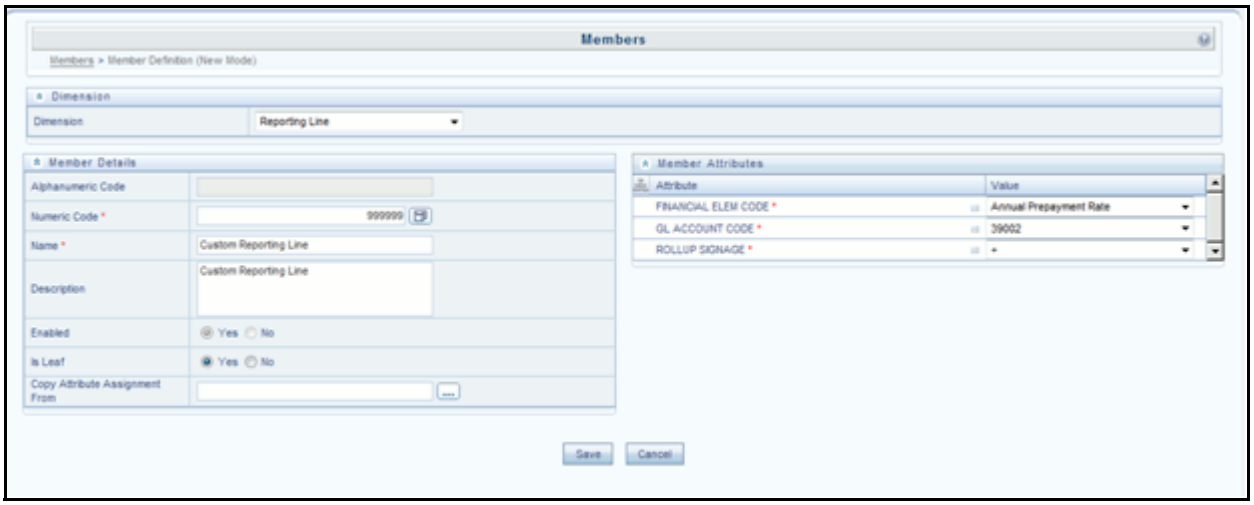


Figure 42. Member Definition (New Mode)

2. In the Member Definition (New Mode) screen:

- Enter Numeric Code.
- Enter the Name of the custom reporting line.
- Enter the Description of the custom reporting line.
- Select Yes, if the custom reporting line has to be Enabled or not.
- Select Yes, if the custom reporting line Is Leaf or not.
- Select the Attributes for the reporting line member.
- Save the Member definition.

To modify a reporting line:

1. Click Edit button from the Members screen. The Member Definition (Edit Mode)screen is displayed.

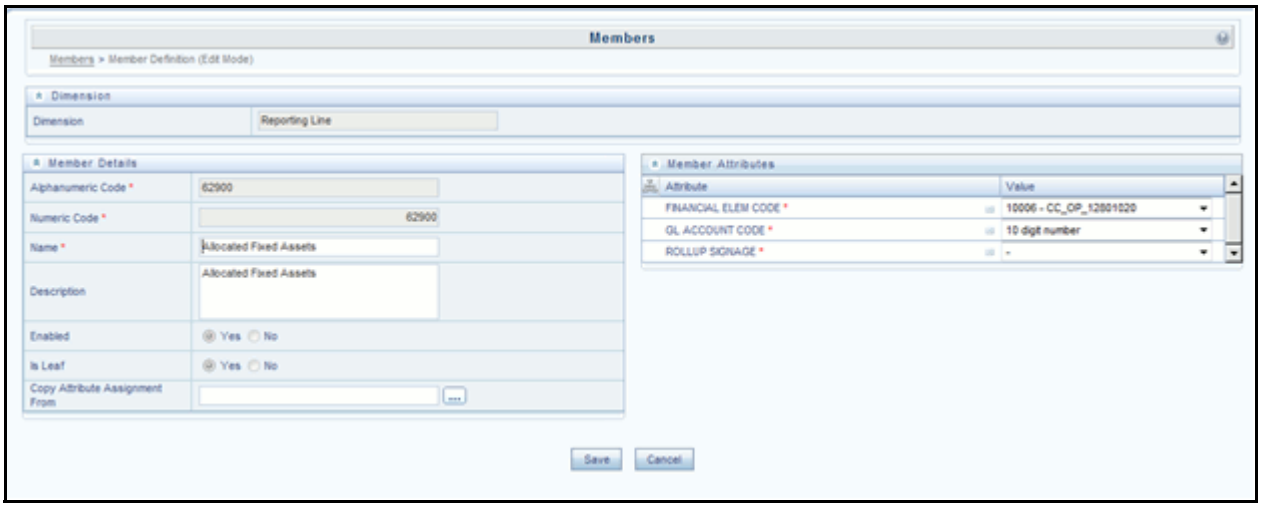


Figure 43. Member Definition (Edit Mode)

2. In the Member Definition (Edit Mode) screen, perform the following as required:

- Modify the Name of the custom reporting line.
- Modify the Description of the custom reporting line.
- Modify the selection of the radio button in the Enabled field.
- Modify the selection of the radio button in the Is Leaf field.
- Modify the Attributes for the reporting line member.
- Save the Member definition.

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

Add Custom Reporting Line Hierarchy or Modify Existing Seeded Reporting Line Hierarchy

To create a new Reporting Line Hierarchy:

1. Click Add button from the menu. The Hierarchy Definition (New Mode) screen is displayed.

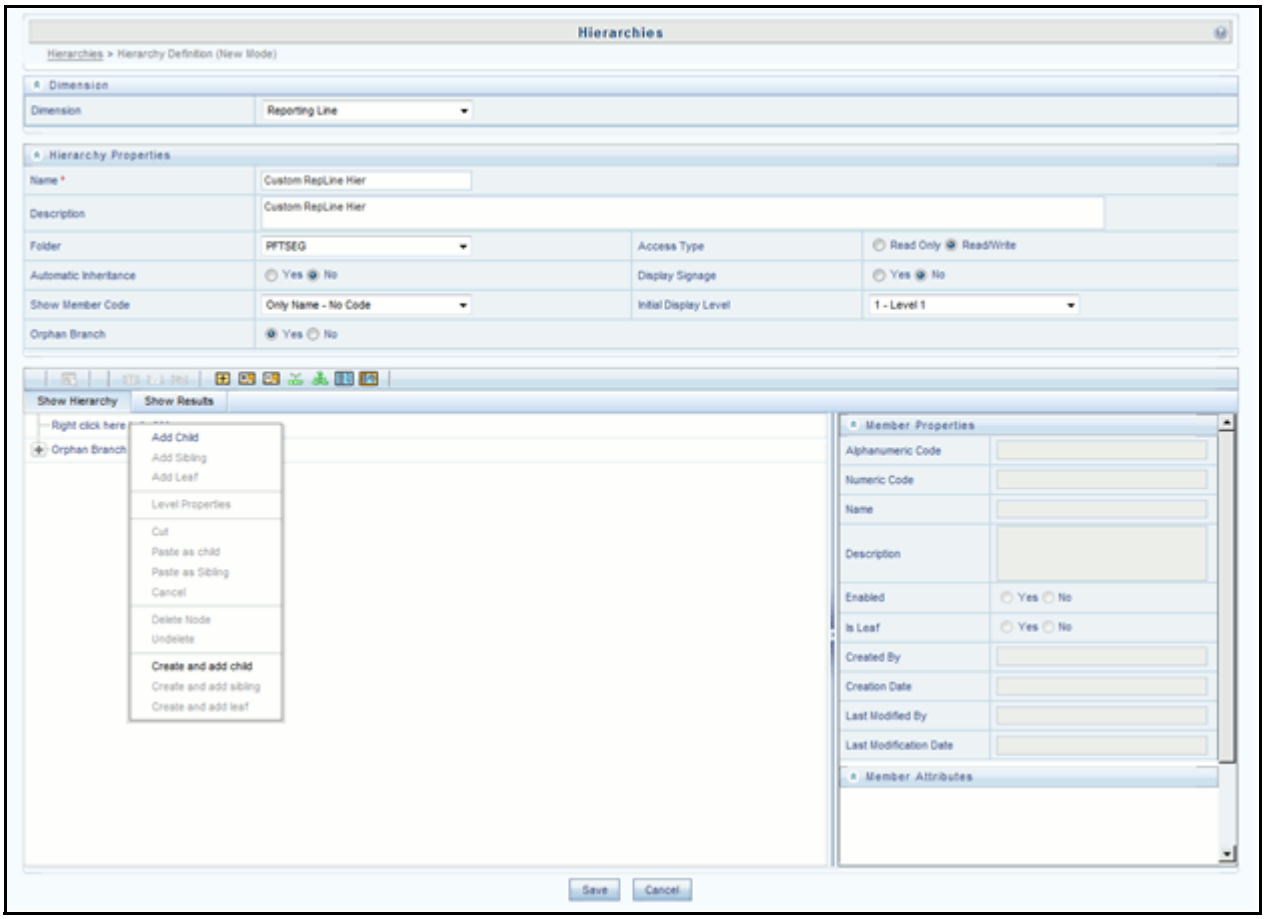


Figure 44. Hierarchy Definition (New Mode)

2. Enter the details in the required fields, and click Save.

Note: Alternatively, insert scripts and update scripts can be prepared into tables DIM_REPORTING_LINE_B, DIM_REPORTING_LINE_TL, DIM_REPORTING_LINE_ATTR, and DIM_REPORTING_LINE_HIER for adding any new custom reporting lines or modifying an existing reporting line.

3. Execute the seeded batch `<Infodom>_ Repline_Dimension_Update` specifying the Reporting line hierarchy as parameter to batch.
4. Execute the seeded batch `<Infodom>_ Repline_Dimension_Update` . It populates data into DIM_REP_LINE table.

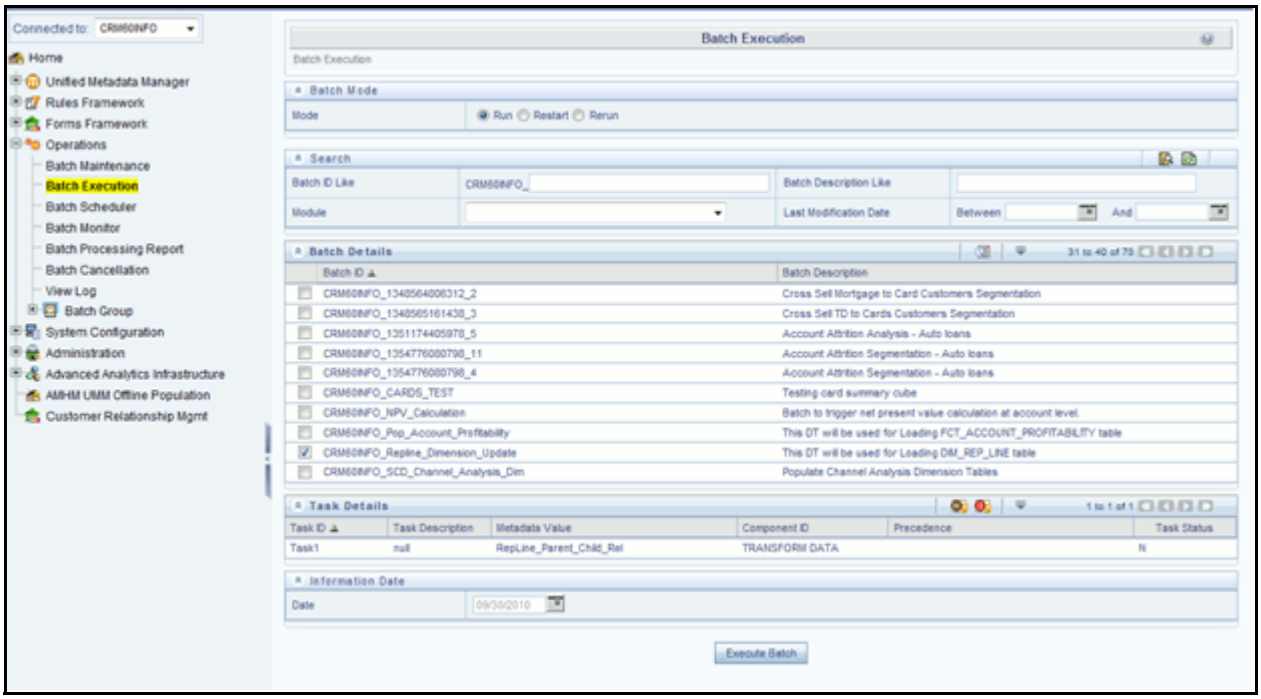


Figure 45. Execute Batch

To modify existing seeded Reporting Line Hierarchy:

1. Select the check box adjacent to the Reporting Line Hierarchy to be modified.
2. Click Edit button from the menu.
3. Modify the Hierarchy as required and click Save.

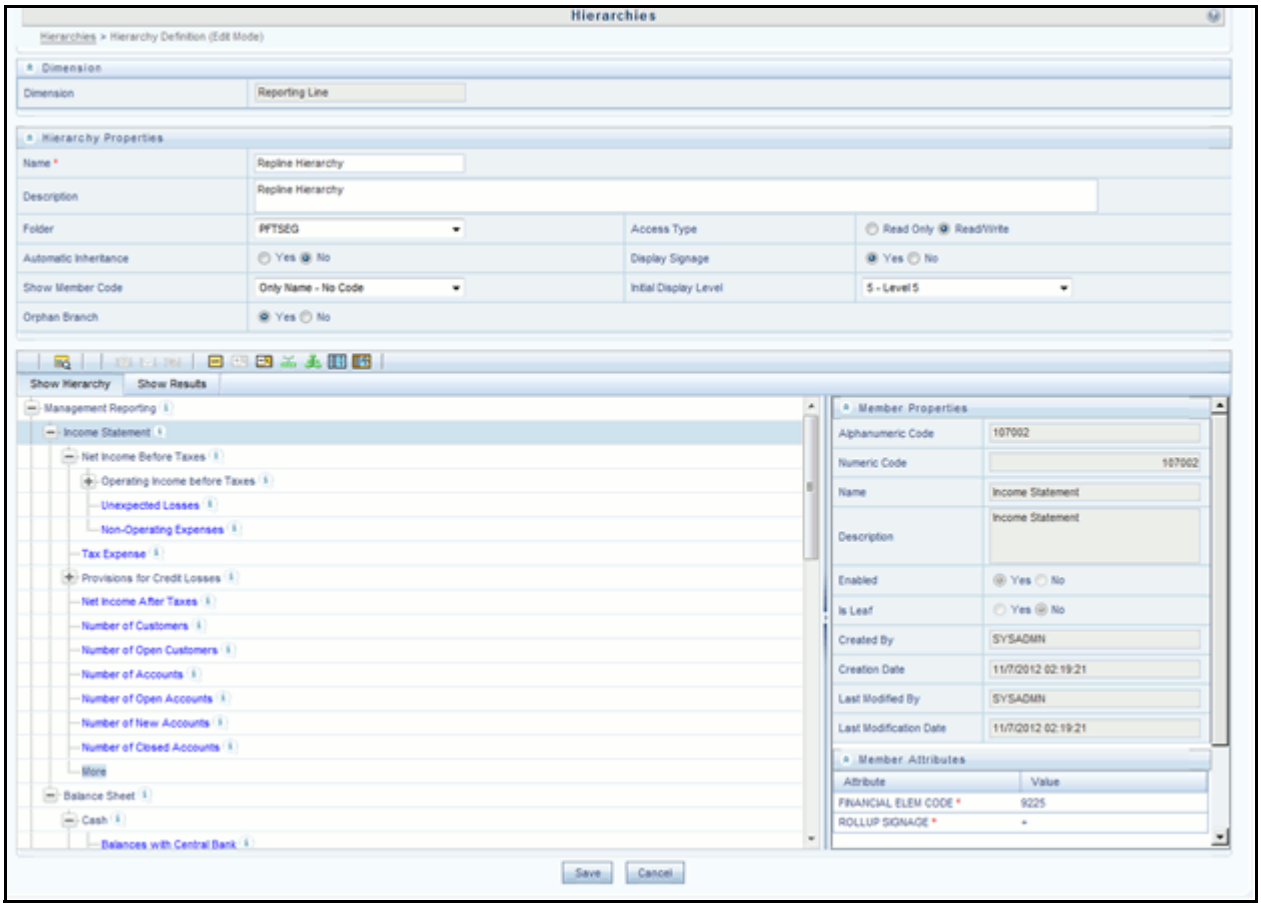


Figure 46. Modified Hierarchy

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

Modify the Seeded Business Metadata

1. Resave the Seeded Business Metadata parent child hierarchy, "Reporting Line Hierarchy" (HPFTRL), so that the changes done are consolidated in the hierarchy as well.

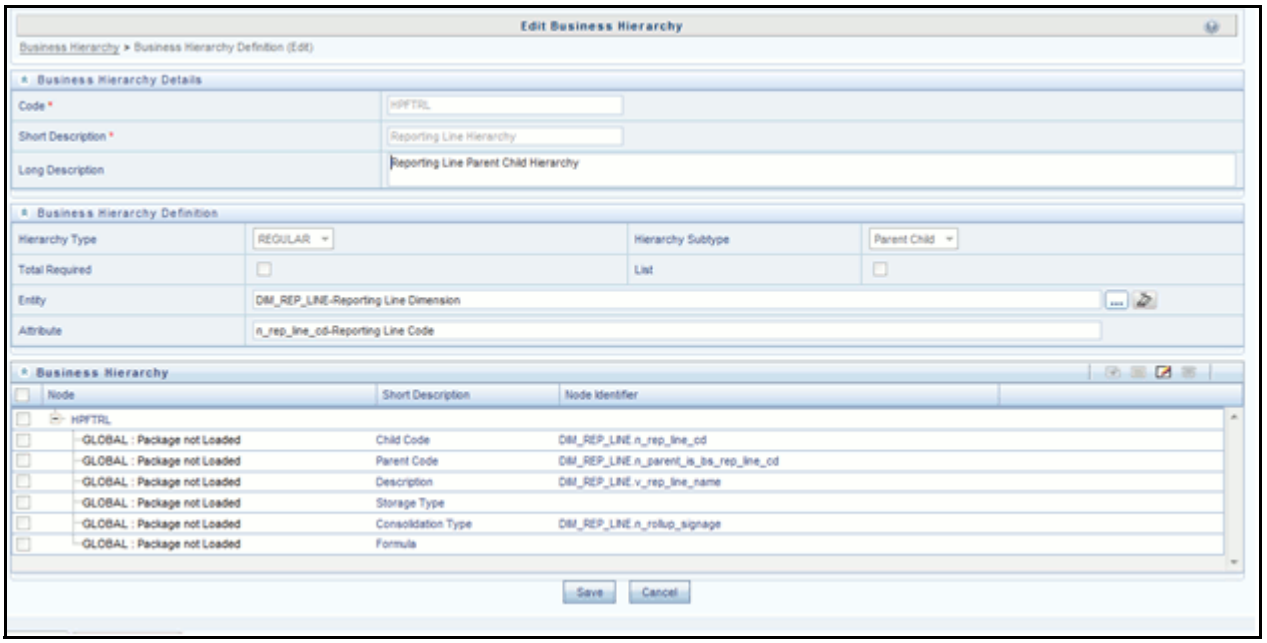


Figure 47. HPFTRL

2. (Optional) Create the Business Measures for the newly added reporting lines.
3. Attach and Save the defined Business Measures to the hierarchy "Reporting Line Measures".
4. Save the metadata.

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

Map Maintenance

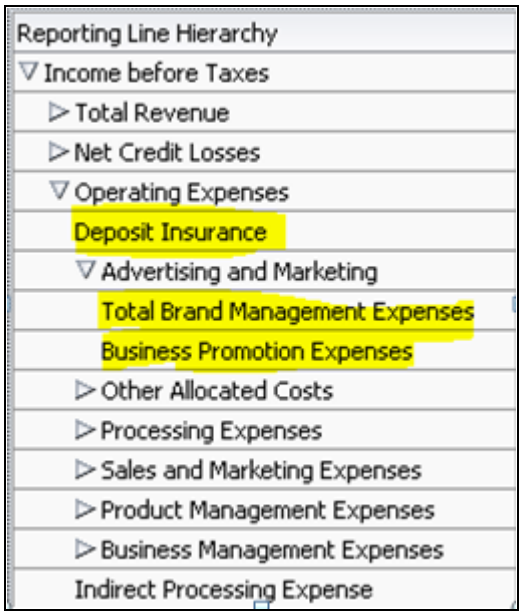
Once all the above steps are done, the seeded map configured between the Reporting Line Hierarchy and Reporting Line Measure Hierarchy has to be modified if required from Map Maintenance of OFSAAI.

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

Rollup Signage and Operational Signage

In the context of Reporting Lines, the significance of Signage is that it indicates whether the Reporting Line Value in question will be an addition or a subtraction to the corresponding Parent Reporting Line. The reporting line values that are loaded to the Fact tables like FCT_ACCOUNT_PROFITABILITY or FCT_MGMT_REPORTING are leaf level reporting lines.

For example, consider the following hierarchy:



The Fact table will not contain values for Advertising and Marketing as that value is expected to be calculated based on the "rollup" of the underlying leaf level values - Total Brand Management Expenses and Business Promotion Expenses. However, all the underlying values will not be added together. Some values will be expected as positive, and some will be expected as negative. For example:

Reporting Line Hierarchy	Rollup Signage
Income before Taxes	1
Total Revenue	1
Net Credit Losses	-1
Operating Expenses	-1
Deposit Insurance	-1
Advertising and Marketing	1
Total Brand Management Expenses	1
Business Promotion Expenses	1
Other Allocated Costs	1
Processing Expenses	1
Sales and Marketing Expenses	1
Product Management Expenses	1

Hence, when Deposit Insurance rolls up into Operating Expenses, it is considered a subtraction. This rollup into the immediate parent is called Rollup Signage.

However, when rolling up further, (in this case, Income before Taxes), the signage of Deposit Insurance will be dependent on the rollup signage of Operating Expenses.

Operating Expenses = (-1) x Deposit Insurance

Income before Taxes = (-1) x Operating Expenses

Hence, when the leaf value Deposit Insurance rolls up into Income before Taxes,

Income before Taxes = (-1)x(-1) x Deposit Insurance = (+1) x Deposit Insurance

Hence, Rollup Signage of Deposit Insurance is -1 (or negative).

However, in relation to Income before Taxes, the Operational Signage of Deposit Insurance is +1 (or positive).

The effective signage of the leaf reporting line with respect to a parent reporting line is called Operational Signage.

Operational Signage of a reporting line is defined in relation to a parent reporting line. However, the Rollup Signage is always in relation to the immediate parent reporting line.

Prerequisites

Following are the lists of tables used in the population of of Fact Account Profitability. These tables are required to be loaded prior to running the DT.

- DIM_DATES - Mandatory
- DIM_REP_LINE - Mandatory
- FCT_COMMON_ACCOUNT_SUMMARY
- FCT_PFT_ACCOUNT_SUMMARY
- FCT_FTP_ACCOUNT_SUMMARY
- FCT_REG_CAP_ACCOUNT_SUMMARY
- FCT_ECO_CAP_ACCOUNT_SUMMARY

For more information on SCD, refer to the *Dimension Loading Process* chapter.

Executing the Fact Account Profitability Population DT

You can execute the the T2T component from the Operations (formerly Information Command Center (ICC) framework) module of OFSAAI.

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 the section How to Define a Batch.

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

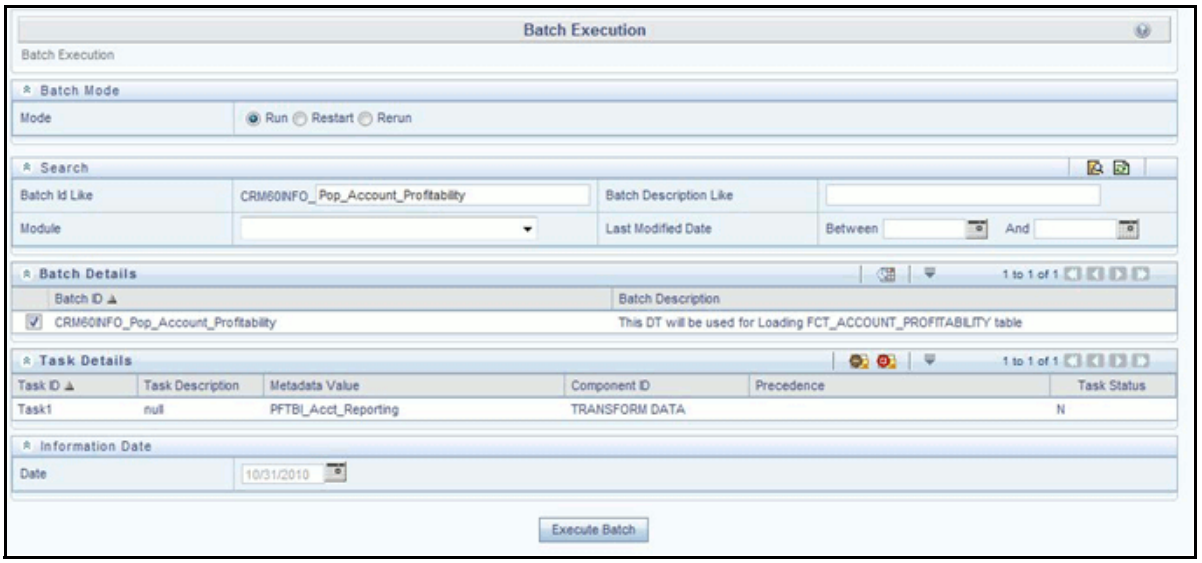


Figure 48. Pop_Account_Profitability

To define a new task for a Batch definition:

1. Click the check box in the Batch Name container to select the Batch.
2. Click Add (+) button from the Task Details grid. The Task Definition window is displayed.
3. Enter the Task ID and Description.
4. Select TRANSFORM DATA from the Components list.
5. 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.
   - Rule Name - Select FN_FCT_ACCOUNT_PFT from the list.

6. 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.

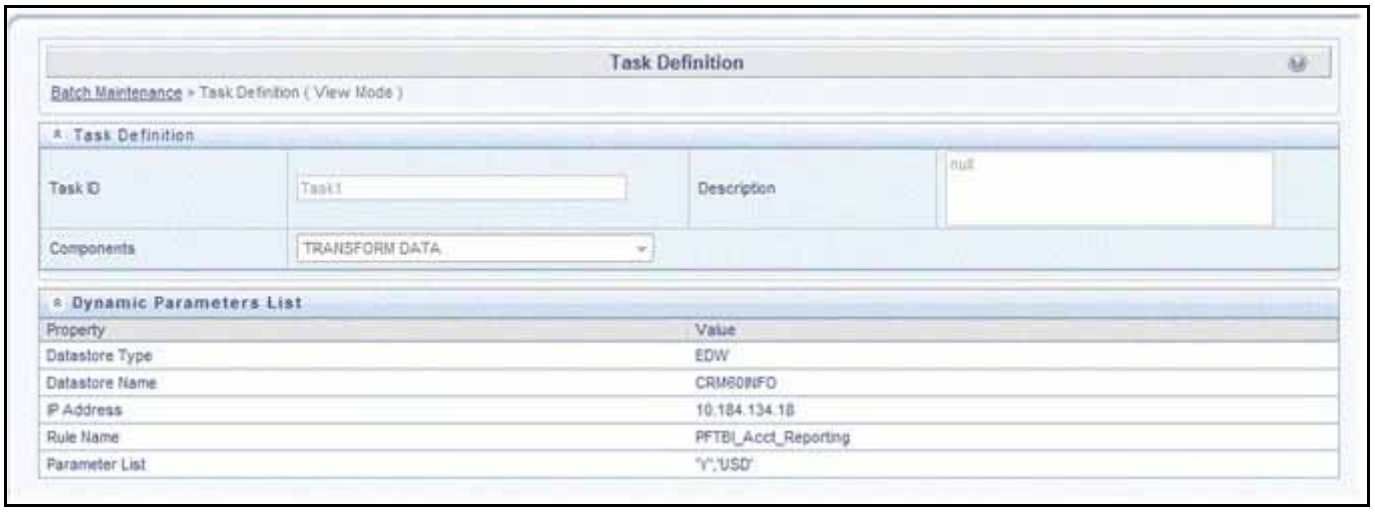


Figure 49. Data Transformation Task

7. Click Save. The Task definition is saved for the selected Batch.

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

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 executionID. The following tables can be queried for errors:

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.

Table 20. 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.

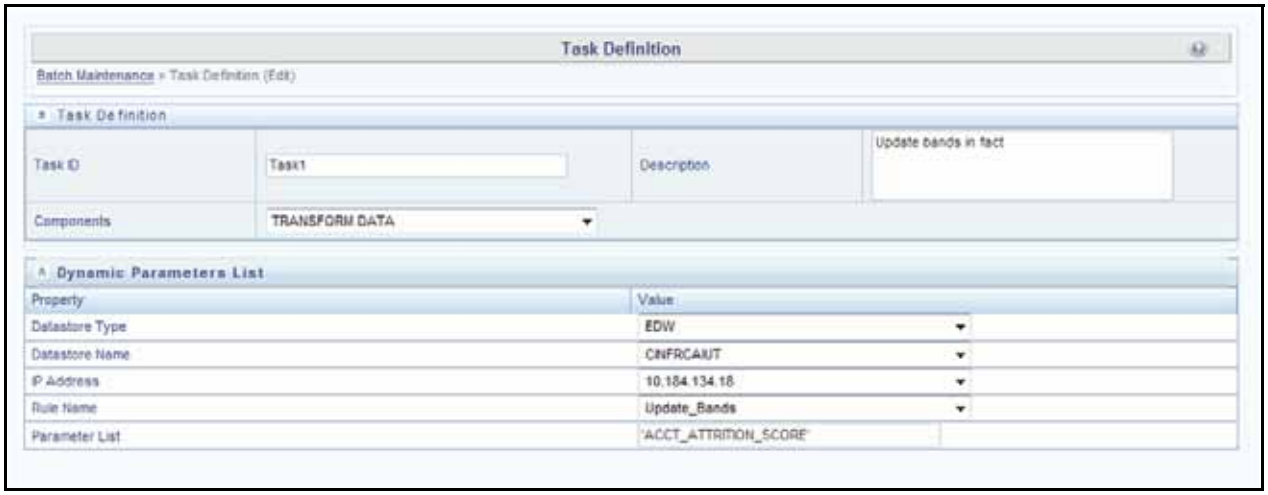


Figure 50. Update_Bands

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:

Table 21. Band Type Parameters

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

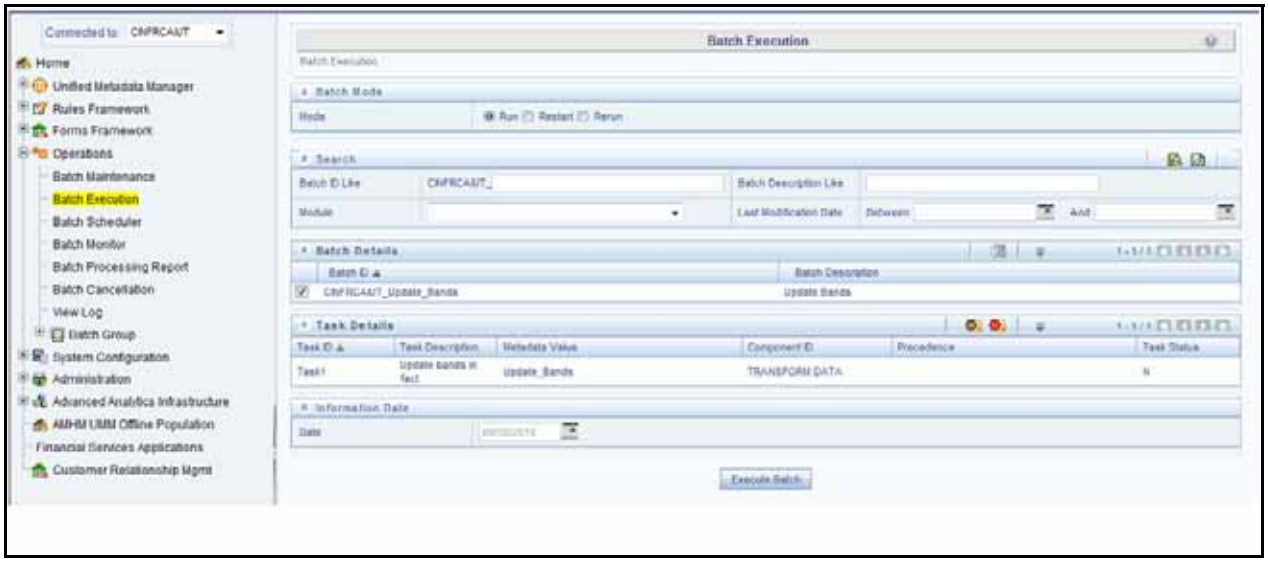


Figure 51. Define batch

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.

CHAPTER 9 Predictive Modeling

OFS Retail Customer Analytics currently comprises of the following Predictive Models:

- Cross Sell Model
- Attrition Model
- Pre Payment Analysis
- Channel Propensity Analysis
- Product Association Modeling
- Account Forecast Modeling

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
/
```

CHAPTER 10 Model Creation and Execution

This chapter contains the following topics:

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.

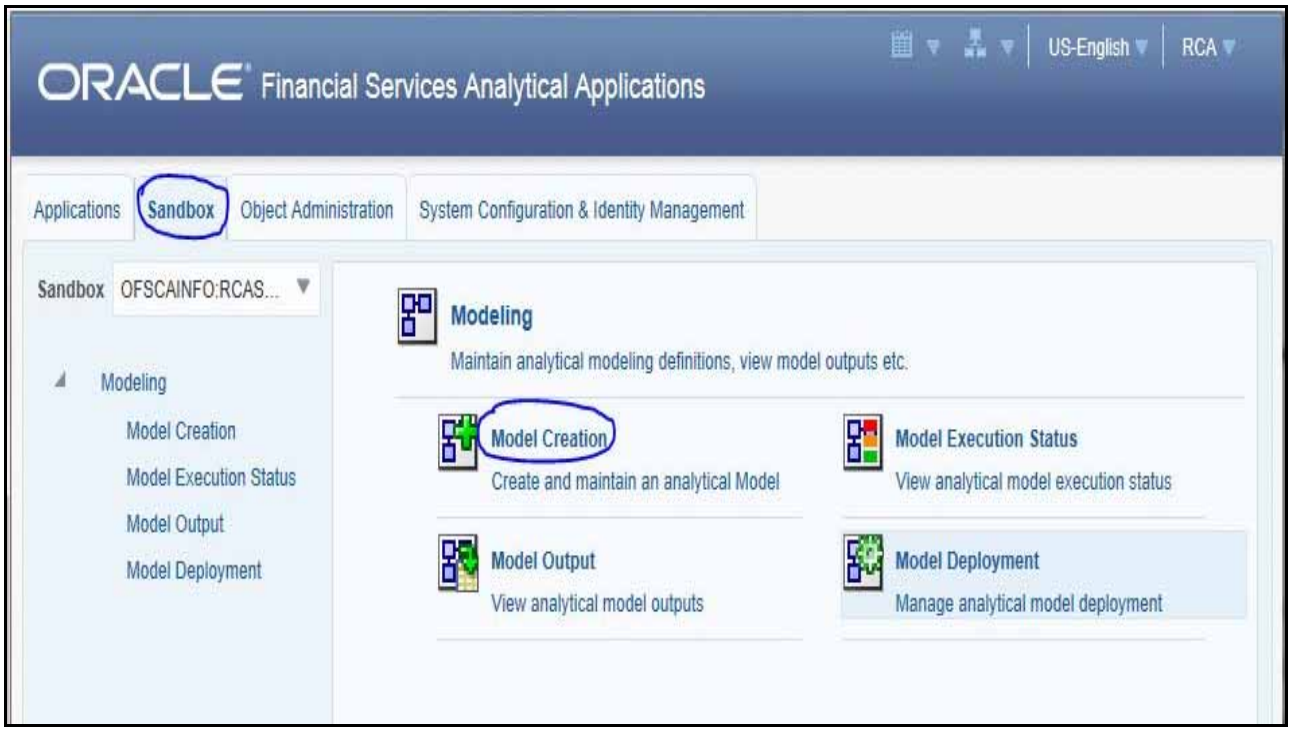


Figure 52. Model Creation page

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.

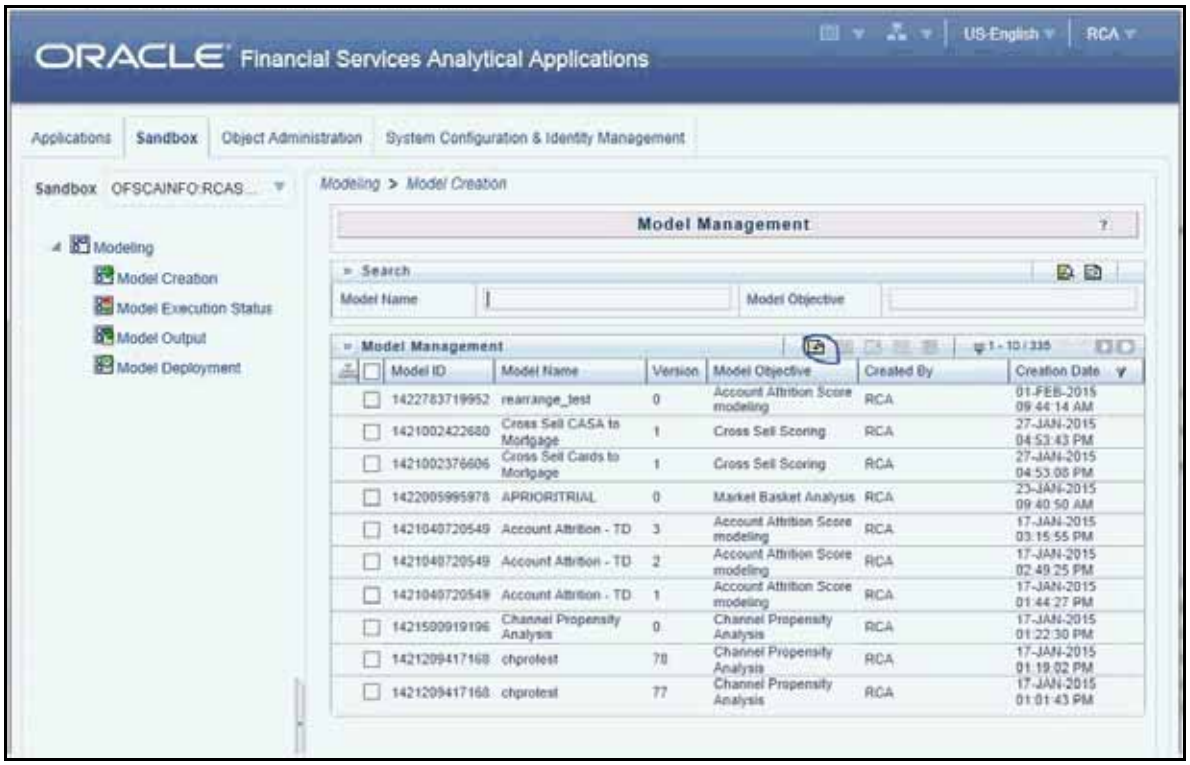


Figure 53. Model Management

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
- Modify Model Definition

Create Model Definition

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

1. Select Add 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.

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

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

5. Click OK and save the model.

Limitation on Dataset definition

Dataset creation for OFSAAI has been explained in Creating Data Set section of the *OFS Analytical Applications Infrastructure User Guide 8.0.* This section explains how various sections of a Dataset can be defined. The core component of a Dataset definition is the ANSI join which logically links all the underlying Entities.

The limitation with respect to using a Dataset for defining a Model in the Modeling Framework is that the total number of columns of the cumulative dataset cannot exceed 1000 columns. Hence, if we attempt to use the following tables in the dataset - `FCT_COMMON_ACCOUNT_SUMMARY, DIM_DATES, DIM_PRODUCT`, we would write the ANSI JOIN expression as -

```
FCT_COMMON_ACCOUNT_SUMMARY

JOIN DIM_DATES ON FCT_COMMON_ACCOUNT_SUMMARY.N_MIS_DATE_SKEY =
DIM_DATES.N_DATE_SKEY

JOIN DIM_PRODUCT ON FCT_COMMON_ACCOUNT_SUMMARY.N_PRODUCT_SKEY =
DIM_PRODUCT.N_PROD_SKEY
```

The cumulative number of columns of this dataset cannot exceed 1000 columns. Hence, it would be prudent to optimize the above ANSI JOIN as:

```
FCT_COMMON_ACCOUNT_SUMMARY

JOIN (select N_DATE_SKEY, V_MONTH_CALENDAR_NAME, D_CALENDAR_DATE FROM DIM_DATES)
DIM_DATES ON FCT_COMMON_ACCOUNT_SUMMARY.N_MIS_DATE_SKEY = DIM_DATES.N_DATE_SKEY

JOIN (SELECT N_PROD_SKEY, V_PROD_CODE) DIM_PRODUCT ON
FCT_COMMON_ACCOUNT_SUMMARY.N_PRODUCT_SKEY = DIM_PRODUCT.N_PROD_SKEY
```

By including only the necessary columns and aliasing the dimensions, we are ensuring that the unnecessary columns from these dimensions do not restrict the entire dataset. This is especially important when defining datasets using a large number of entities. In addition, if the dataset uses a huge number of entities, it is advisable to create an intermediate processing table and use the intermediate table instead so as to avoid performance issues.

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 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.
- You can select the length of Historic period, Observation Period, and Observation range.

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.

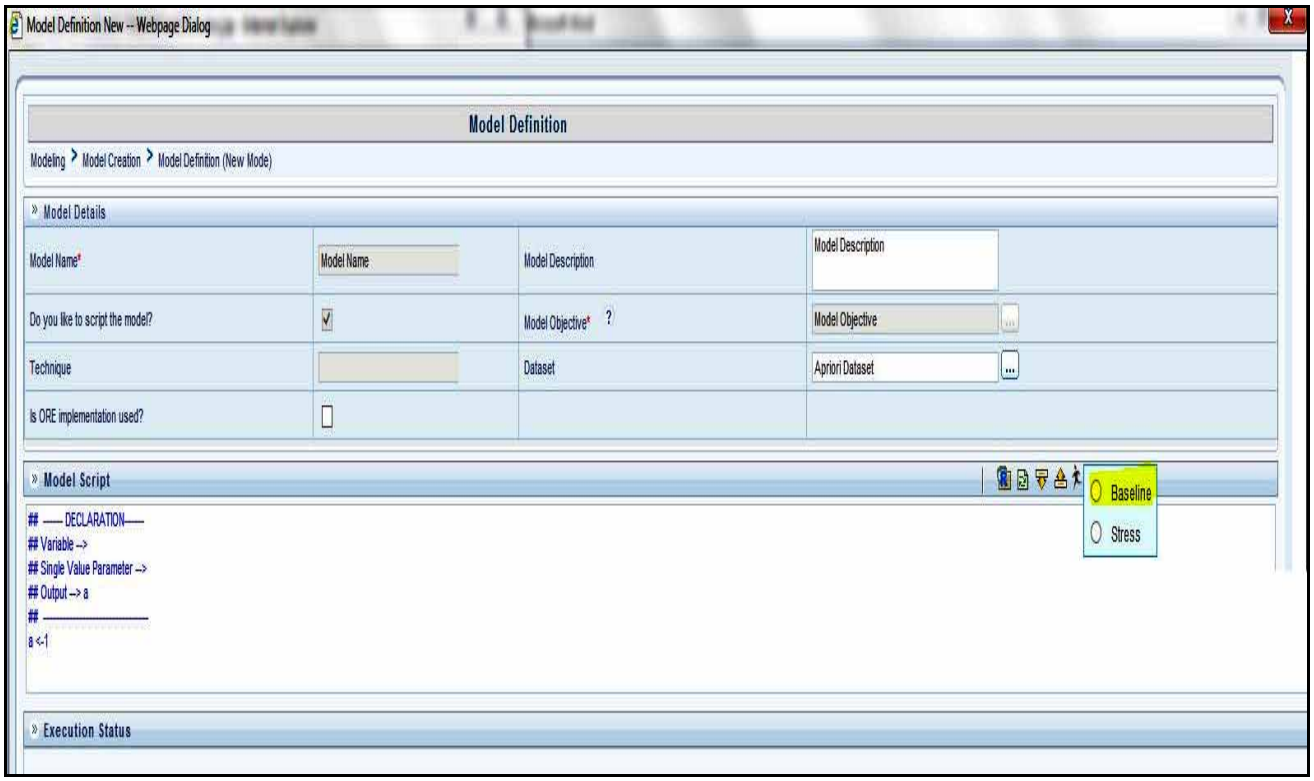


Figure 54. Baseline (when technique is directly written in the Modeling Screen)

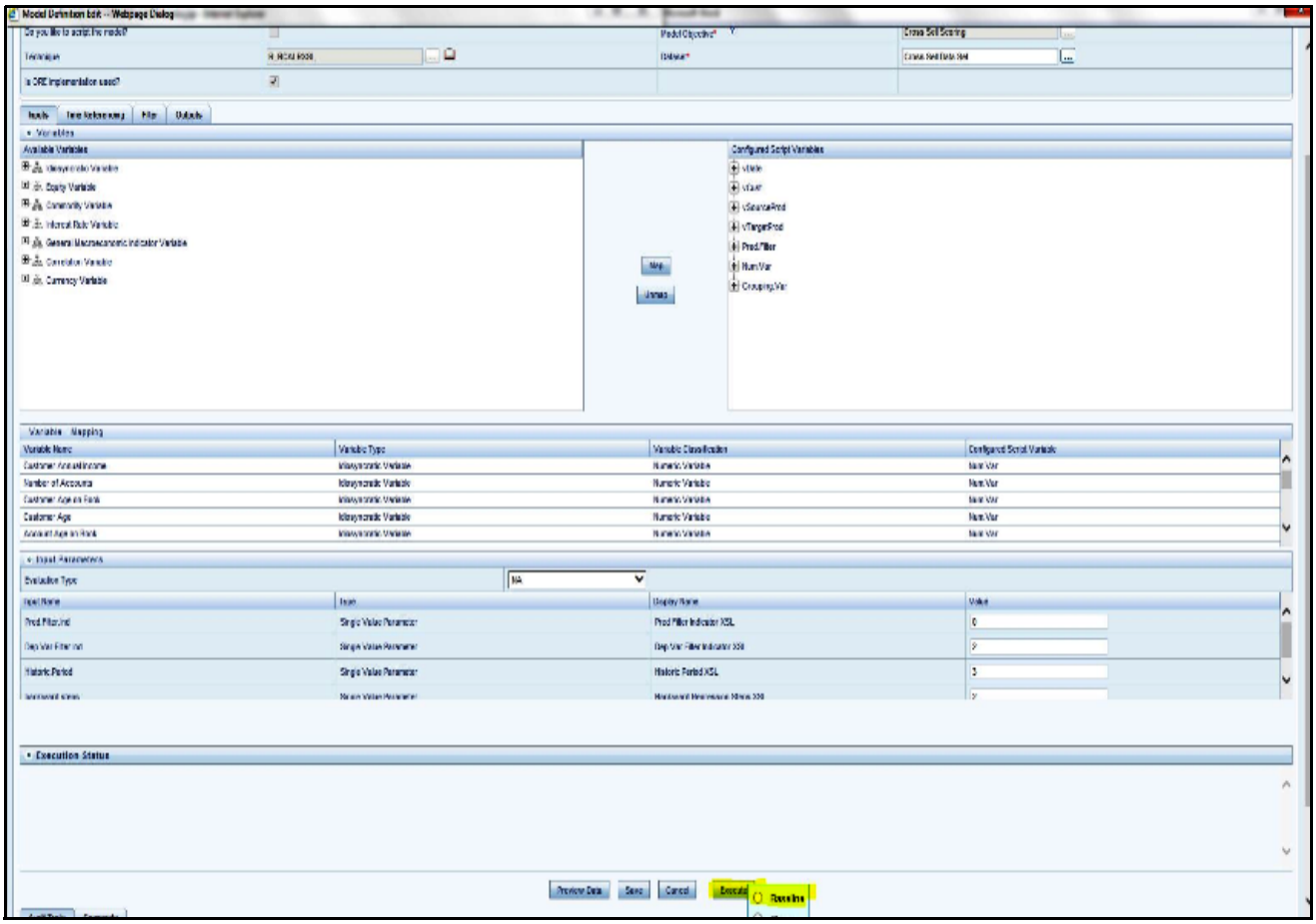


Figure 55. Baseline (when technique is written in Technique Registration and selected in the Technique screen)

2. After the model execution is successfully triggered, the following message appears: *Successfully triggered the model execution.*
3. Check the model execution status in the Model Execution Status window (sort descending by date for the status of the latest execution)

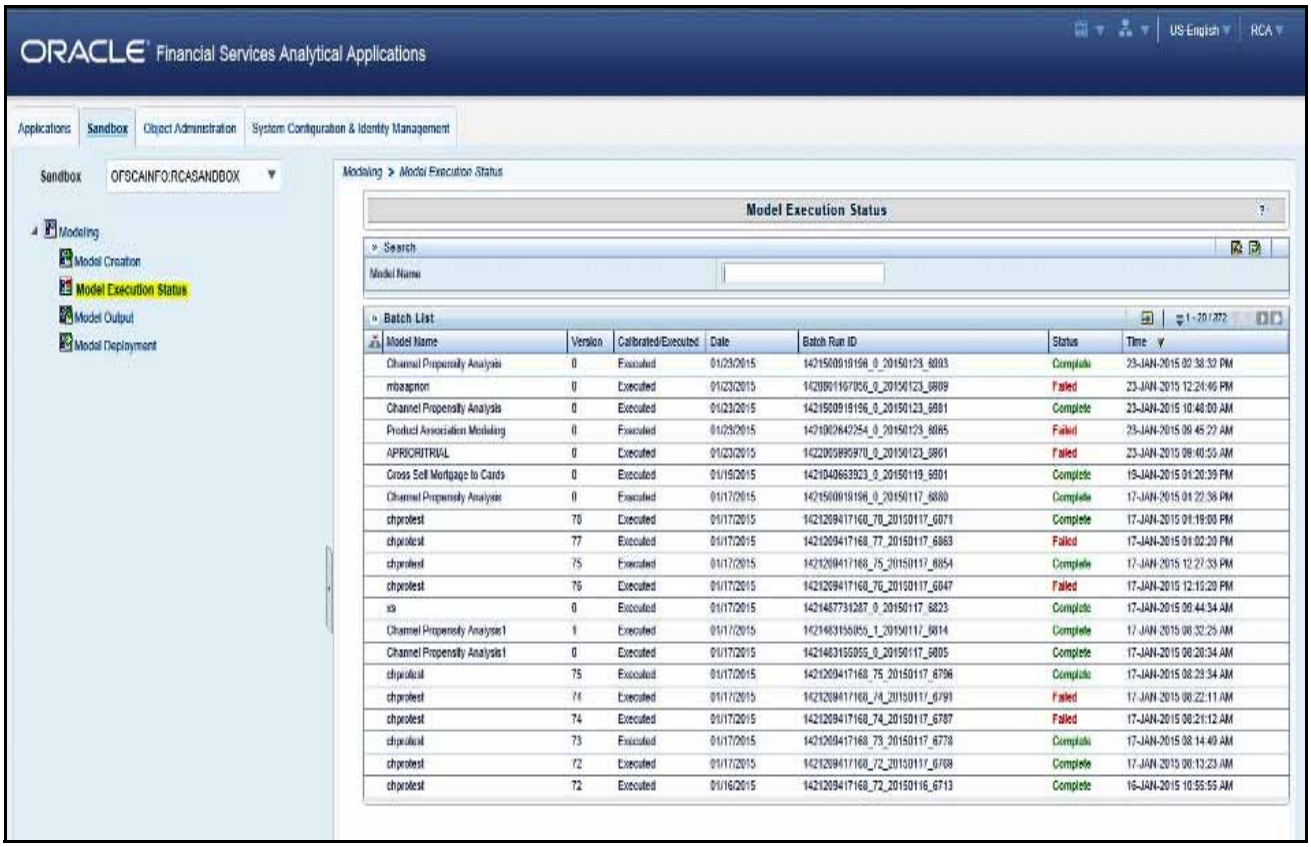


Figure 56. Model Execution Status

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

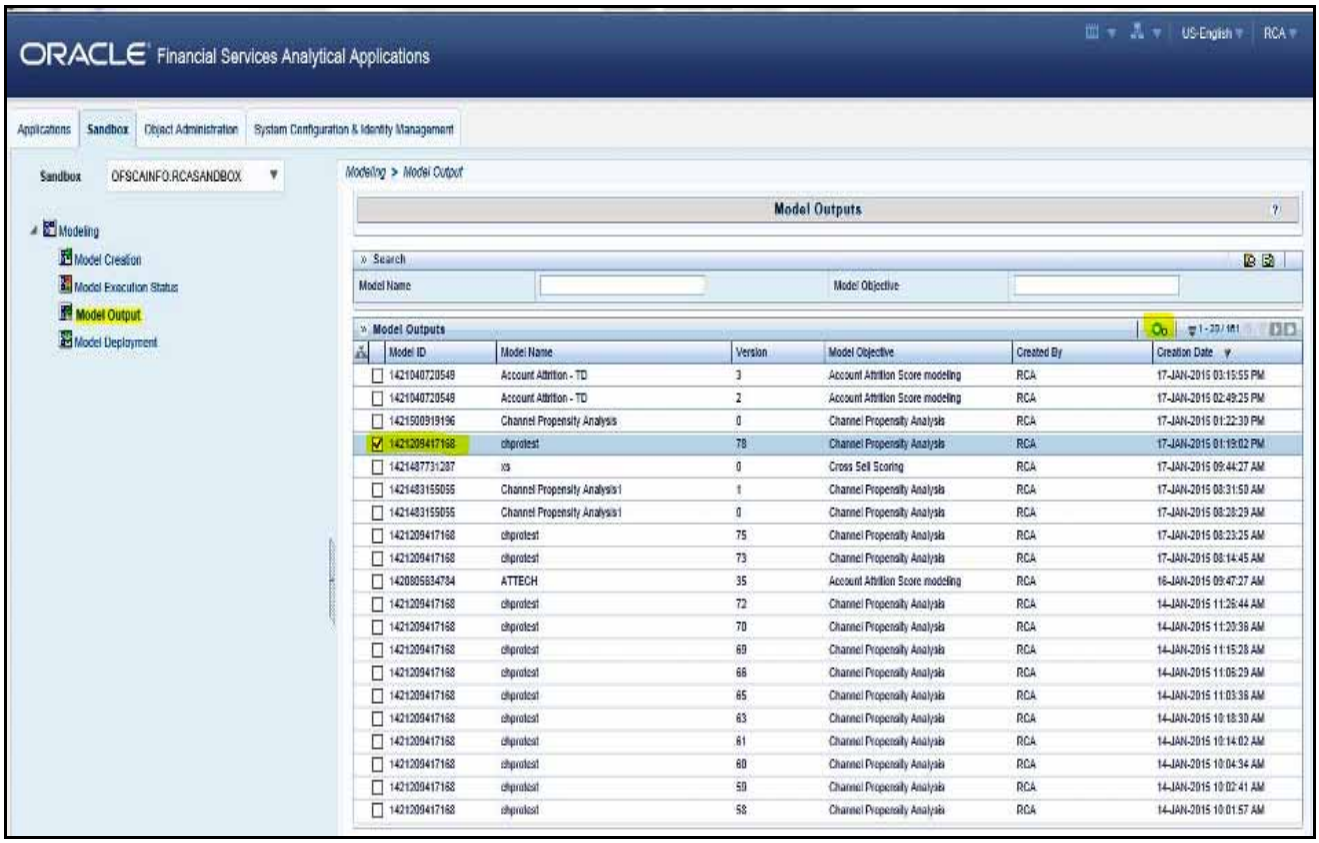


Figure 57. Model Output

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

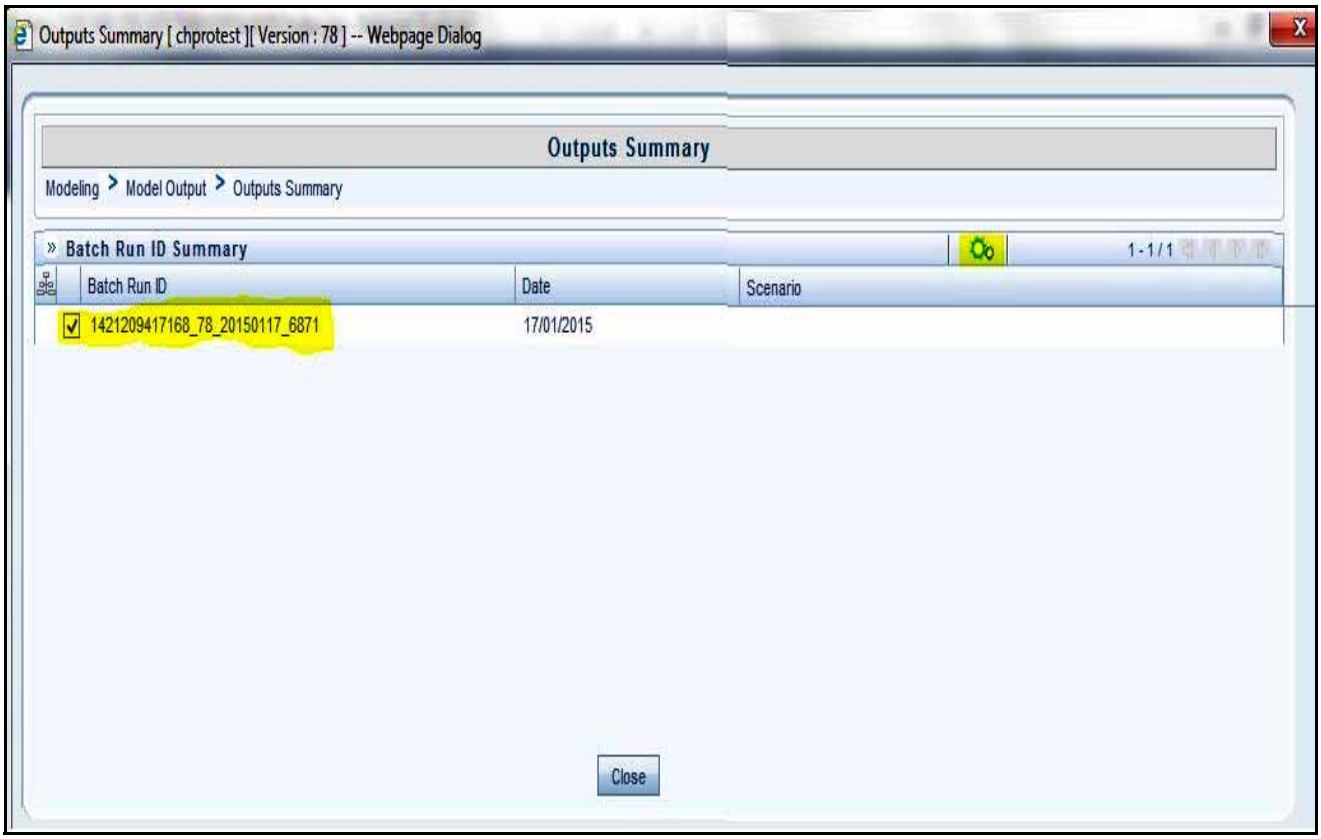


Figure 58. Outputs Summary

6. Click the Model Output desired to be viewed.

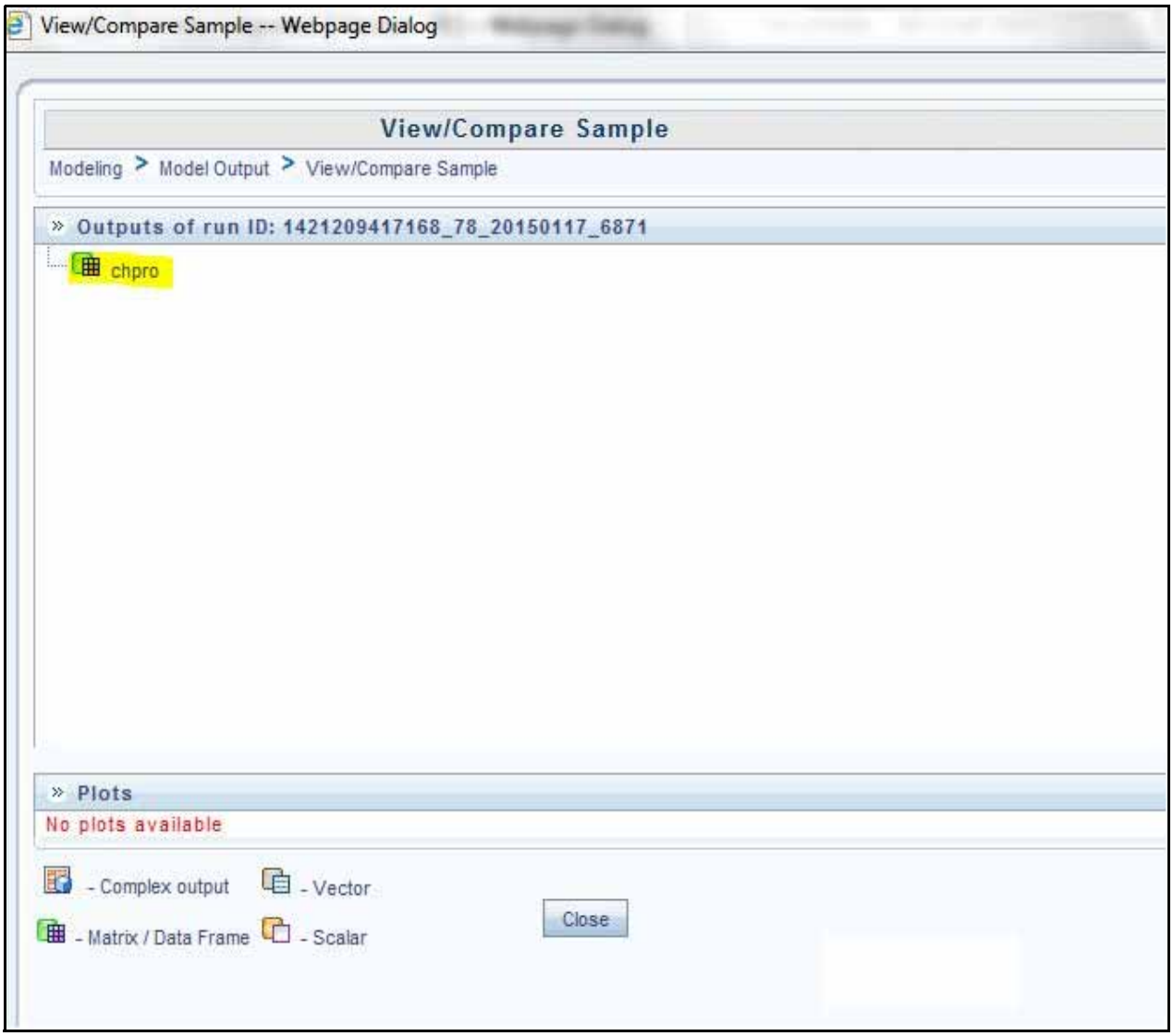


Figure 59. View Sample

7. 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.

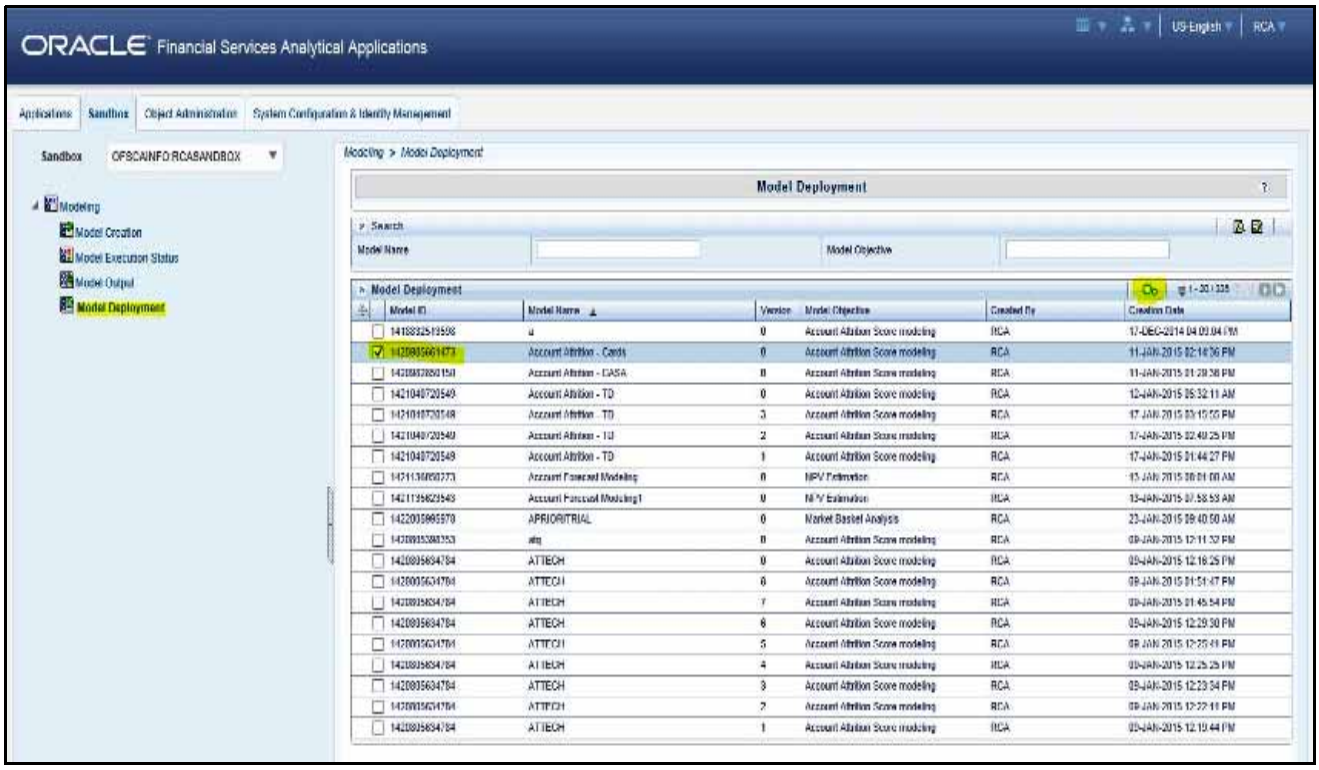


Figure 60. Model Deployment

8. Authorize and Deploy the model to Production Schema.

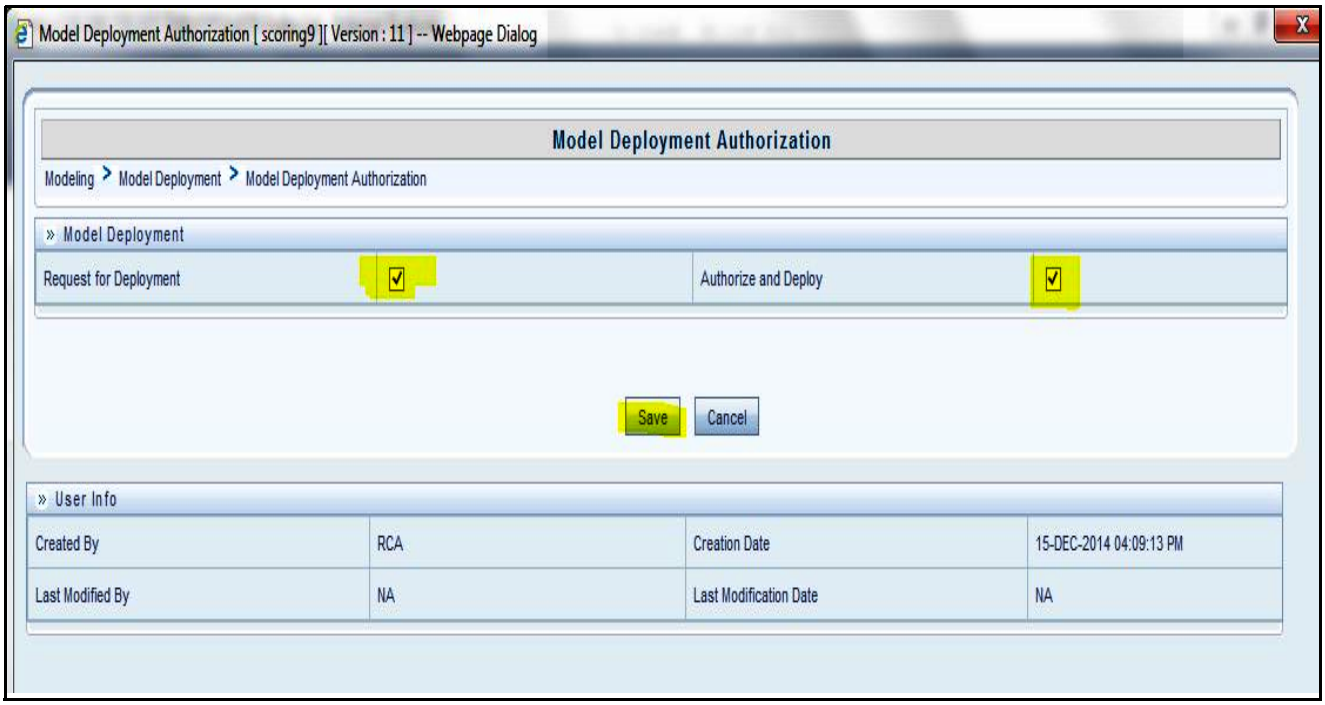


Figure 61. Model Deployment Authorization

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.

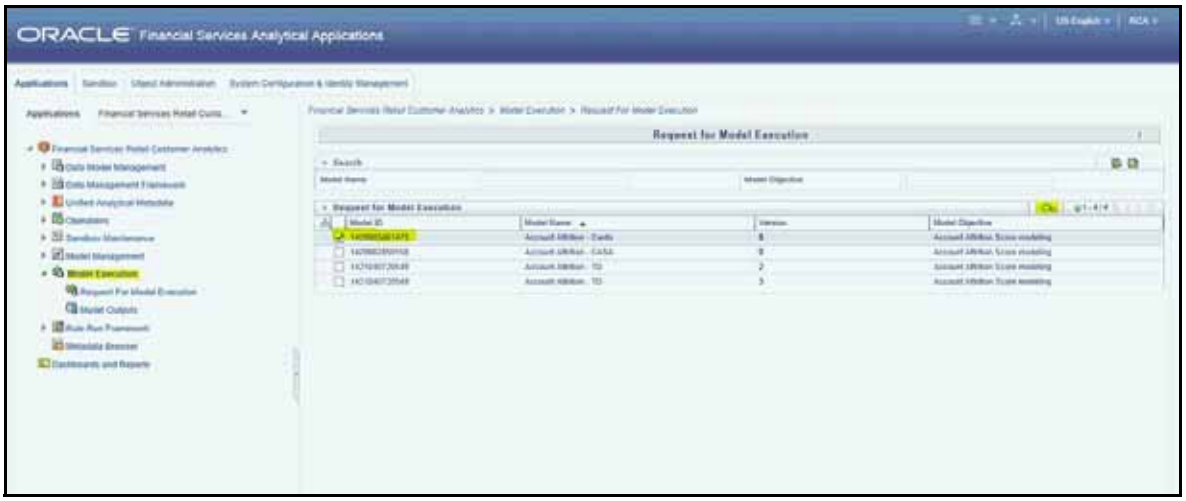


Figure 62. Request for Model Execution

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:

- MF_MODEL_ORE_OUTPUT (Execution Summary)
- 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.

For example, if you needs to configure parameters for attrition-cards model, follow these steps:

1. Enter comma separated values in the database table `FSI_MODEL_PARAMETERS` that can be categorized as CARDS related Product Types against `V_MODEL_ID = 'CARDS'`
2. Run the following query on atomic schema:

`UPDATE FSI_MODEL_PARAMETERS SET V_PARAMETER_VALUE='CARDS1,CARDS2'where V_MODEL_ID='CARDS'`; where `CARDS1,CARDS2` are the values corresponding to CARDS product type in `DIM_PRODUCT.V_PROD_TYPE`

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

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

Table 22. Input Parameters

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
Run Key	-1

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

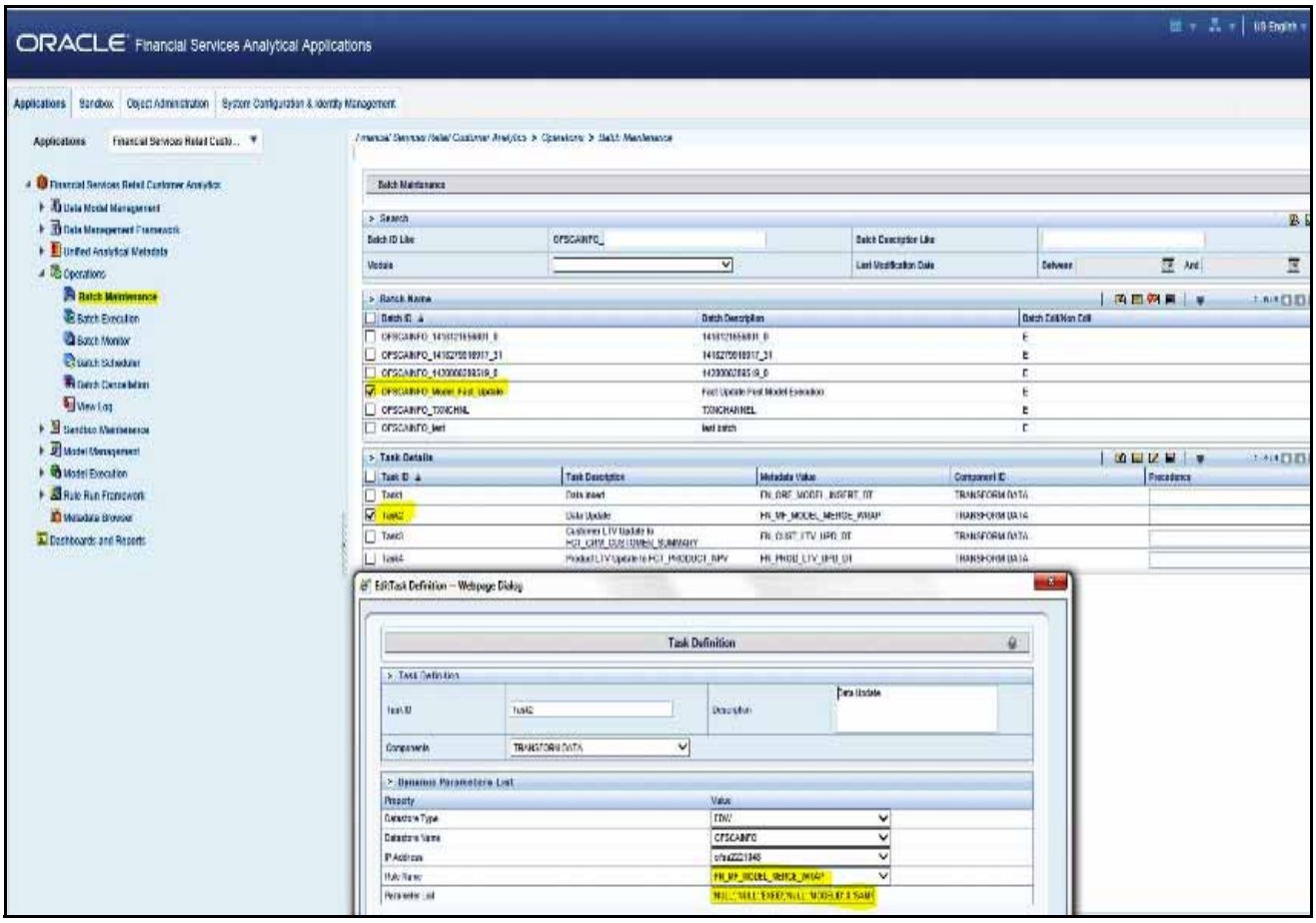


Figure 63. Batch Maintenance page

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

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	

Figure 64. MF_MODEL_ORE_OUTPUT Example

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)

Table 23. Model_Fact_Update - Task1 Parameters

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`.

Table 24. Update Bands

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.

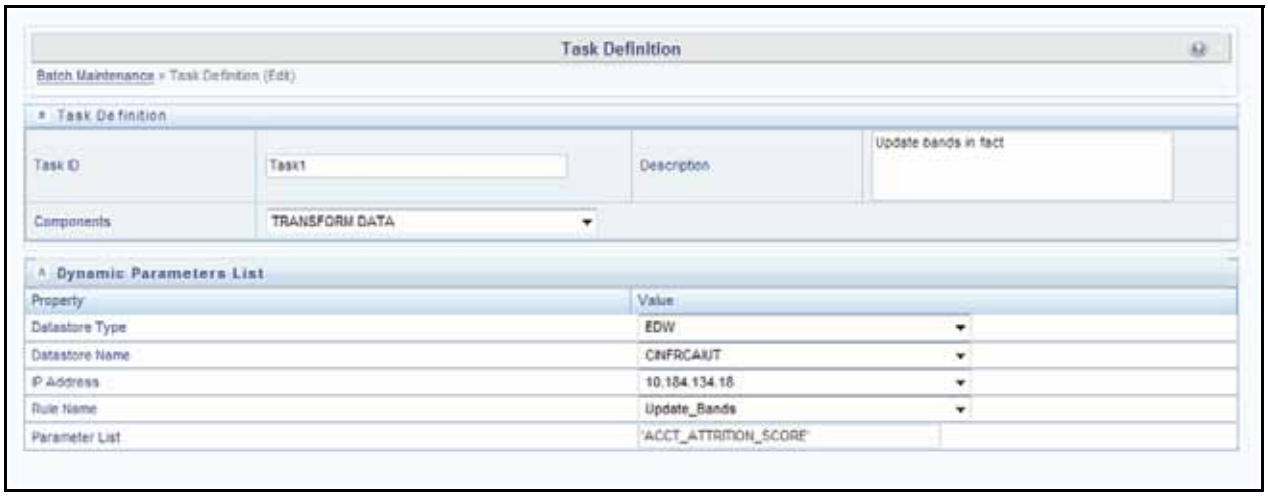


Figure 65. Task Definition

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:

Table 25. Band Type Parameters

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

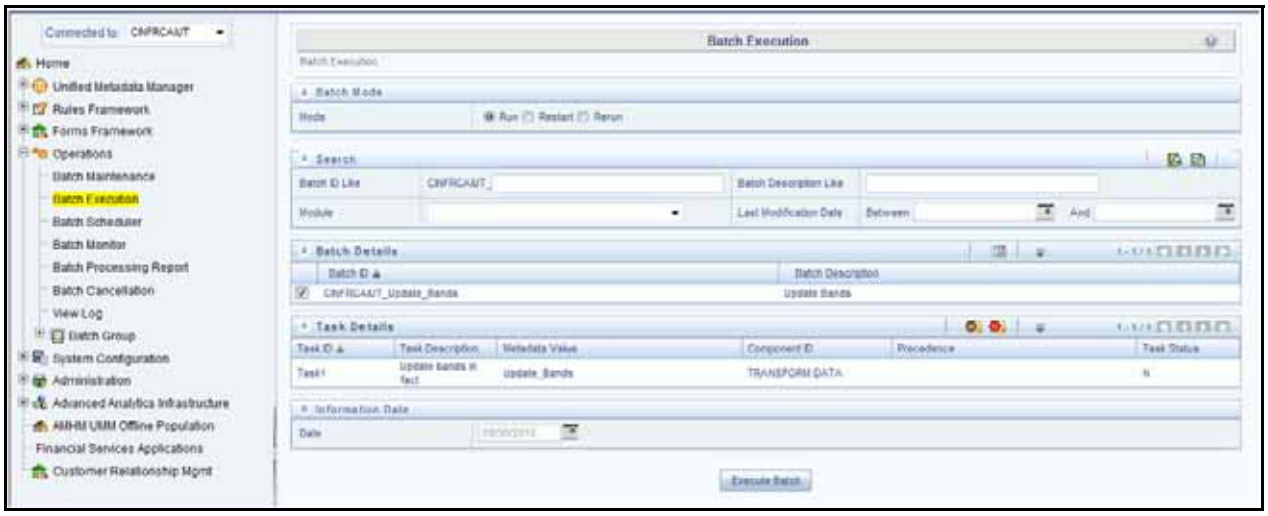


Figure 66. Batch Execution

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.

CHAPTER 11 Overview of OFSRCA Reports

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

OFSRCA 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:

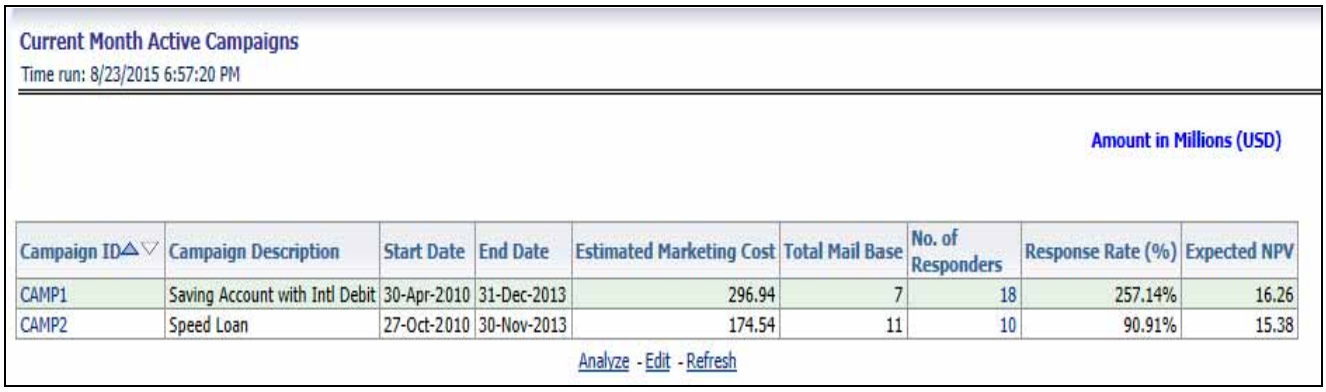
- Campaign Summary
- Response Tracking
- Campaign Performance

The following sections describe 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.



Current Month Active Campaigns

Time run: 8/23/2015 6:57:20 PM

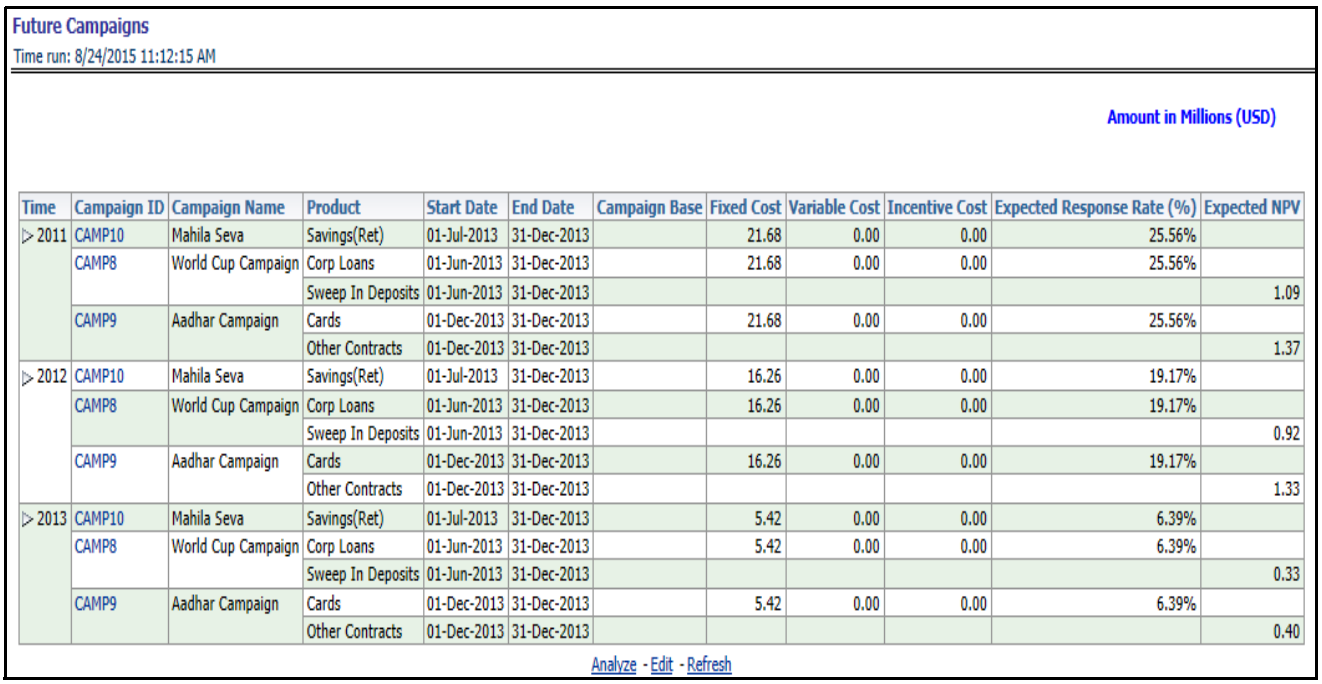
Amount in Millions (USD)

Campaign ID	Campaign Description	Start Date	End Date	Estimated Marketing Cost	Total Mail Base	No. of Responders	Response Rate (%)	Expected NPV
CAMP1	Saving Account with Intl Debit	30-Apr-2010	31-Dec-2013	296.94	7	18	257.14%	16.26
CAMP2	Speed Loan	27-Oct-2010	30-Nov-2013	174.54	11	10	90.91%	15.38

Analyze - Edit - Refresh

Figure 67. Current Month Active Campaigns

- Future Campaigns: This report gives details of the expected effectiveness and associated costs of future campaigns.



Future Campaigns

Time run: 8/24/2015 11:12:15 AM

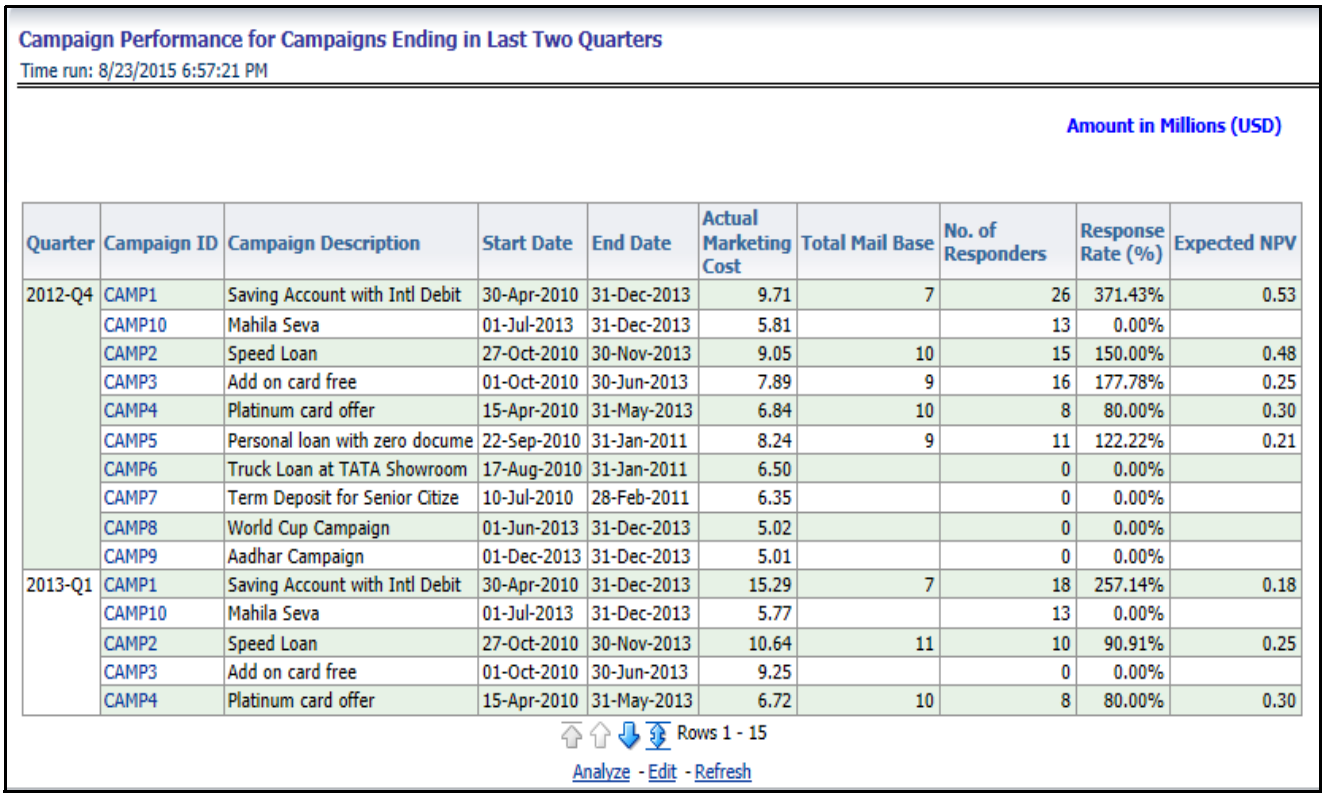
Amount in Millions (USD)

Time	Campaign ID	Campaign Name	Product	Start Date	End Date	Campaign Base	Fixed Cost	Variable Cost	Incentive Cost	Expected Response Rate (%)	Expected NPV
▷ 2011	CAMP10	Mahila Seva	Savings(Ret)	01-Jul-2013	31-Dec-2013		21.68	0.00	0.00	25.56%	
	CAMP8	World Cup Campaign	Corp Loans	01-Jun-2013	31-Dec-2013		21.68	0.00	0.00	25.56%	
			Sweep In Deposits	01-Jun-2013	31-Dec-2013						1.09
	CAMP9	Aadhar Campaign	Cards	01-Dec-2013	31-Dec-2013		21.68	0.00	0.00	25.56%	
			Other Contracts	01-Dec-2013	31-Dec-2013						1.37
▷ 2012	CAMP10	Mahila Seva	Savings(Ret)	01-Jul-2013	31-Dec-2013		16.26	0.00	0.00	19.17%	
	CAMP8	World Cup Campaign	Corp Loans	01-Jun-2013	31-Dec-2013		16.26	0.00	0.00	19.17%	
			Sweep In Deposits	01-Jun-2013	31-Dec-2013						0.92
	CAMP9	Aadhar Campaign	Cards	01-Dec-2013	31-Dec-2013		16.26	0.00	0.00	19.17%	
			Other Contracts	01-Dec-2013	31-Dec-2013						1.33
▷ 2013	CAMP10	Mahila Seva	Savings(Ret)	01-Jul-2013	31-Dec-2013		5.42	0.00	0.00	6.39%	
	CAMP8	World Cup Campaign	Corp Loans	01-Jun-2013	31-Dec-2013		5.42	0.00	0.00	6.39%	
			Sweep In Deposits	01-Jun-2013	31-Dec-2013						0.33
	CAMP9	Aadhar Campaign	Cards	01-Dec-2013	31-Dec-2013		5.42	0.00	0.00	6.39%	
			Other Contracts	01-Dec-2013	31-Dec-2013						0.40

Analyze - Edit - Refresh

Figure 68. 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: 8/23/2015 6:57:21 PM

Amount in Millions (USD)

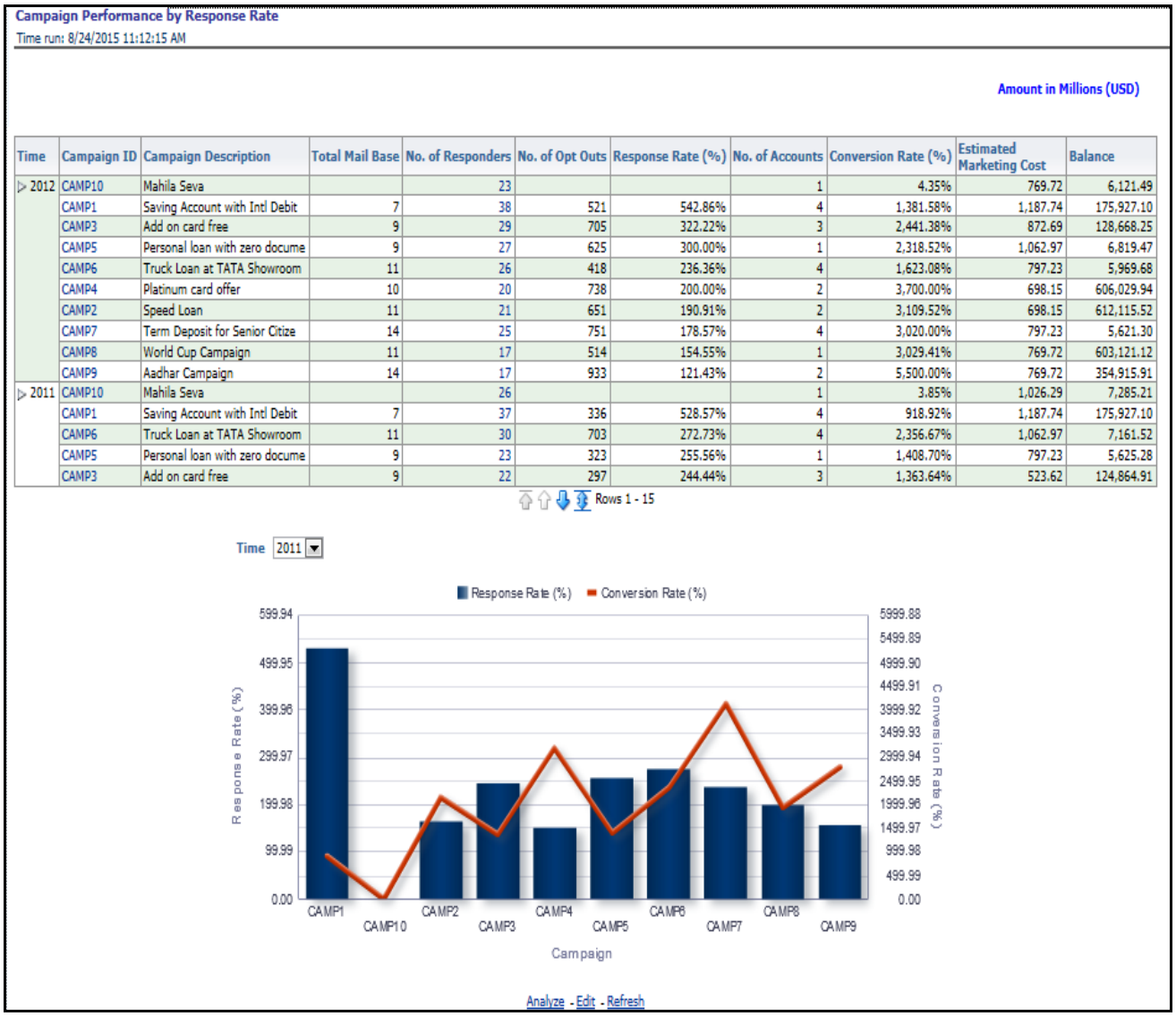
Quarter	Campaign ID	Campaign Description	Start Date	End Date	Actual Marketing Cost	Total Mail Base	No. of Responders	Response Rate (%)	Expected NPV
2012-Q4	CAMP1	Saving Account with Intl Debit	30-Apr-2010	31-Dec-2013	9.71	7	26	371.43%	0.53
	CAMP10	Mahila Seva	01-Jul-2013	31-Dec-2013	5.81		13	0.00%	
	CAMP2	Speed Loan	27-Oct-2010	30-Nov-2013	9.05	10	15	150.00%	0.48
	CAMP3	Add on card free	01-Oct-2010	30-Jun-2013	7.89	9	16	177.78%	0.25
	CAMP4	Platinum card offer	15-Apr-2010	31-May-2013	6.84	10	8	80.00%	0.30
	CAMP5	Personal loan with zero docume	22-Sep-2010	31-Jan-2011	8.24	9	11	122.22%	0.21
	CAMP6	Truck Loan at TATA Showroom	17-Aug-2010	31-Jan-2011	6.50		0	0.00%	
	CAMP7	Term Deposit for Senior Citize	10-Jul-2010	28-Feb-2011	6.35		0	0.00%	
	CAMP8	World Cup Campaign	01-Jun-2013	31-Dec-2013	5.02		0	0.00%	
	CAMP9	Aadhar Campaign	01-Dec-2013	31-Dec-2013	5.01		0	0.00%	
2013-Q1	CAMP1	Saving Account with Intl Debit	30-Apr-2010	31-Dec-2013	15.29	7	18	257.14%	0.18
	CAMP10	Mahila Seva	01-Jul-2013	31-Dec-2013	5.77		13	0.00%	
	CAMP2	Speed Loan	27-Oct-2010	30-Nov-2013	10.64	11	10	90.91%	0.25
	CAMP3	Add on card free	01-Oct-2010	30-Jun-2013	9.25		0	0.00%	
	CAMP4	Platinum card offer	15-Apr-2010	31-May-2013	6.72	10	8	80.00%	0.30

Rows 1 - 15

Analyze - Edit - Refresh

Figure 69. Campaign Performance for Campaigns Ending in Last Two Quarters

- 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: 8/24/2015 11:12:15 AM

Amount in Millions (USD)

Time	Campaign ID	Campaign Description	Total Mail Base	No. of Responders	No. of Opt Outs	Response Rate (%)	No. of Accounts	Conversion Rate (%)	Estimated Marketing Cost	Balance
▷ 2012	CAMP10	Mahila Seva		23			1	4.35%	769.72	6,121.49
	CAMP1	Saving Account with Intl Debit	7	38	521	542.86%	4	1,381.58%	1,187.74	175,927.10
	CAMP3	Add on card free	9	29	705	322.22%	3	2,441.38%	872.69	128,668.25
	CAMP5	Personal loan with zero docume	9	27	625	300.00%	1	2,318.52%	1,062.97	6,819.47
	CAMP6	Truck Loan at TATA Showroom	11	26	418	236.36%	4	1,623.08%	797.23	5,969.68
	CAMP4	Platinum card offer	10	20	738	200.00%	2	3,700.00%	698.15	606,029.94
	CAMP2	Speed Loan	11	21	651	190.91%	2	3,109.52%	698.15	612,115.52
	CAMP7	Term Deposit for Senior Citize	14	25	751	178.57%	4	3,020.00%	797.23	5,621.30
	CAMP8	World Cup Campaign	11	17	514	154.55%	1	3,029.41%	769.72	603,121.12
	CAMP9	Aadhar Campaign	14	17	933	121.43%	2	5,500.00%	769.72	354,915.91
▷ 2011	CAMP10	Mahila Seva		26			1	3.85%	1,026.29	7,285.21
	CAMP1	Saving Account with Intl Debit	7	37	336	528.57%	4	918.92%	1,187.74	175,927.10
	CAMP6	Truck Loan at TATA Showroom	11	30	703	272.73%	4	2,356.67%	1,062.97	7,161.52
	CAMP5	Personal loan with zero docume	9	23	323	255.56%	1	1,408.70%	797.23	5,625.28
	CAMP3	Add on card free	9	22	297	244.44%	3	1,363.64%	523.62	124,864.91

Rows 1 - 15

Time 2011

Analyze - Edit - Refresh

Figure 70. Campaign Performance by Response Rate

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.

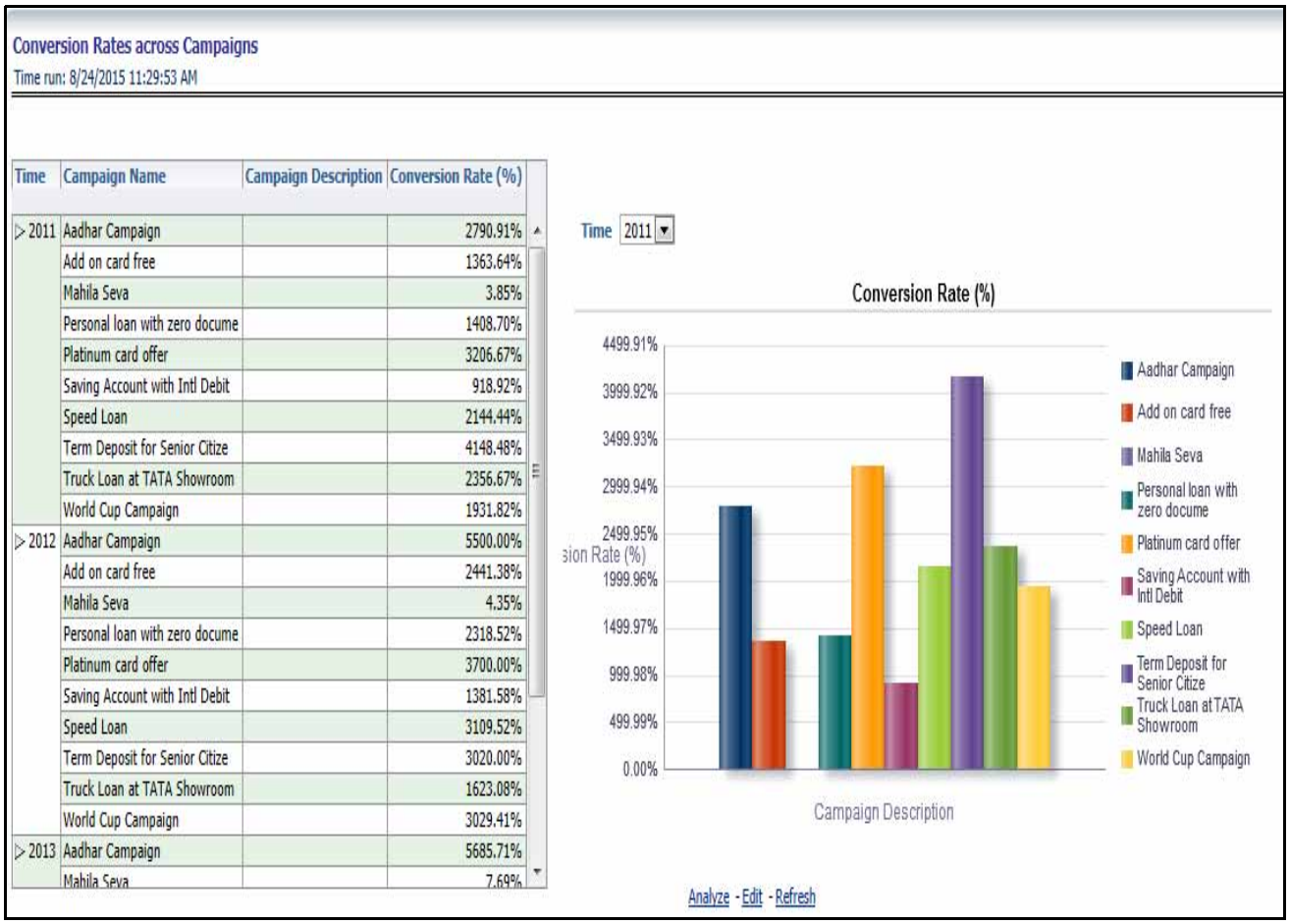


Figure 71. Conversion Rates across Campaigns

- Response Rates across Campaigns: This report allows a comparison of conversion rate across campaigns.

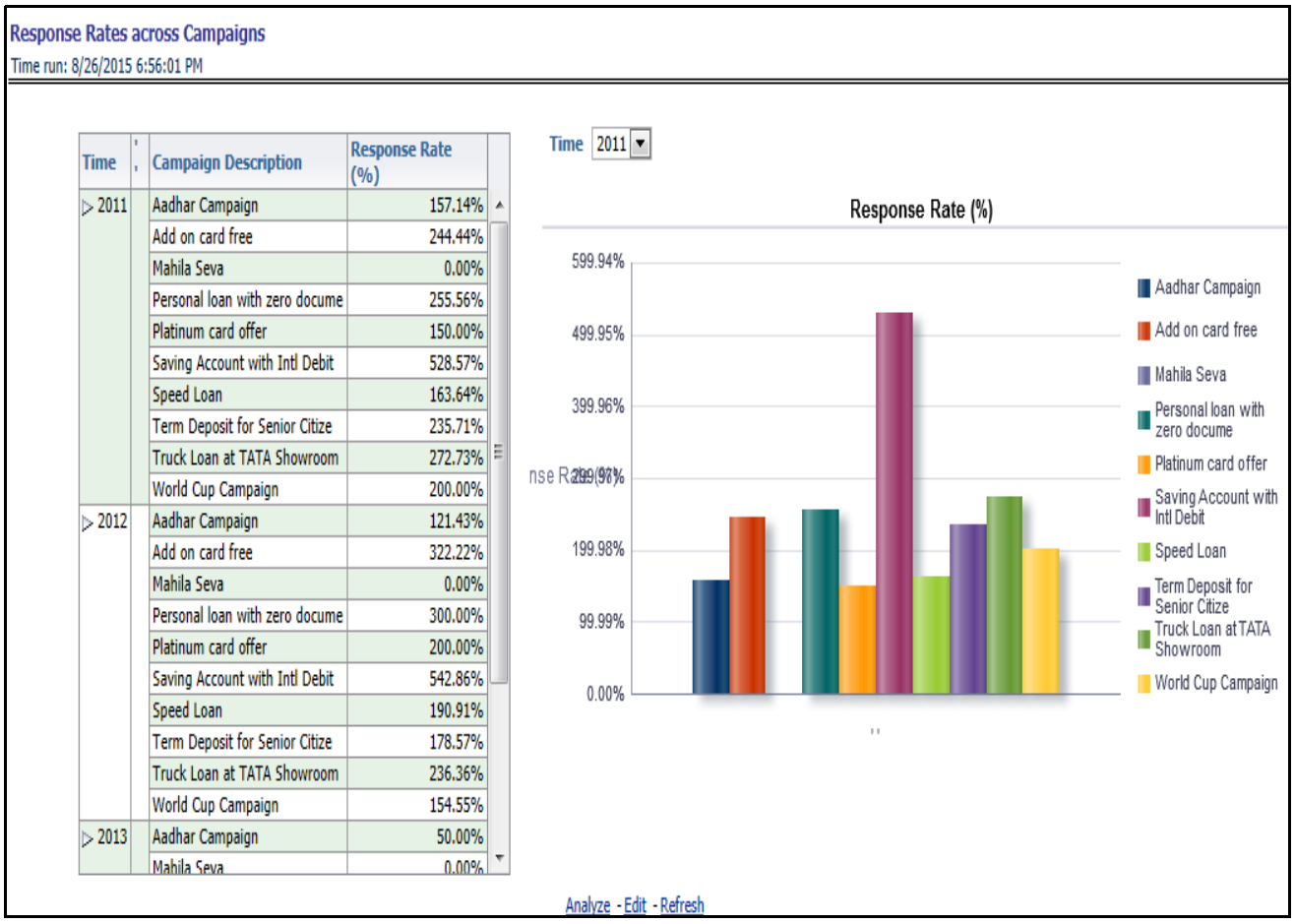


Figure 72. Response Rates across Campaigns

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

Response Metrics

Time run: 8/26/2015 6:56:01 PM

Time	Campaign ID	Campaign Name	Start Date	End Date	Total Mail Base	No. of Responders	Response Rate (%)	No. of Conversions	No. of New Activations	Opt-Outs	Conversion Rate (%)
▷ 2011	CAMP1	Saving Account with Intl Debit	30-Apr-2010	31-Dec-2013	7	37	528.57%	340	4	336	346.81%
	CAMP10	Mahila Seva	01-Jul-2013	31-Dec-2013		26	0.00%	1	1		3.85%
	CAMP2	Speed Loan	27-Oct-2010	30-Nov-2013	11	18	163.64%	386	2	384	395.11%
	CAMP3	Add on card free	01-Oct-2010	30-Jun-2013	9	22	244.44%	300	3	297	310.64%
	CAMP4	Platinum card offer	15-Apr-2010	31-May-2013	10	15	150.00%	481	2	479	492.33%
	CAMP5	Personal loan with zero docume	22-Sep-2010	31-Jan-2011	9	23	255.56%	324	1	323	327.35%
	CAMP6	Truck Loan at TATA Showroom	17-Aug-2010	31-Jan-2011	11	30	272.73%	707	4	703	716.33%
	CAMP7	Term Deposit for Senior Citize	10-Jul-2010	28-Feb-2011	14	33	235.71%	1,369	4	1,365	1,377.12%
	CAMP8	World Cup Campaign	01-Jun-2013	31-Dec-2013	11	22	200.00%	425	1	424	428.55%
	CAMP9	Aadhar Campaign	01-Dec-2013	31-Dec-2013	14	22	157.14%	614	2	612	621.09%
▷ 2012	CAMP1	Saving Account with Intl Debit	30-Apr-2010	31-Dec-2013	7	38	542.86%	525	4	521	531.53%
	CAMP10	Mahila Seva	01-Jul-2013	31-Dec-2013		23	0.00%	1	1		4.35%
	CAMP2	Speed Loan	27-Oct-2010	30-Nov-2013	11	21	190.91%	653	2	651	660.52%
	CAMP3	Add on card free	01-Oct-2010	30-Jun-2013	9	29	322.22%	708	3	705	715.34%
	CAMP4	Platinum card offer	15-Apr-2010	31-May-2013	10	20	200.00%	740	2	738	748.00%

Rows 1 - 15

Figure 73. Response Metrics

- 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	EMCD - 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

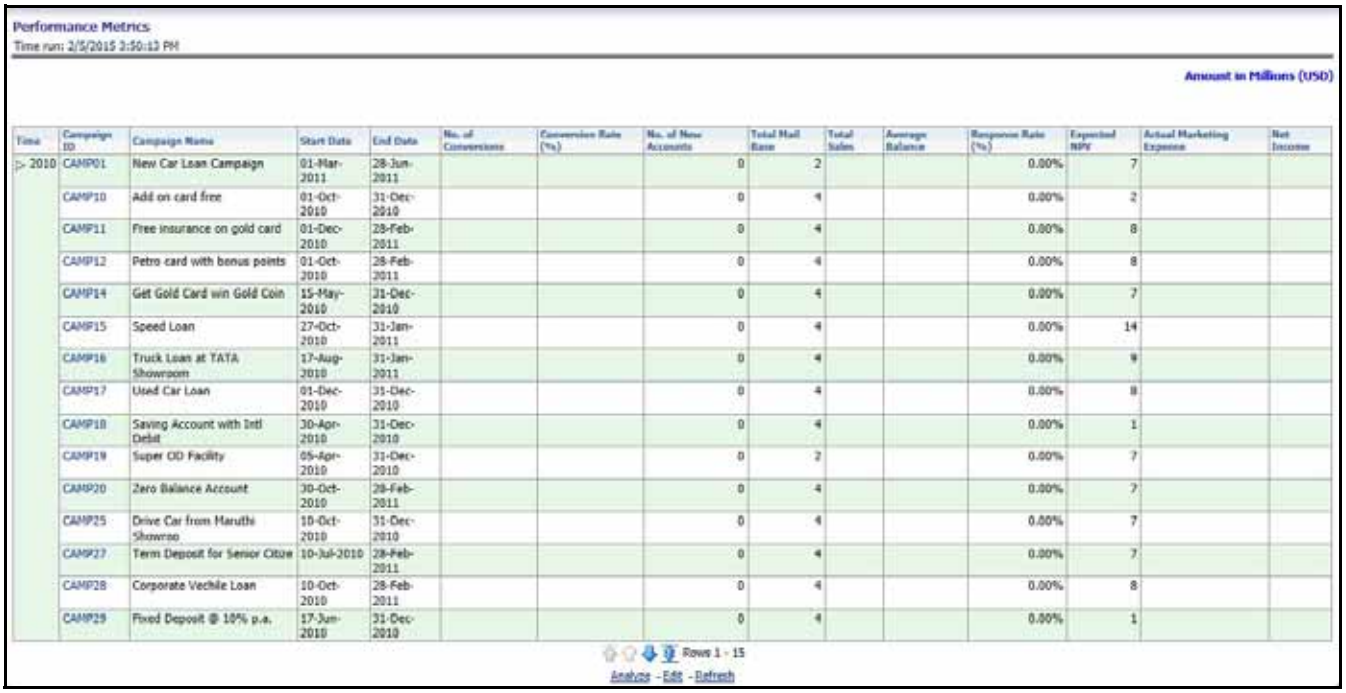
Analyze - Edit - Refresh

Figure 74. Detailed Campaign Response

Campaign Performance

This tab contains the following reports:

- Performance Metrics: This report tracks the performance of a campaign in terms of its responsiveness of leads and value (income) generation.



Performance Metrics
Time run: 2/5/2015 3:50:12 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

Figure 75. Performance Metrics Report

- Marketing Expense Across Campaigns: This report provides details of the marketing expenses that have incurred for different campaigns thus facilitating the comparison.

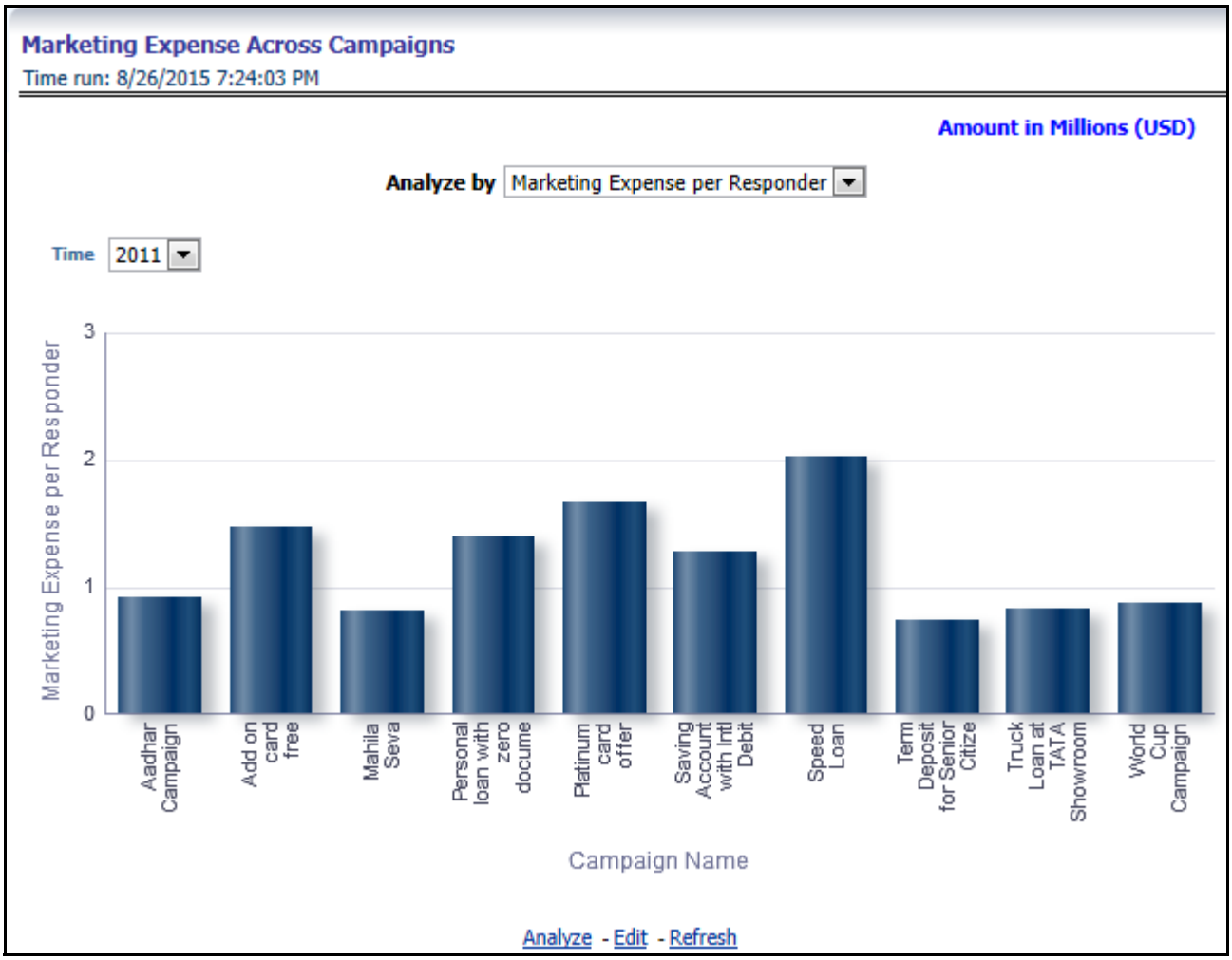


Figure 76. Marketing Expense Across Campaigns

- 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.

Figure 77. Marketing Expenses Over last 5 Years

- 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.

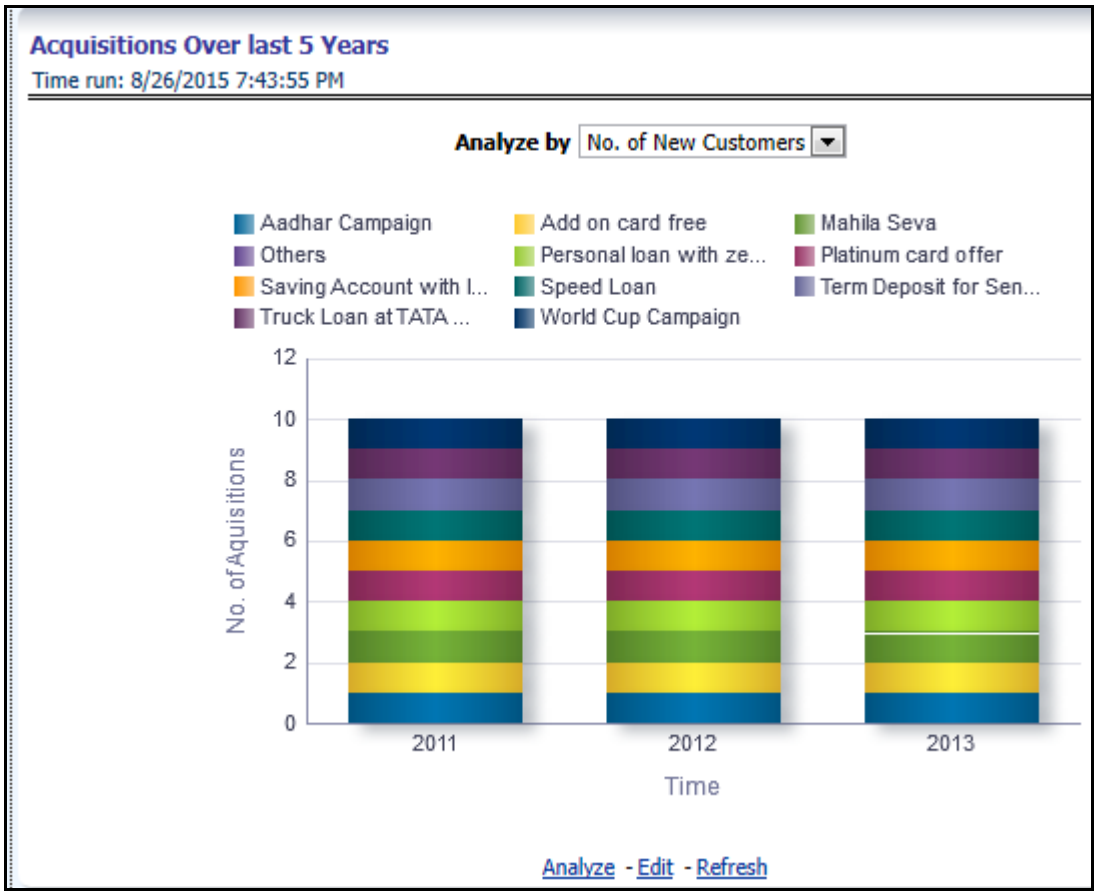


Figure 78. Acquisitions Over last 5 Years

Cost Per Acquisition (CPA): This report describes the cost incurred in acquisition per account over a period of time.

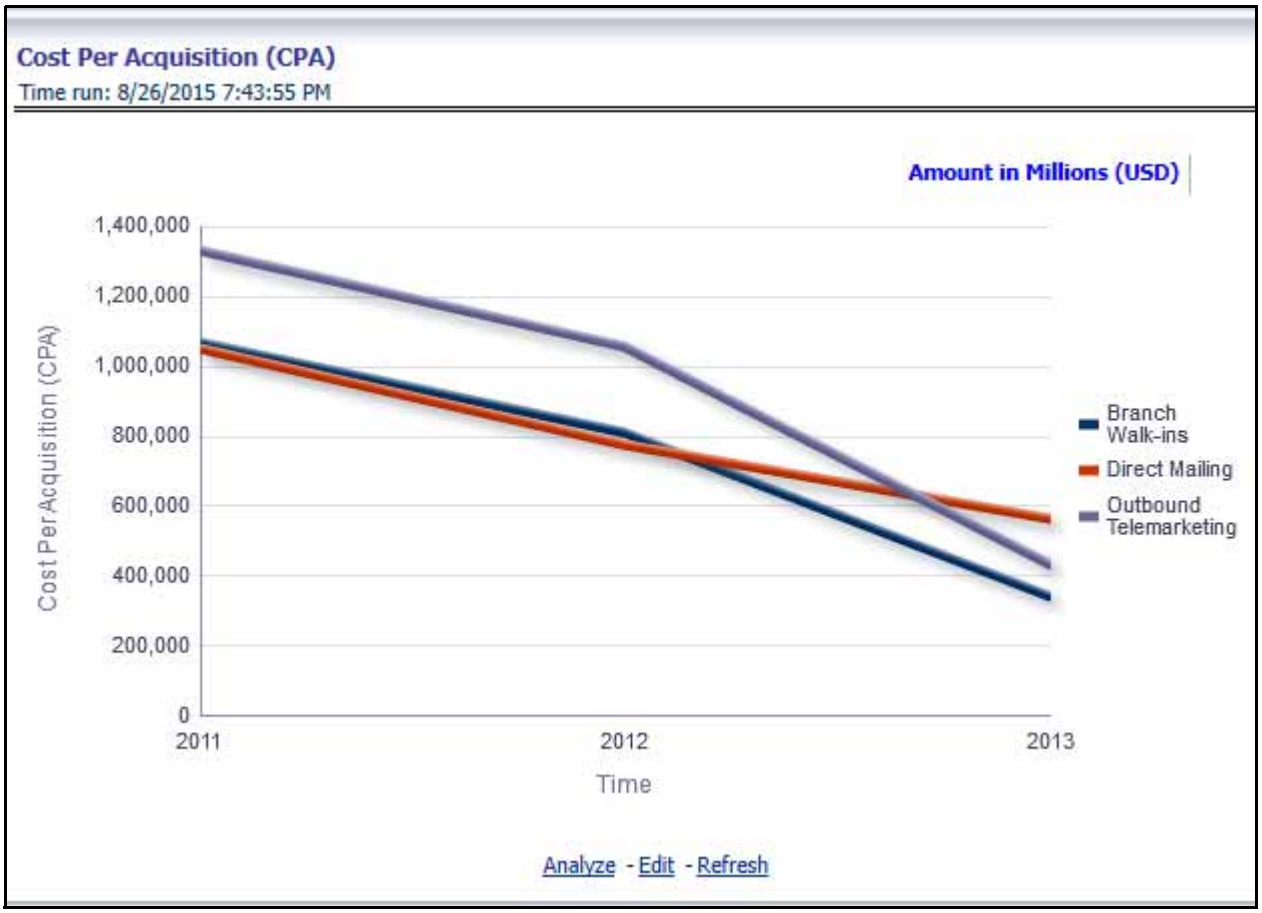


Figure 79. Cost Per Acquisition (CPA)

- 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.

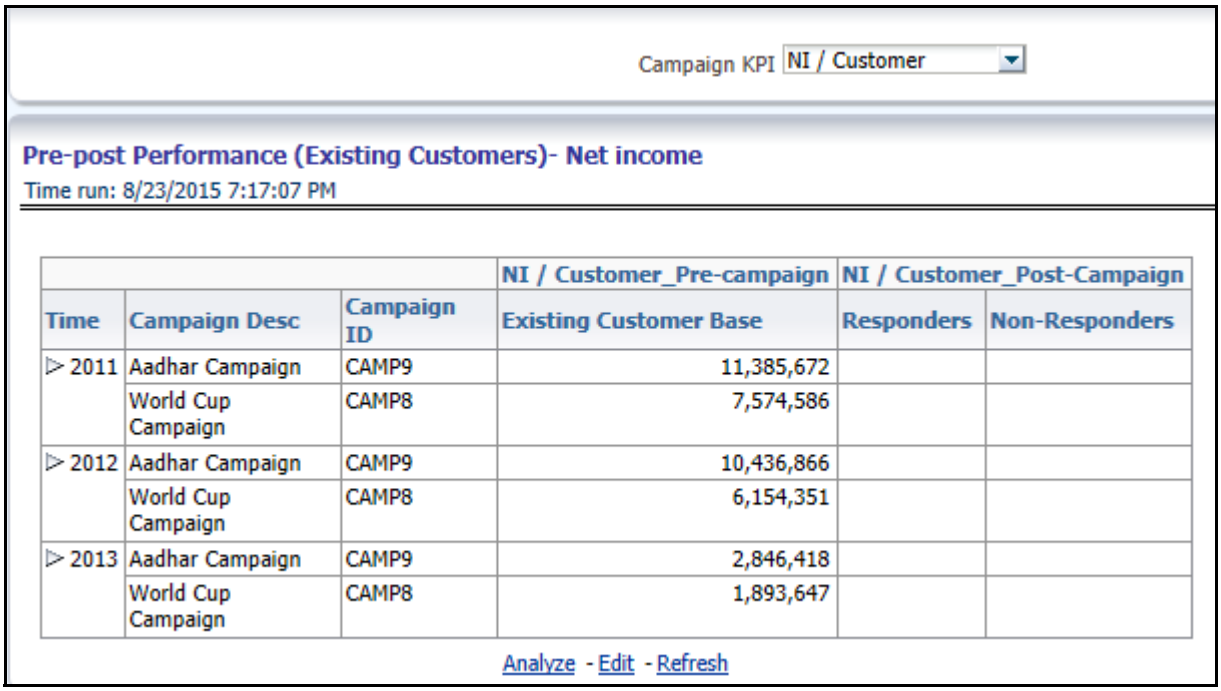


Figure 80. Pre-post Performance (Existing Customers) - Net income

- 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.

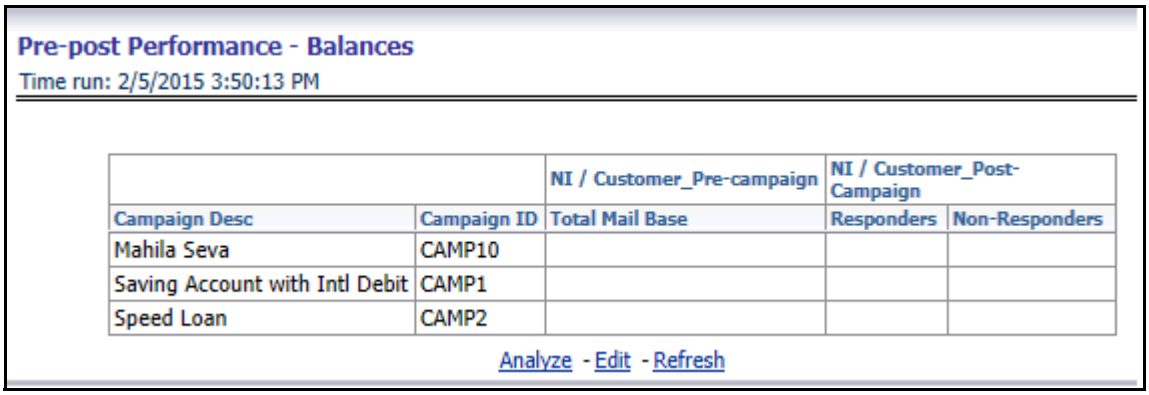
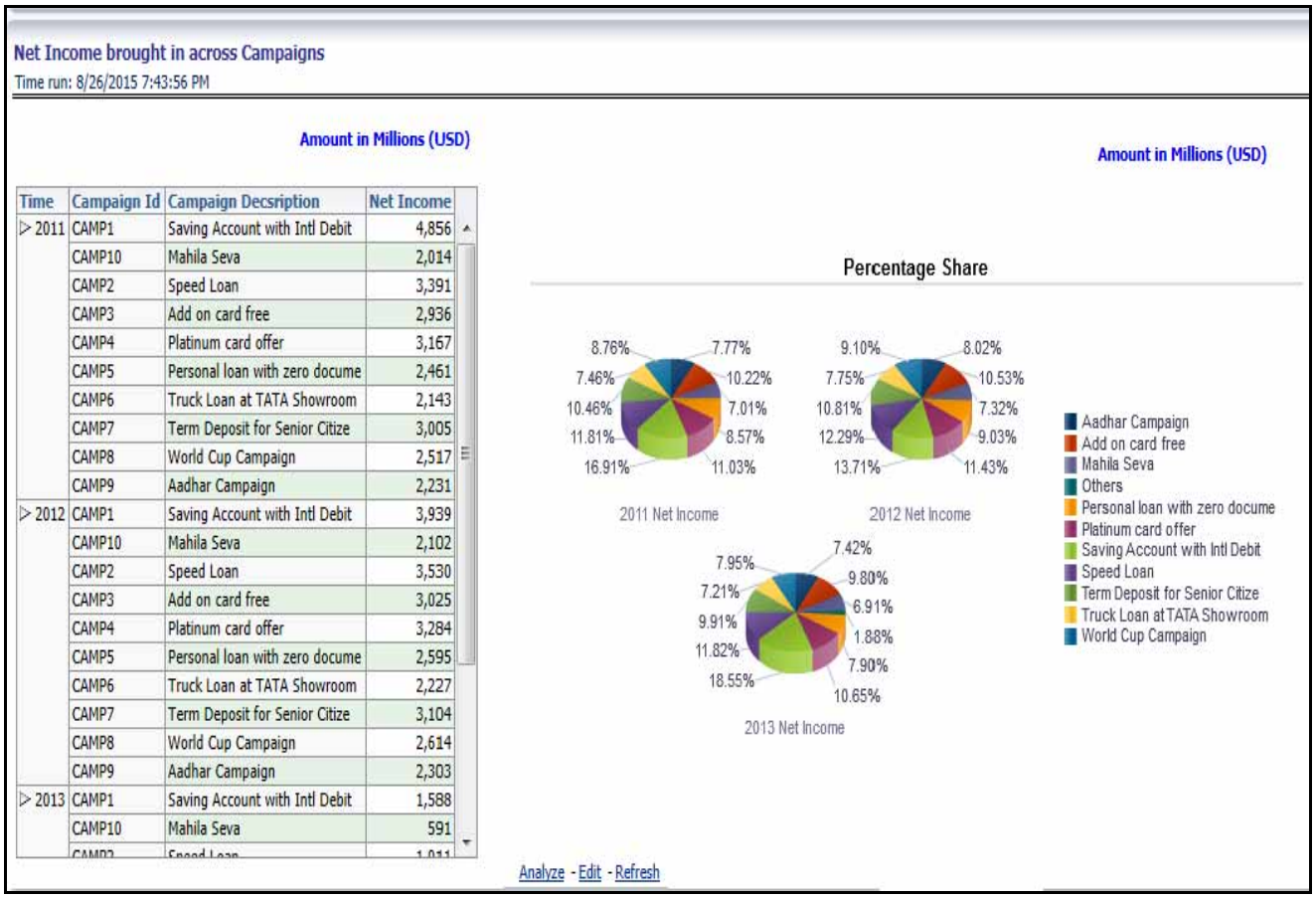


Figure 81. Pre-post Performance (Existing Customers) - Balance Report

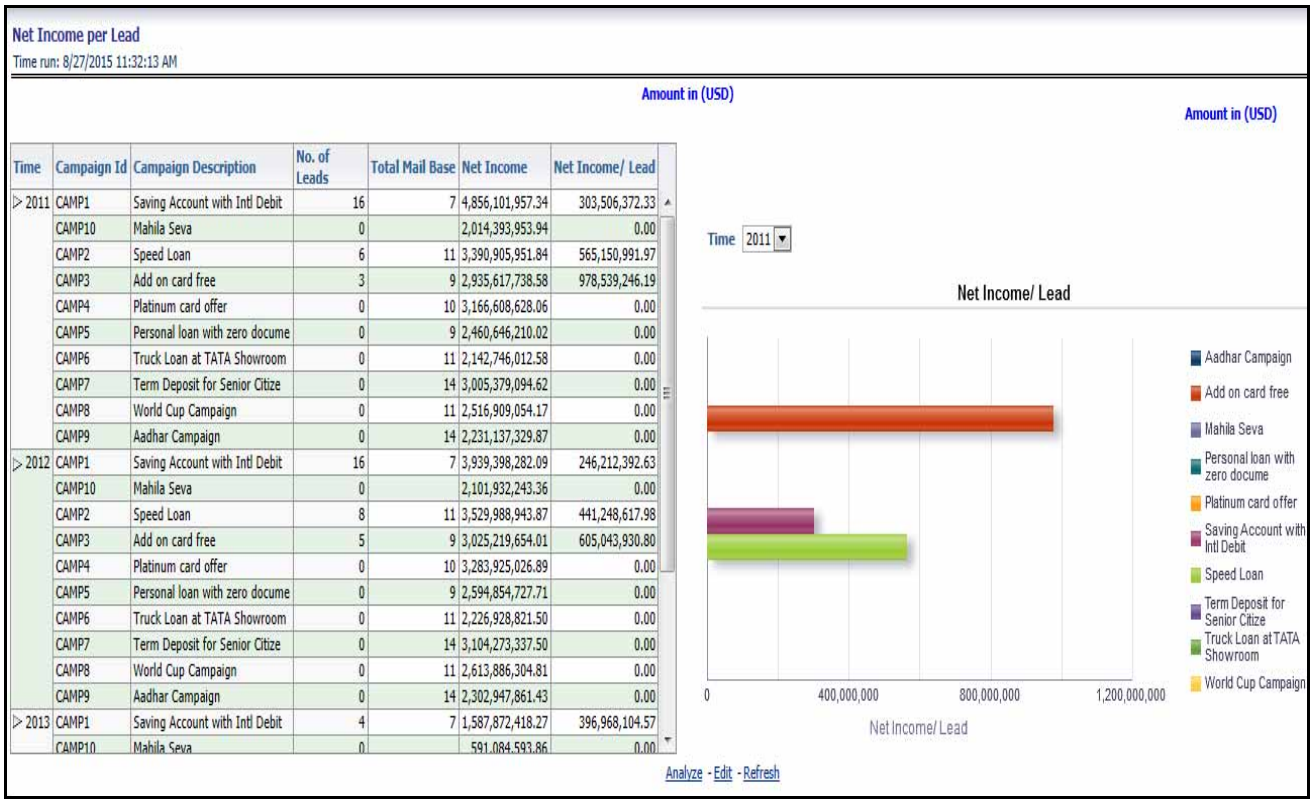
- Net Income brought in across Campaigns: This report displays the income that has been generated through any campaign.



Time	Campaign Id	Campaign Decsription	Net Income
▷ 2011	CAMP1	Saving Account with Intl Debit	4,856
	CAMP10	Mahila Seva	2,014
	CAMP2	Speed Loan	3,391
	CAMP3	Add on card free	2,936
	CAMP4	Platinum card offer	3,167
	CAMP5	Personal loan with zero docume	2,461
	CAMP6	Truck Loan at TATA Showroom	2,143
	CAMP7	Term Deposit for Senior Citize	3,005
	CAMP8	World Cup Campaign	2,517
	CAMP9	Aadhar Campaign	2,231
▷ 2012	CAMP1	Saving Account with Intl Debit	3,939
	CAMP10	Mahila Seva	2,102
	CAMP2	Speed Loan	3,530
	CAMP3	Add on card free	3,025
	CAMP4	Platinum card offer	3,284
	CAMP5	Personal loan with zero docume	2,595
	CAMP6	Truck Loan at TATA Showroom	2,227
	CAMP7	Term Deposit for Senior Citize	3,104
	CAMP8	World Cup Campaign	2,614
	CAMP9	Aadhar Campaign	2,303
▷ 2013	CAMP1	Saving Account with Intl Debit	1,588
	CAMP10	Mahila Seva	591

Figure 82. Net Income brought in across Campaigns

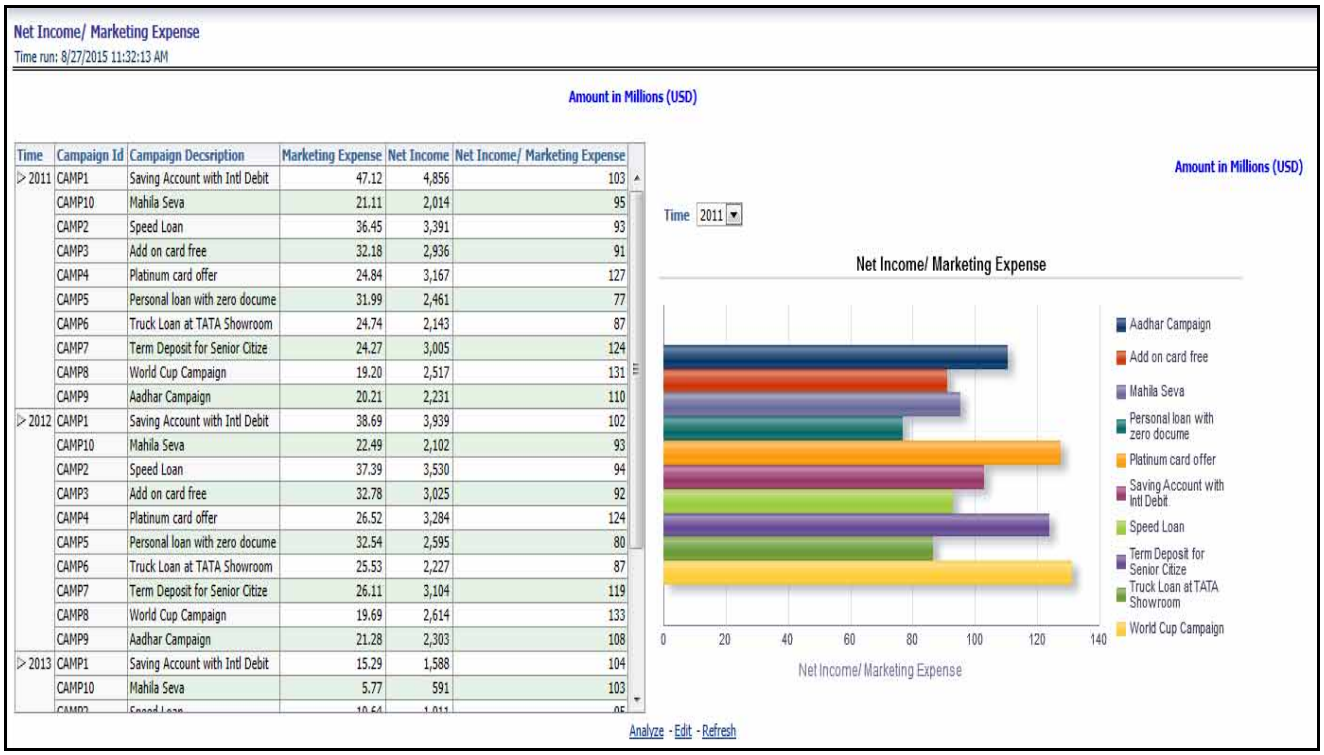
- Net Income per Lead: This report provides details of the income that has been generated per lead for each campaign.



Time	Campaign Id	Campaign Description	No. of Leads	Total Mail Base	Net Income	Net Income/ Lead
▷ 2011	CAMP1	Saving Account with Intl Debit	16	7	4,856,101,957.34	303,506,372.33
	CAMP10	Mahila Seva	0		2,014,393,953.94	0.00
	CAMP2	Speed Loan	6	11	3,390,905,951.84	565,150,991.97
	CAMP3	Add on card free	3	9	2,935,617,738.58	978,539,246.19
	CAMP4	Platinum card offer	0	10	3,166,608,628.06	0.00
	CAMP5	Personal loan with zero docume	0	9	2,460,646,210.02	0.00
	CAMP6	Truck Loan at TATA Showroom	0	11	2,142,746,012.58	0.00
	CAMP7	Term Deposit for Senior Citize	0	14	3,005,379,094.62	0.00
	CAMP8	World Cup Campaign	0	11	2,516,909,054.17	0.00
	CAMP9	Aadhar Campaign	0	14	2,231,137,329.87	0.00
▷ 2012	CAMP1	Saving Account with Intl Debit	16	7	3,939,398,282.09	246,212,392.63
	CAMP10	Mahila Seva	0		2,101,932,243.36	0.00
	CAMP2	Speed Loan	8	11	3,529,988,943.87	441,248,617.98
	CAMP3	Add on card free	5	9	3,025,219,654.01	605,043,930.80
	CAMP4	Platinum card offer	0	10	3,283,925,026.89	0.00
	CAMP5	Personal loan with zero docume	0	9	2,594,854,727.71	0.00
	CAMP6	Truck Loan at TATA Showroom	0	11	2,226,928,821.50	0.00
	CAMP7	Term Deposit for Senior Citize	0	14	3,104,273,337.50	0.00
	CAMP8	World Cup Campaign	0	11	2,613,886,304.81	0.00
	CAMP9	Aadhar Campaign	0	14	2,302,947,861.43	0.00
▷ 2013	CAMP1	Saving Account with Intl Debit	4	7	1,587,872,418.27	396,968,104.57
	CAMP10	Mahila Seva	0		591,084,593.86	0.00

Figure 83. Net Income per Lead

- Net Income/Marketing Expense: This report displays the income that has been generated through a campaign in correspondence to the marketing expense that has been incurred.



Time	Campaign Id	Campaign Decsription	Marketing Expense	Net Income	Net Income/ Marketing Expense
▷ 2011	CAMP1	Saving Account with Intl Debit	47.12	4,856	103
	CAMP10	Mahila Seva	21.11	2,014	95
	CAMP2	Speed Loan	36.45	3,391	93
	CAMP3	Add on card free	32.18	2,936	91
	CAMP4	Platinum card offer	24.84	3,167	127
	CAMP5	Personal loan with zero docume	31.99	2,461	77
	CAMP6	Truck Loan at TATA Showroom	24.74	2,143	87
	CAMP7	Term Deposit for Senior Citize	24.27	3,005	124
	CAMP8	World Cup Campaign	19.20	2,517	131
	CAMP9	Aadhar Campaign	20.21	2,231	110
▷ 2012	CAMP1	Saving Account with Intl Debit	38.69	3,939	102
	CAMP10	Mahila Seva	22.49	2,102	93
	CAMP2	Speed Loan	37.39	3,530	94
	CAMP3	Add on card free	32.78	3,025	92
	CAMP4	Platinum card offer	26.52	3,284	124
	CAMP5	Personal loan with zero docume	32.54	2,595	80
	CAMP6	Truck Loan at TATA Showroom	25.53	2,227	87
	CAMP7	Term Deposit for Senior Citize	26.11	3,104	119
	CAMP8	World Cup Campaign	19.69	2,614	133
	CAMP9	Aadhar Campaign	21.28	2,303	108
▷ 2013	CAMP1	Saving Account with Intl Debit	15.29	1,588	104
	CAMP10	Mahila Seva	5.77	591	103

Figure 84. Net Income/Marketing Expense

- Contact Frequency

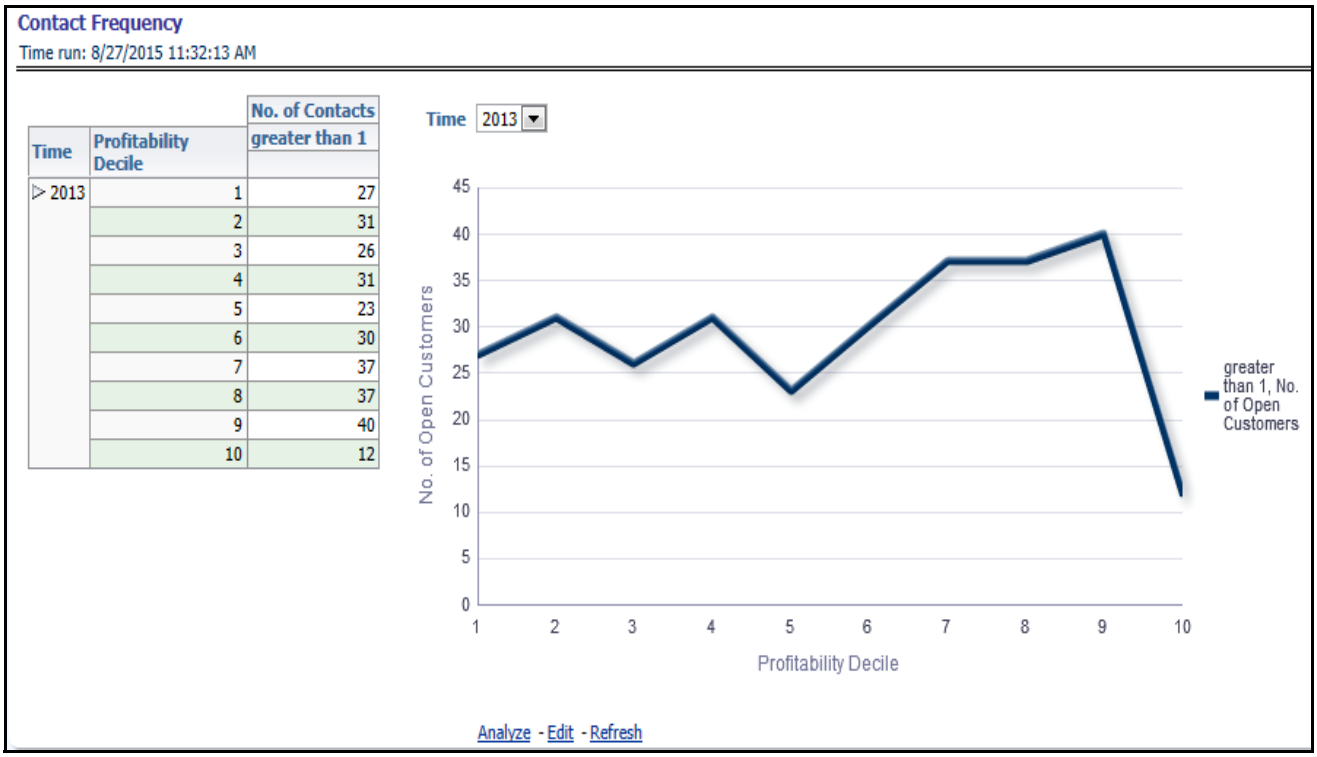


Figure 85. Contact Frequency

Channel Analytics

The following tabs are present in the Channel Analytics Dashboard:

- Originating Channels
- Transaction Channels
- Service
- Channel Effectiveness

The following sections describe 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.

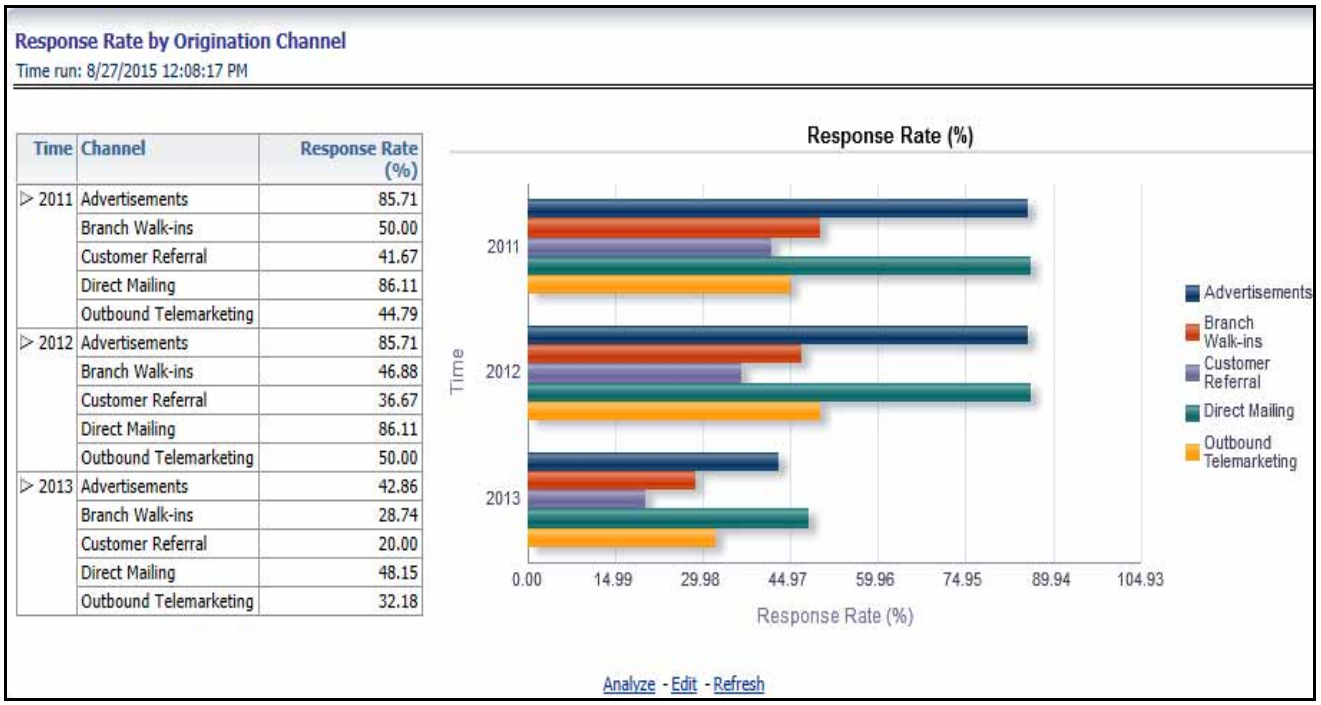


Figure 86. Response Rate by Origination Channel

- Approval Rate by Origination Channel: This report enables comparison of channels in terms of effectiveness for approvals when used for initiation.

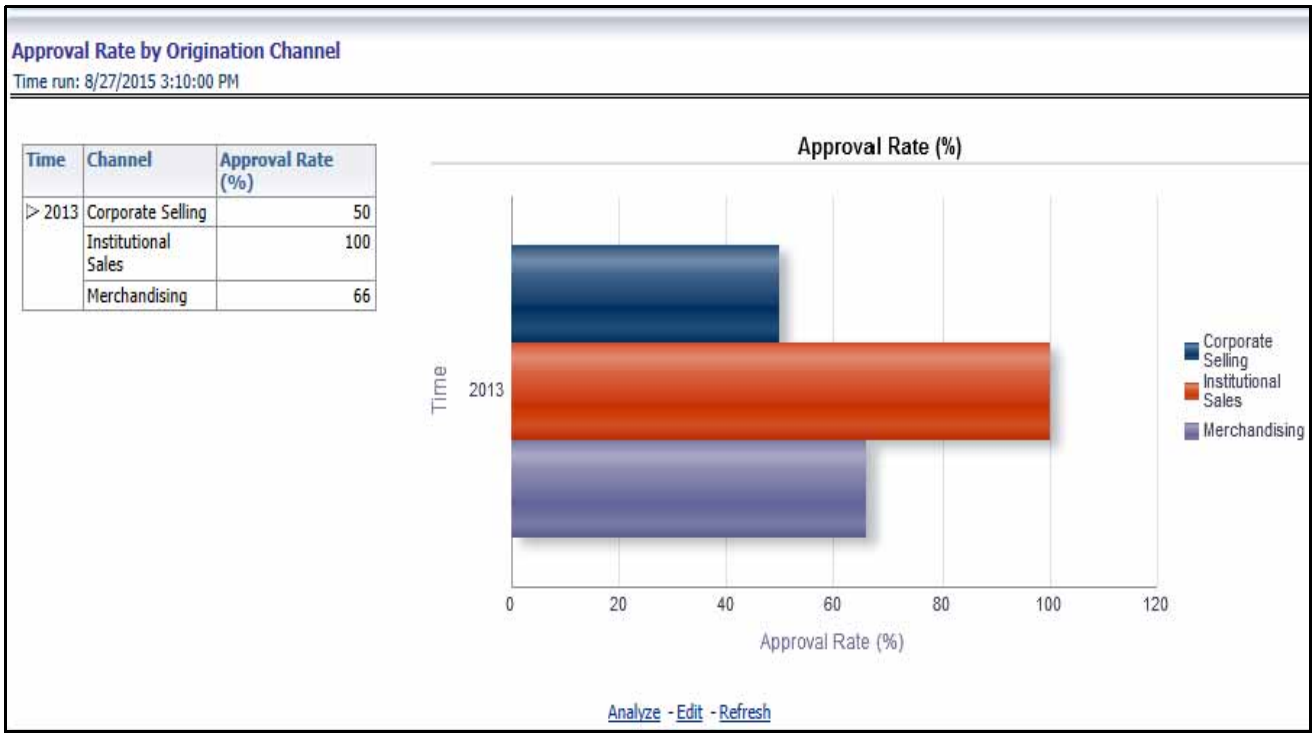


Figure 87. Approval Rate by Origination Channel

- Channel Propensity: This channel denotes the propensity of a channel for a particular product.

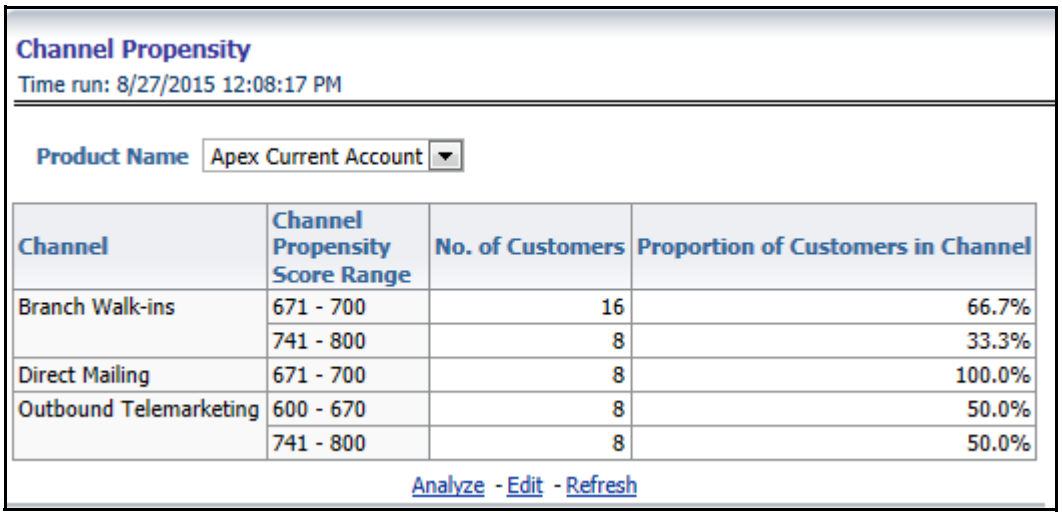


Figure 88. Channel Propensity

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.

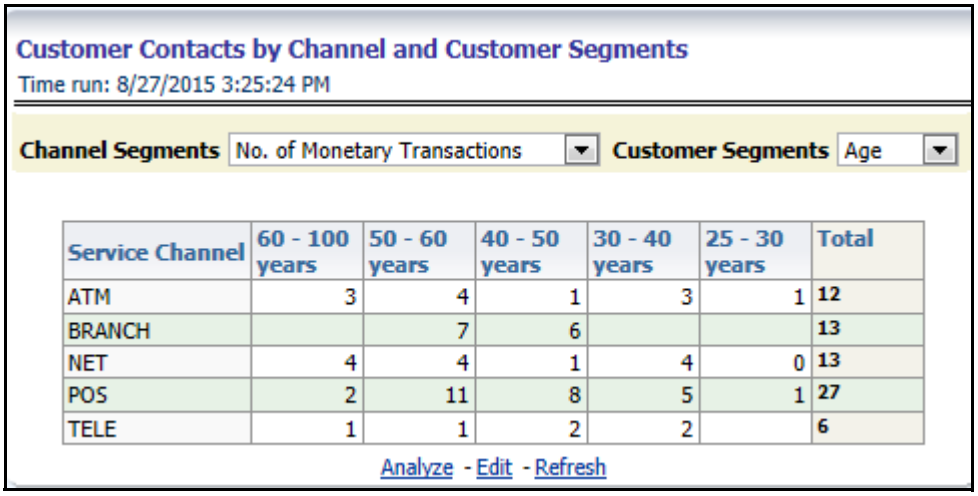


Figure 89. Customer Contacts by Channel and Customer Segments

- 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.

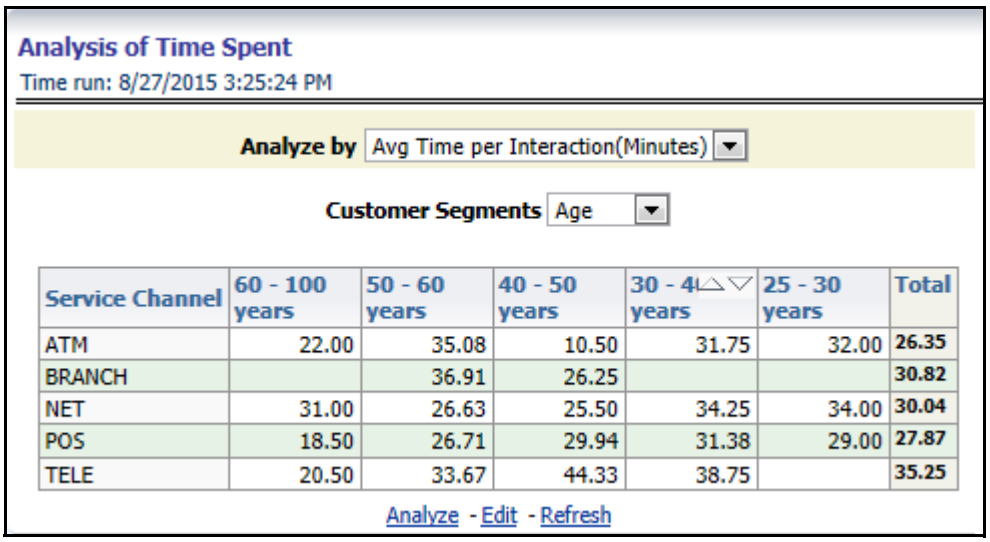


Figure 90. Analysis of Time Spent

- Multi-Channel Interaction: This report shows the details for customers interacting through multiple channels across different customer attributes.

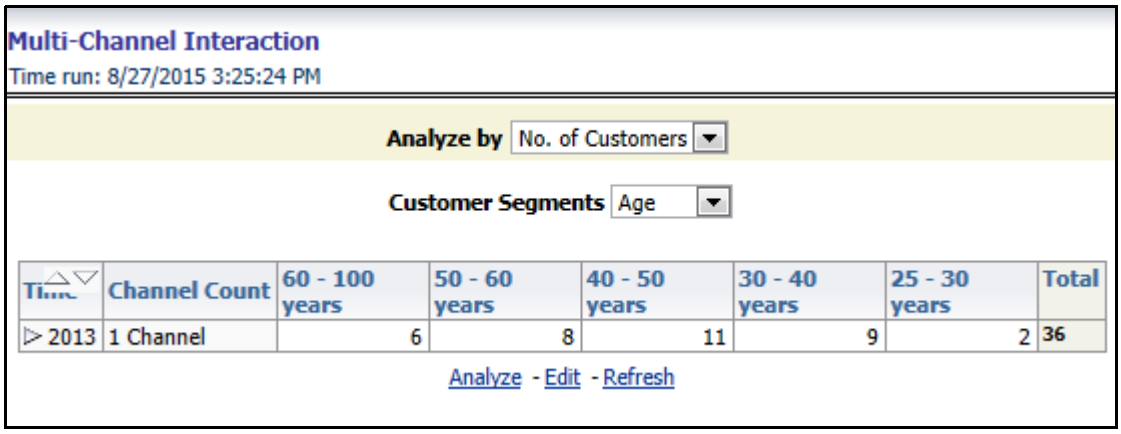
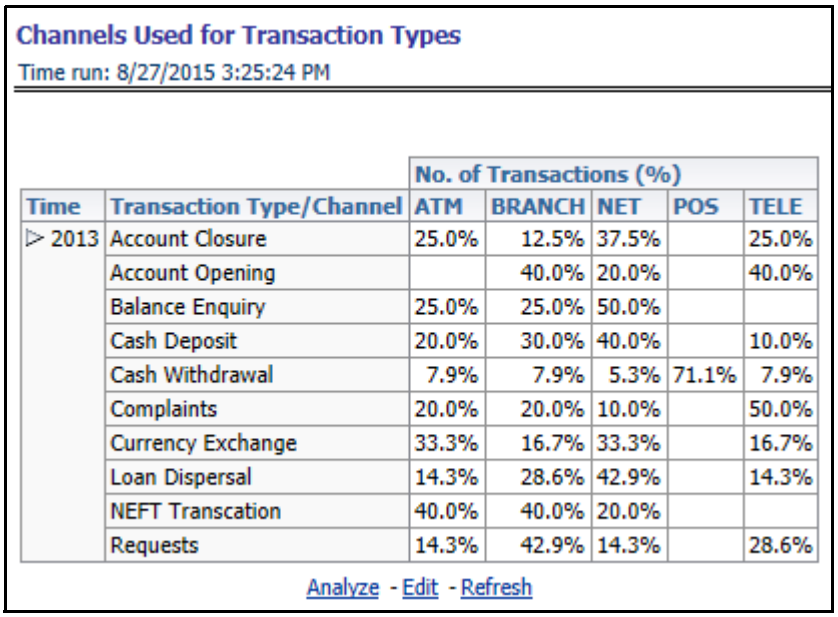


Figure 91. Multi-Channel Interaction

- 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.

Figure 92. No of transactions

- Channels used for transaction types: This report displays the distribution across channels of a particular transaction type.



Channels Used for Transaction Types

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		No. of Transactions (%)				
Time	Transaction Type/Channel	ATM	BRANCH	NET	POS	TELE
▷ 2013	Account Closure	25.0%	12.5%	37.5%		25.0%
	Account Opening		40.0%	20.0%		40.0%
	Balance Enquiry	25.0%	25.0%	50.0%		
	Cash Deposit	20.0%	30.0%	40.0%		10.0%
	Cash Withdrawal	7.9%	7.9%	5.3%	71.1%	7.9%
	Complaints	20.0%	20.0%	10.0%		50.0%
	Currency Exchange	33.3%	16.7%	33.3%		16.7%
	Loan Dispersal	14.3%	28.6%	42.9%		14.3%
	NEFT Transcation	40.0%	40.0%	20.0%		
	Requests	14.3%	42.9%	14.3%		28.6%

Analyze - Edit - Refresh

Figure 93. Channels used for transaction types Report

- Debit Transaction Amount Distribution (Branches): This report displays the distribution of debit transactions across different bands of transaction amounts.

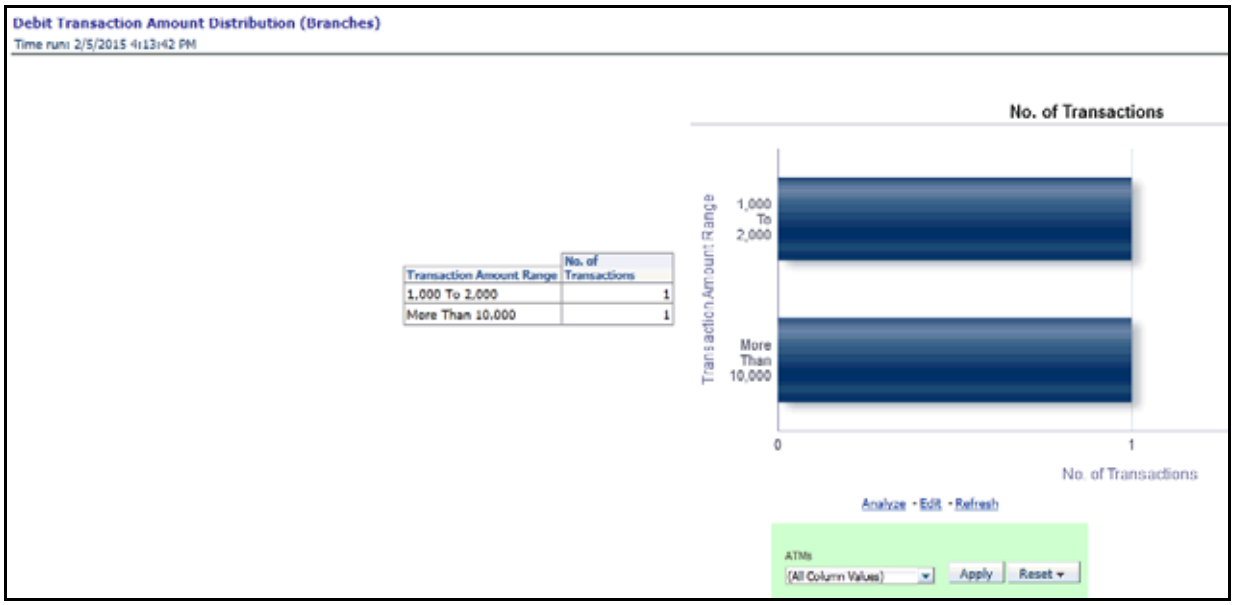


Figure 94. Debit Transaction Amount Distribution (Branches) Report

- Credit Transaction Amount Distribution (Branches): This report displays the distribution of credit transactions across different bands of transaction amounts.

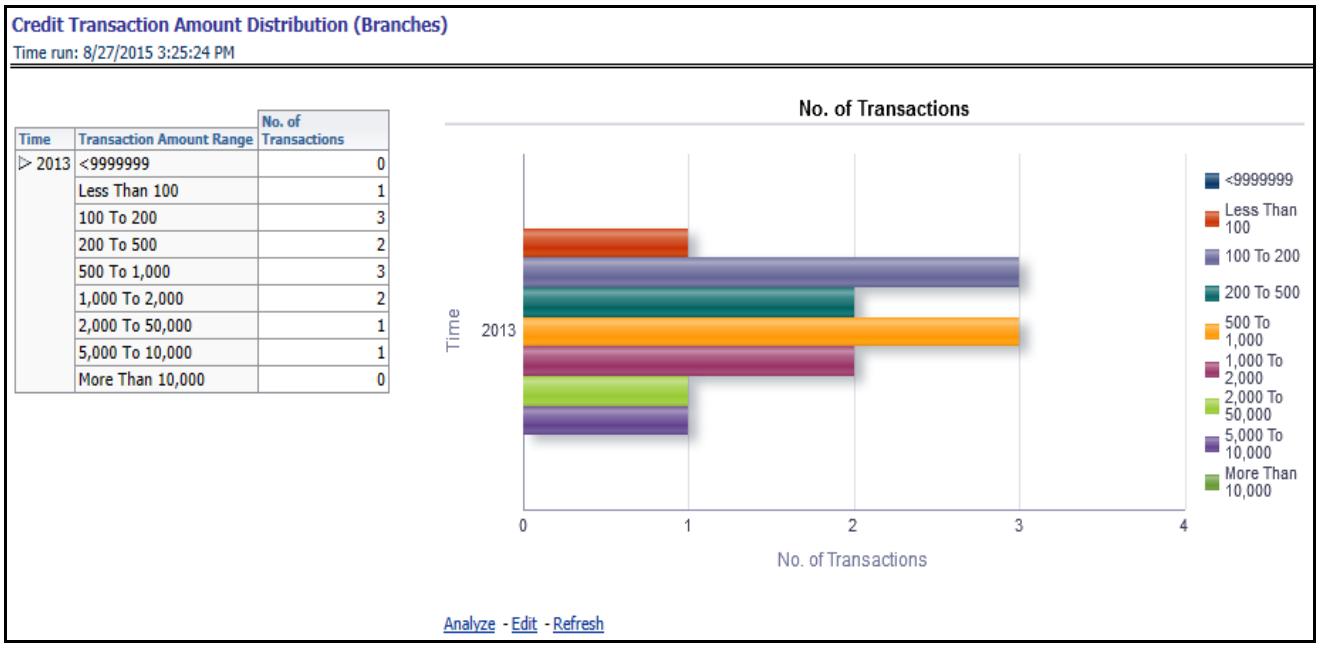


Figure 95. Credit Transaction Amount Distribution (Branches)

- 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.

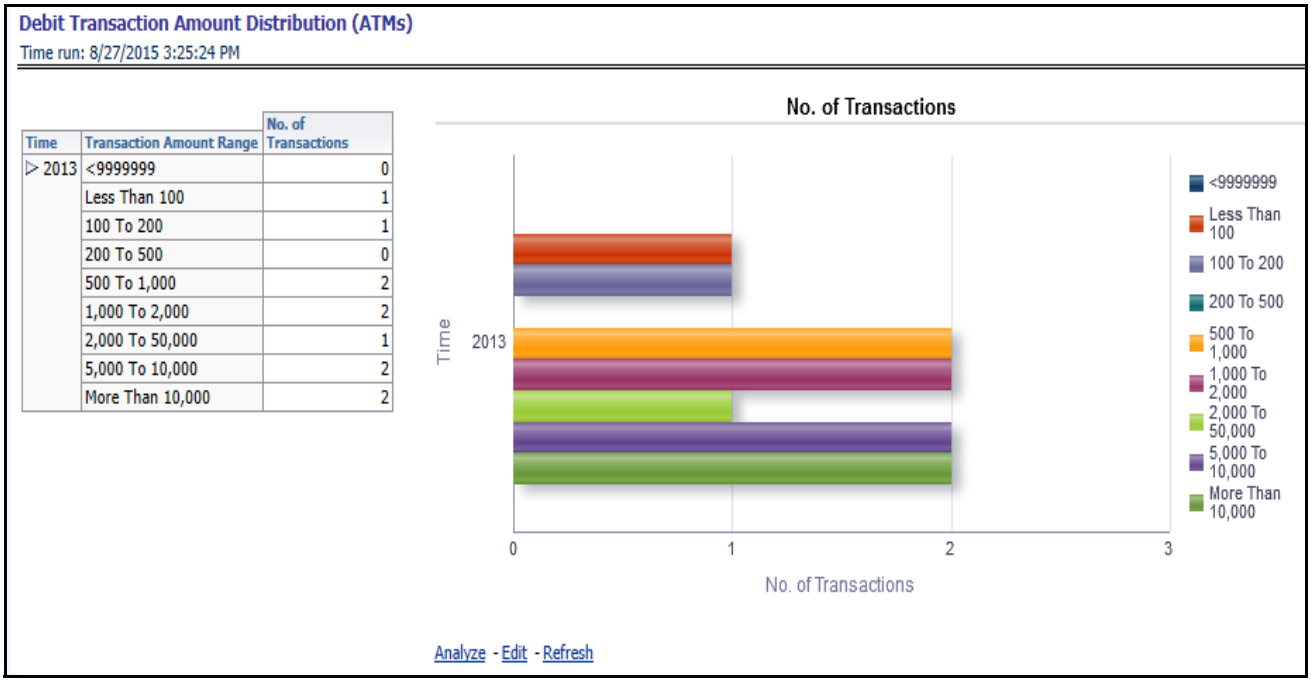


Figure 96. Debit Transaction Amount Distribution (ATMs)

- Credit Transaction Amount Distribution (ATMs): This report displays the distribution of credit transactions across different bands of transaction amounts.

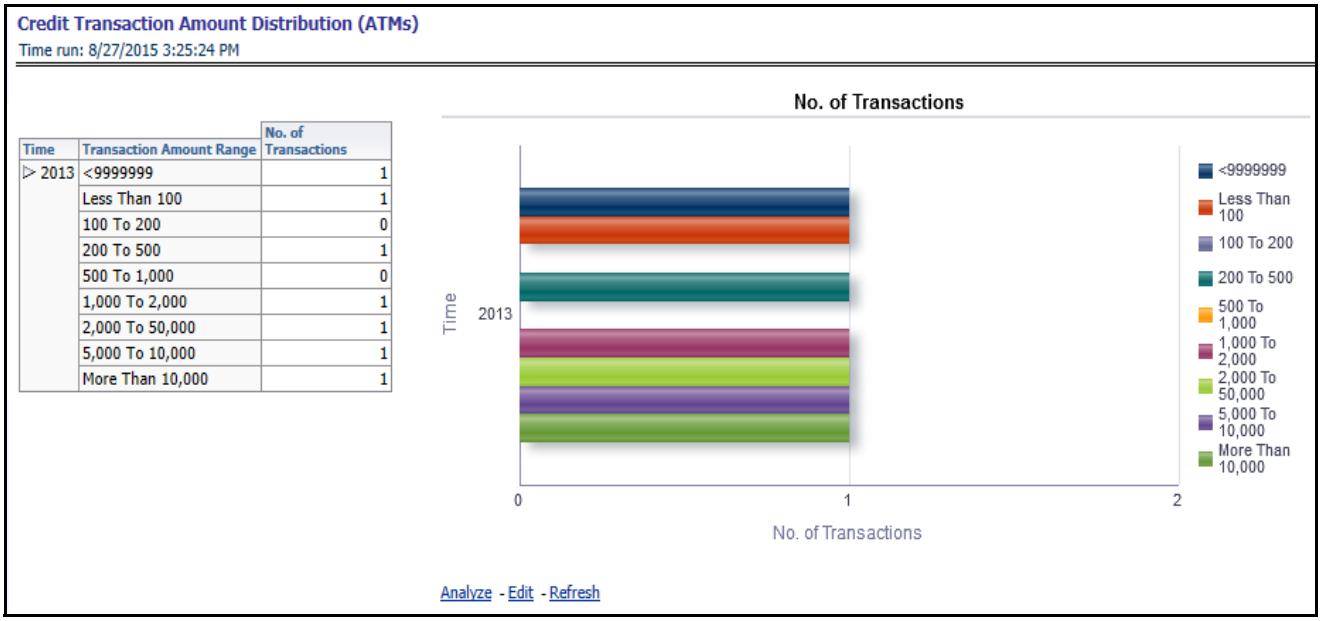


Figure 97. Credit Transaction Amount Distribution (ATMs)

- Region wise Channel Performance 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.

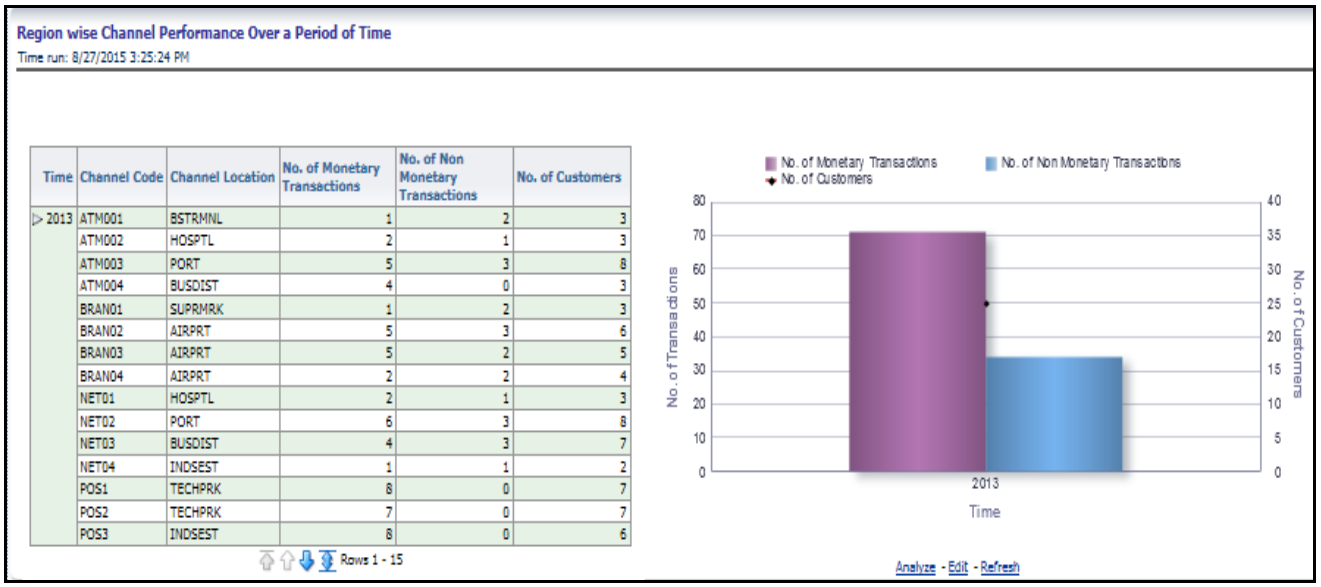


Figure 98. Region wise Channel Performance Over a Period of Time Report

- 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.

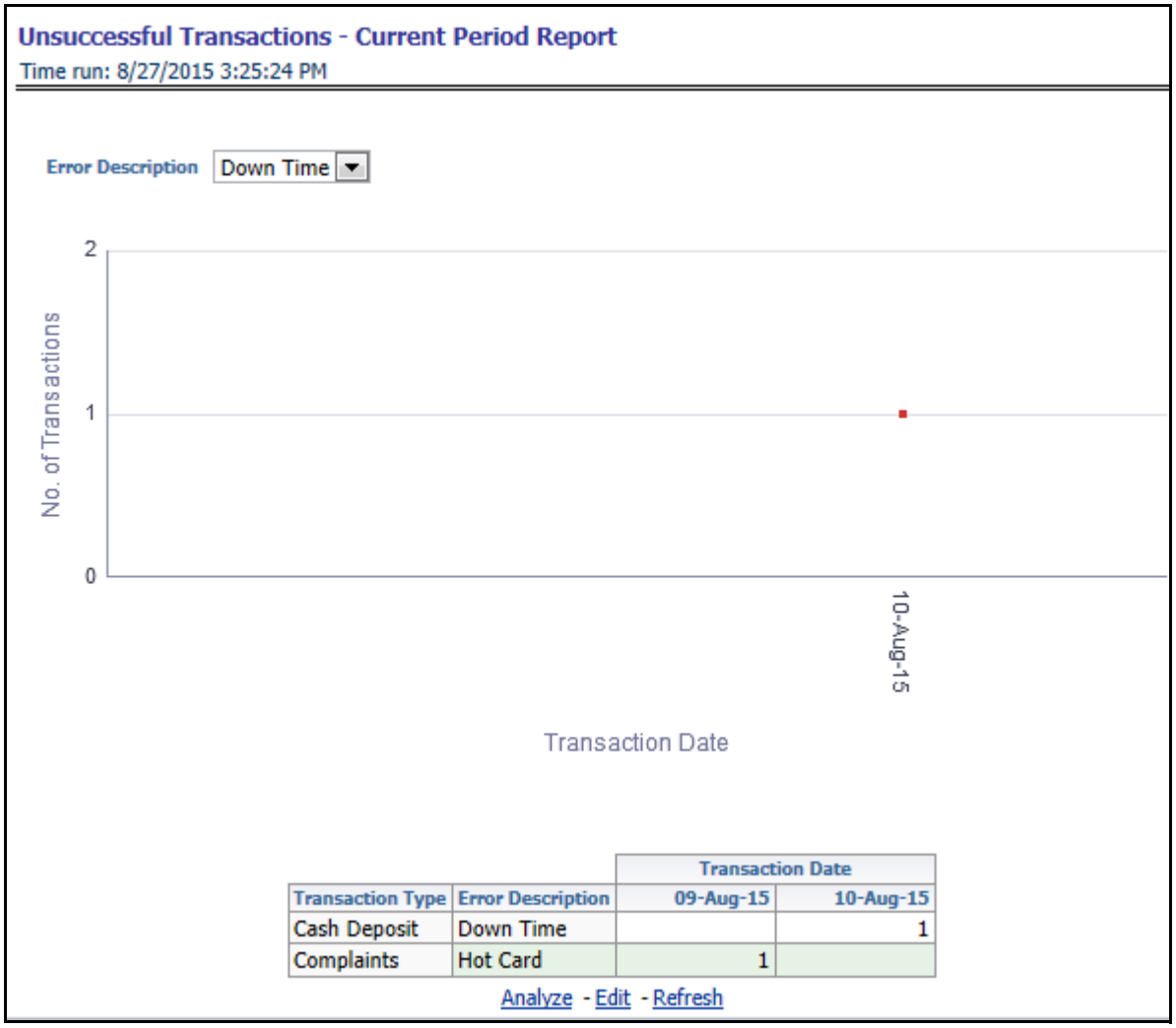


Figure 99. Unsuccessful Transactions - Current Report Period

- Branch Utilization by Region: This report provides details of the transactions that have occurred at any branch.

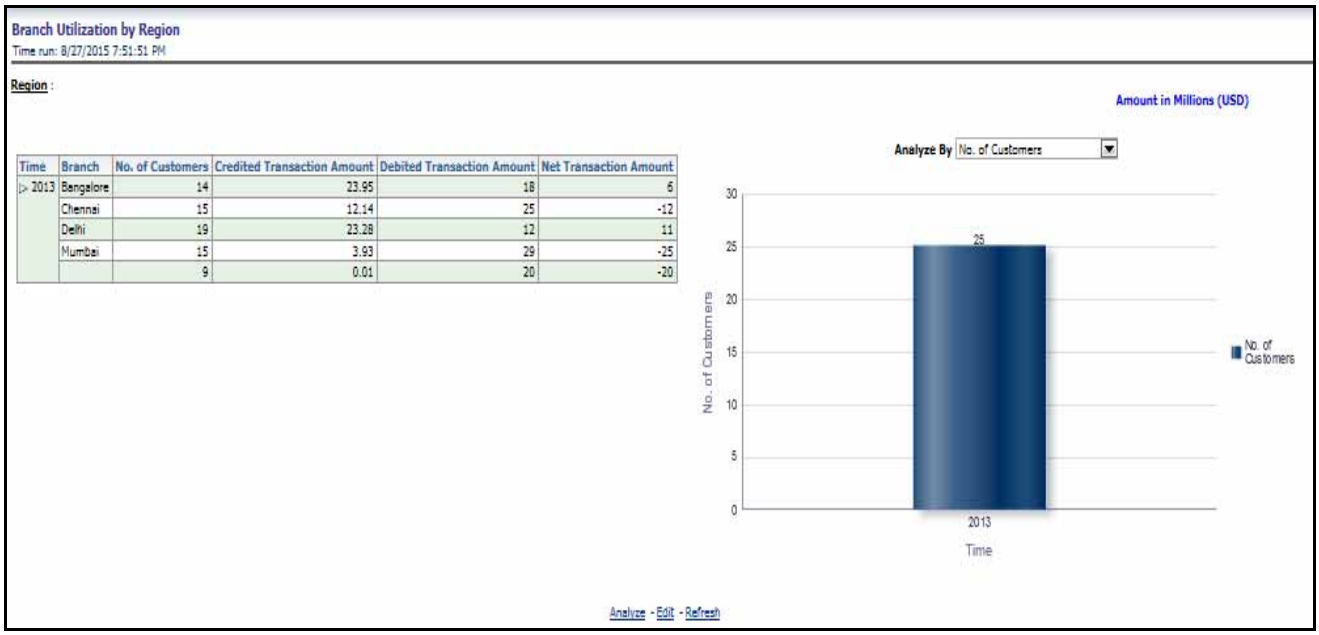


Figure 100. Branch Utilization by Region

- Top 10 Branches by Utilization: This report displays the details of branch transactions for the top most used 10 branches.

Figure 101. Top 10 Branches by Utilization Report

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

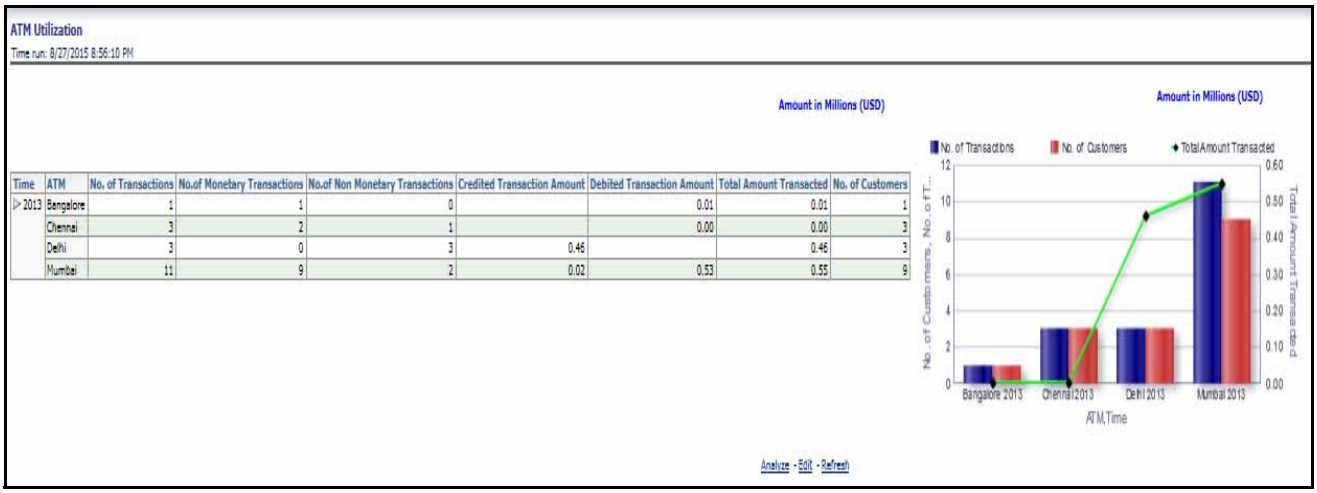


Figure 102. ATM Utilization

- Top 10 ATMs by Utilization: This report displays the details of ATM transactions for the top most used 10 ATMs.

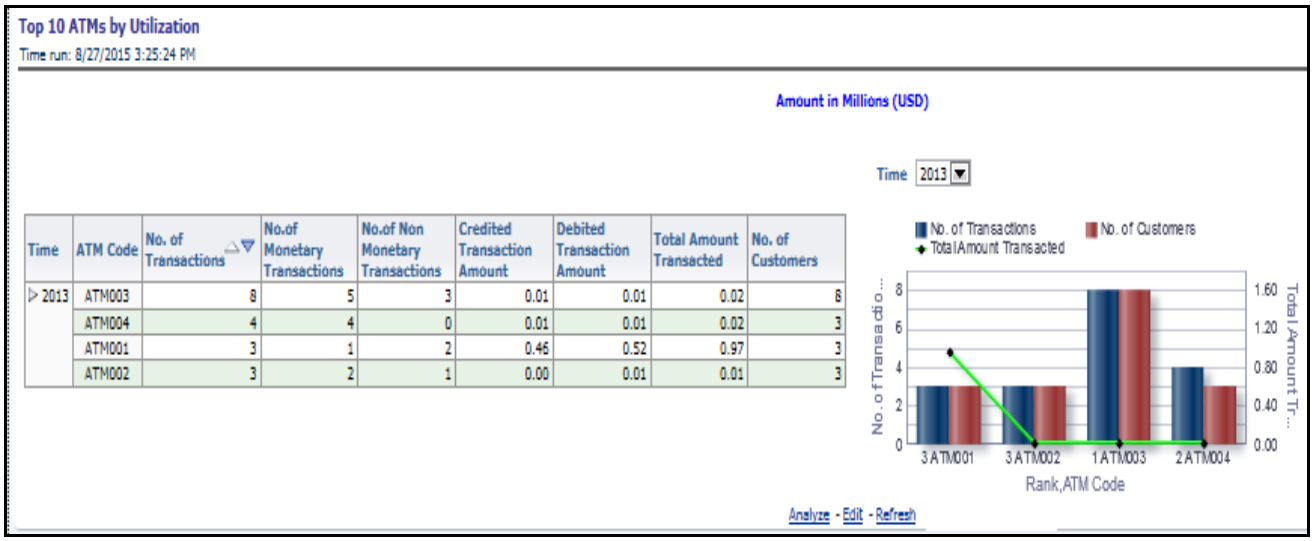
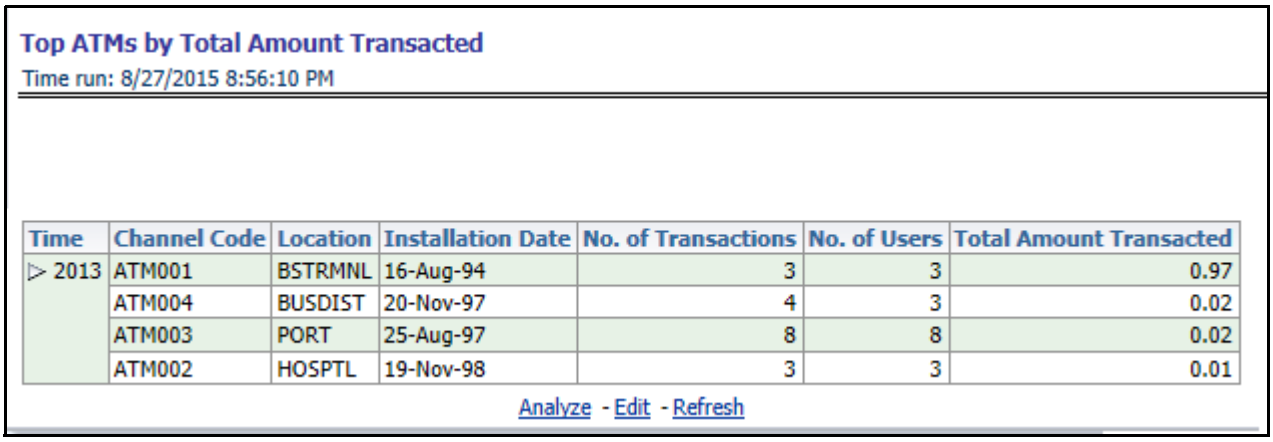


Figure 103. Top 10 ATMs by Utilization

- Top ATMs by Total Amount Transacted: This report gives details of the ATMs which have the maximum transaction amounts.



Top ATMs by Total Amount Transacted

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Time	Channel Code	Location	Installation Date	No. of Transactions	No. of Users	Total Amount Transacted
▷ 2013	ATM001	BSTRMNL	16-Aug-94	3	3	0.97
	ATM004	BUSDIST	20-Nov-97	4	3	0.02
	ATM003	PORT	25-Aug-97	8	8	0.02
	ATM002	HOSPTL	19-Nov-98	3	3	0.01

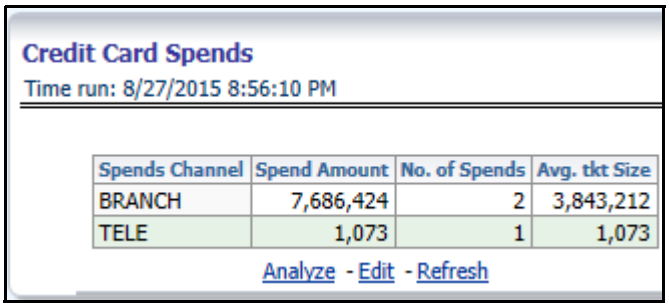
Analyze - Edit - Refresh

Figure 104. Top ATMs by Total Amount Transacted

- 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.

Figure 105. No. of channels used

- Credit Card Spends: Details of transactions carried out through a channel and the size of those transactions is exhibited in this report.



Credit Card Spends

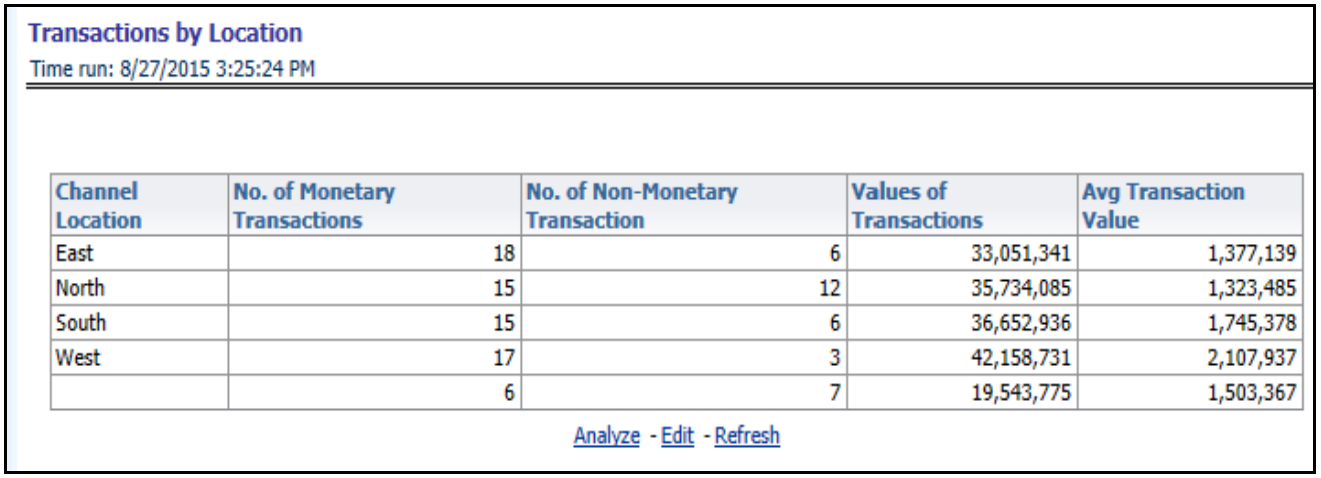
Time run: 8/27/2015 8:56:10 PM

Spends Channel	Spend Amount	No. of Spends	Avg. tkt Size
BRANCH	7,686,424	2	3,843,212
TELE	1,073	1	1,073

Analyze - Edit - Refresh

Figure 106. Credit Card Spends

- Transactions by Location: This report provides the distribution of transactions and the transacted amount across different locations.



Transactions by Location

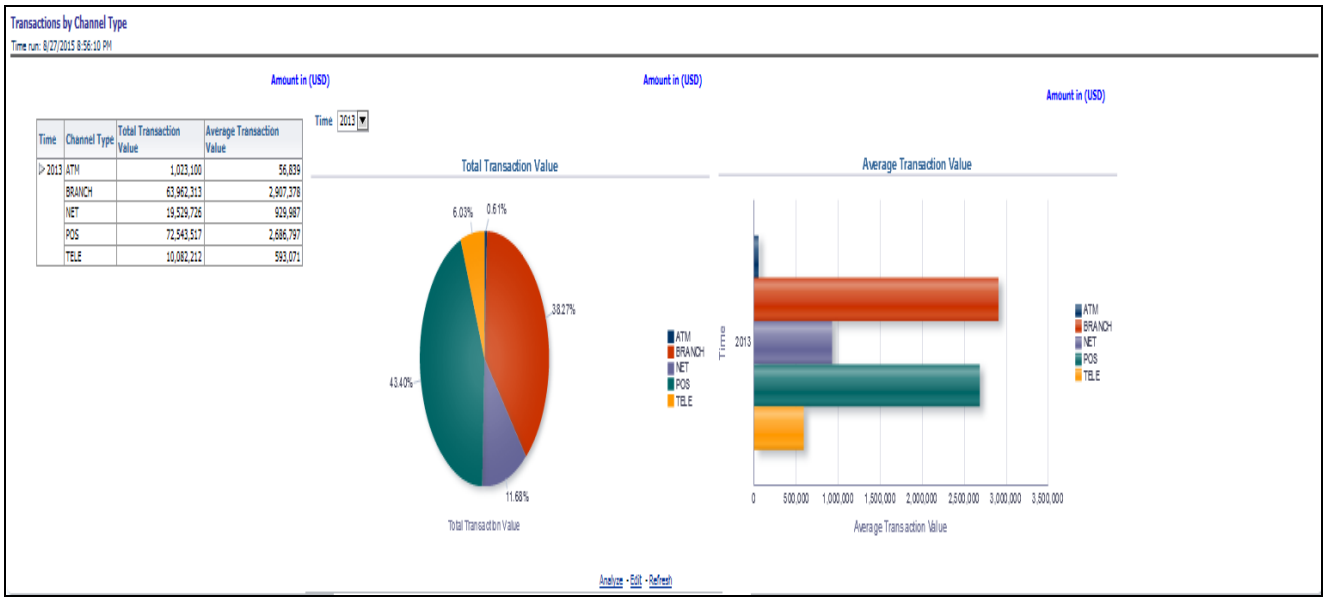
Time run: 8/27/2015 3:25:24 PM

Channel Location	No. of Monetary Transactions	No. of Non-Monetary Transaction	Values of Transactions	Avg Transaction Value
East	18	6	33,051,341	1,377,139
North	15	12	35,734,085	1,323,485
South	15	6	36,652,936	1,745,378
West	17	3	42,158,731	2,107,937
	6	7	19,543,775	1,503,367

Analyze - Edit - Refresh

Figure 107. Transactions by Location

- Transactions by Channel type: This report provides the distribution of transactions and the transacted amount across different channels.



Time	Channel Type	Total Transaction Value	Average Transaction Value
▷ 2013	ATM	1,023,100	56,839
	BRANCH	63,962,313	2,907,378
	NET	19,529,726	929,987
	POS	72,543,517	2,686,797
	TELE	10,082,212	593,071

Figure 108. Transactions by Channel type

- Channels used for transaction types: This report displays the distribution across channels of a particular transaction type.

Channels Used for Transaction Types

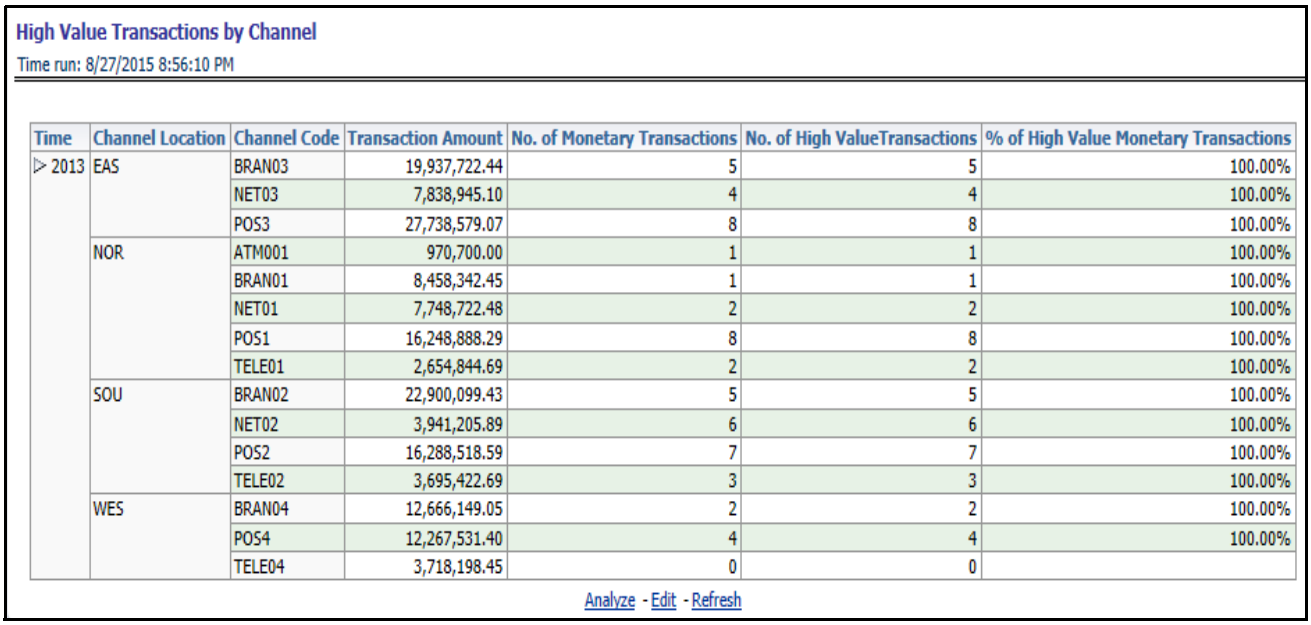
Time run: 8/27/2015 3:25:24 PM

		No. of Transactions (%)				
Time	Transaction Type/Channel	ATM	BRANCH	NET	POS	TELE
▷ 2013	Account Closure	25.0%	12.5%	37.5%		25.0%
	Account Opening		40.0%	20.0%		40.0%
	Balance Enquiry	25.0%	25.0%	50.0%		
	Cash Deposit	20.0%	30.0%	40.0%		10.0%
	Cash Withdrawal	7.9%	7.9%	5.3%	71.1%	7.9%
	Complaints	20.0%	20.0%	10.0%		50.0%
	Currency Exchange	33.3%	16.7%	33.3%		16.7%
	Loan Dispersal	14.3%	28.6%	42.9%		14.3%
	NEFT Transcation	40.0%	40.0%	20.0%		
	Requests	14.3%	42.9%	14.3%		28.6%

Analyze - Edit - Refresh

Figure 109. Channels used for transaction types

- High Value Transactions by Channel: This report shows the proportion of high value transactions to the total monetary transactions across different channels.



High Value Transactions by Channel

Time run: 8/27/2015 8:56:10 PM

Time	Channel Location	Channel Code	Transaction Amount	No. of Monetary Transactions	No. of High ValueTransactions	% of High Value Monetary Transactions
▷ 2013	EAS	BRAN03	19,937,722.44	5	5	100.00%
		NET03	7,838,945.10	4	4	100.00%
		POS3	27,738,579.07	8	8	100.00%
	NOR	ATM001	970,700.00	1	1	100.00%
		BRAN01	8,458,342.45	1	1	100.00%
		NET01	7,748,722.48	2	2	100.00%
		POS1	16,248,888.29	8	8	100.00%
		TELE01	2,654,844.69	2	2	100.00%
	SOU	BRAN02	22,900,099.43	5	5	100.00%
		NET02	3,941,205.89	6	6	100.00%
		POS2	16,288,518.59	7	7	100.00%
		TELE02	3,695,422.69	3	3	100.00%
	WES	BRAN04	12,666,149.05	2	2	100.00%
		POS4	12,267,531.40	4	4	100.00%
		TELE04	3,718,198.45	0	0	

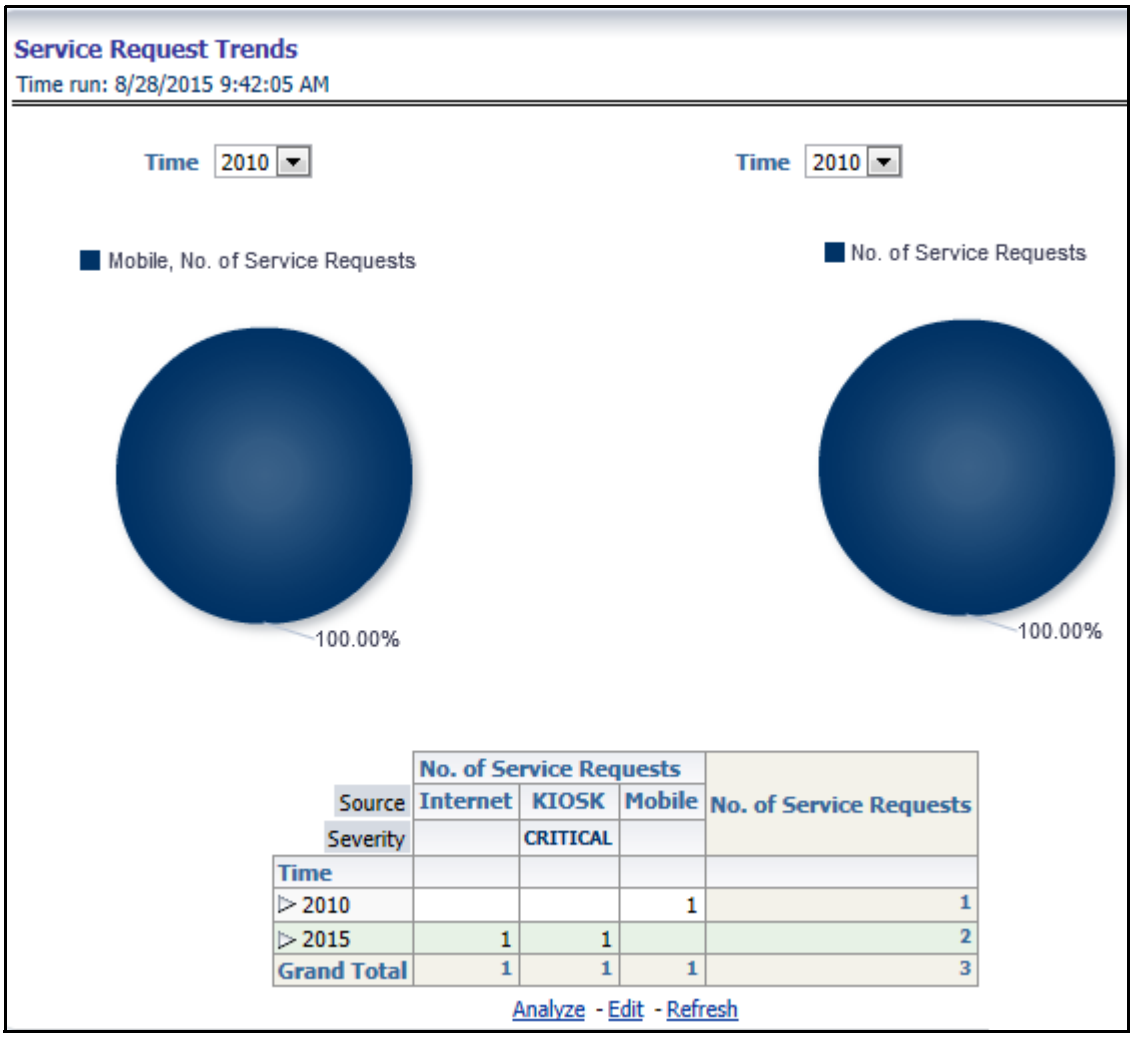
Analyze - Edit - Refresh

Figure 110. High Value Transactions by Channel

Service

This tab contains the following reports:

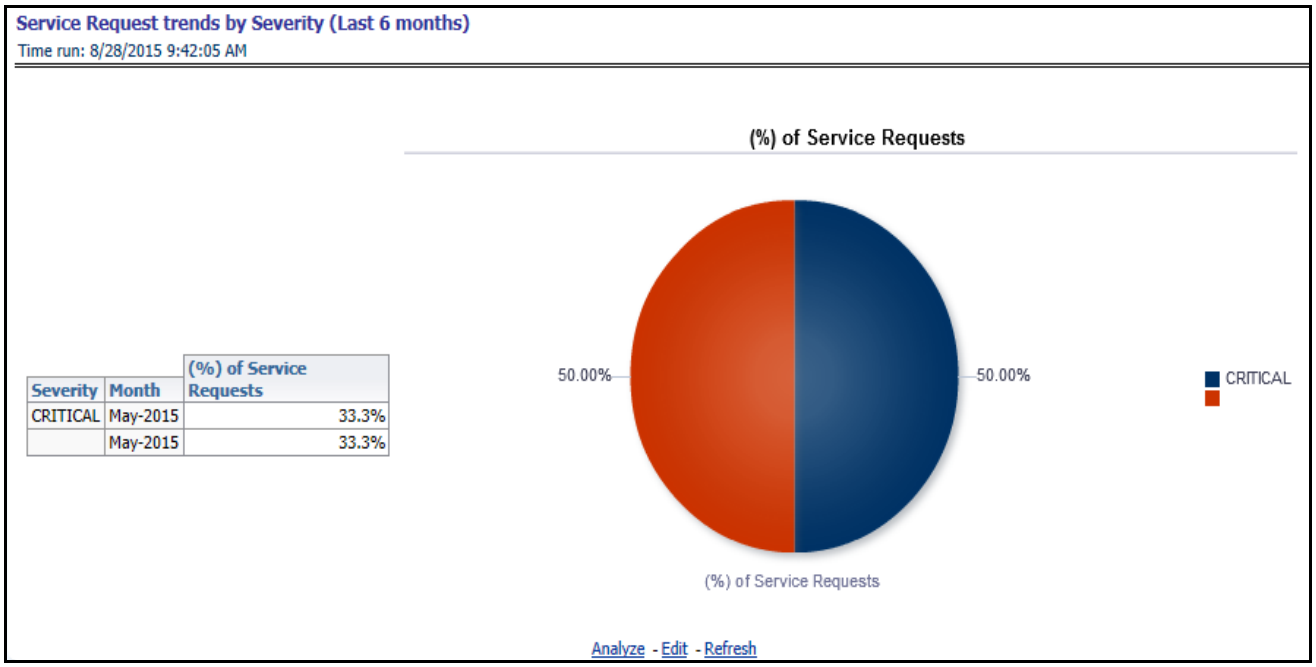
- Service Request Trends: This report displays the service requests with their severity and channel across a period of time thus emphasizing on the trend that has been observed.



	No. of Service Requests			
Source	Internet	KIOSK	Mobile	No. of Service Requests
Severity		CRITICAL		
Time				
▷ 2010			1	1
▷ 2015	1	1		2
Grand Total	1	1	1	3

Figure 111. Service Request Trends

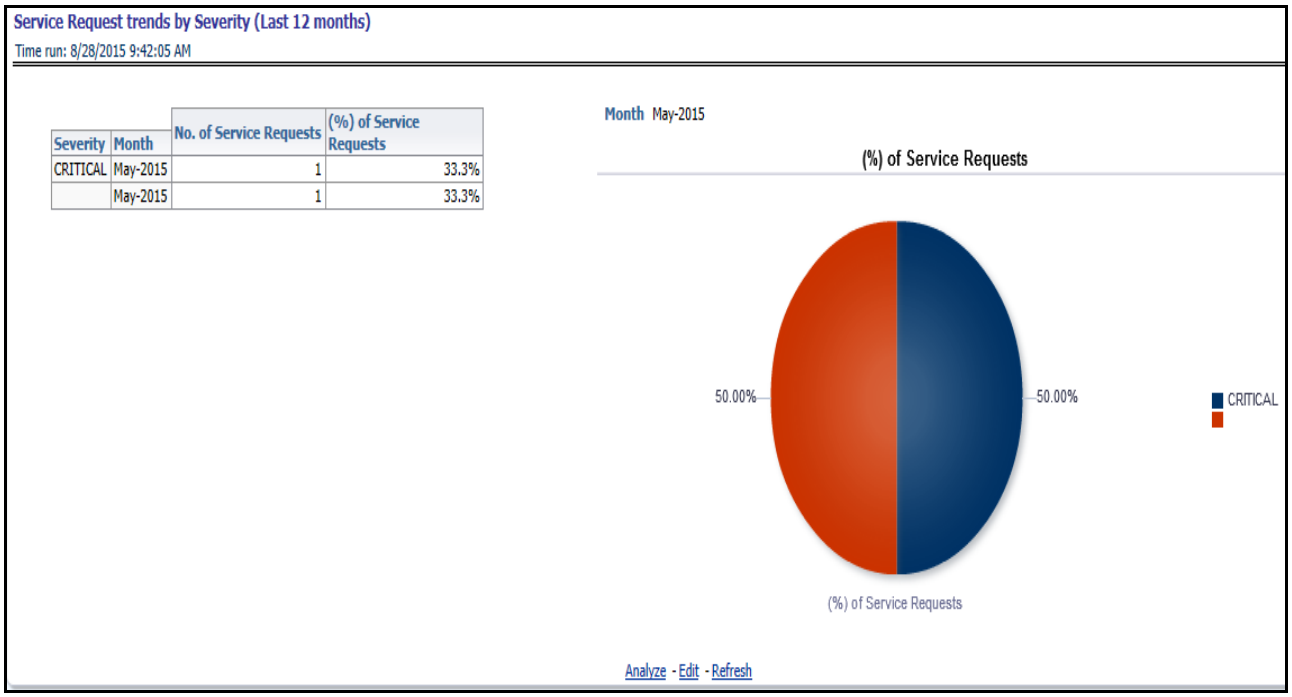
- Service Request trends by severity (6 months back): This report shows the distribution of service requests received in past 6 months in terms of severity.



Severity	Month	(%) of Service Requests
CRITICAL	May-2015	33.3%
	May-2015	33.3%

Figure 112. Service Request trends by severity (6 months back)

- 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.



Severity	Month	No. of Service Requests	(%) of Service Requests
CRITICAL	May-2015	1	33.3%
	May-2015	1	33.3%

Figure 113. Service Request trends by severity (12 months back)

- Service Request trends by channel (6 months back) - Current Period Report: This report shows the distribution of service requests received in past 6 months across different channels.

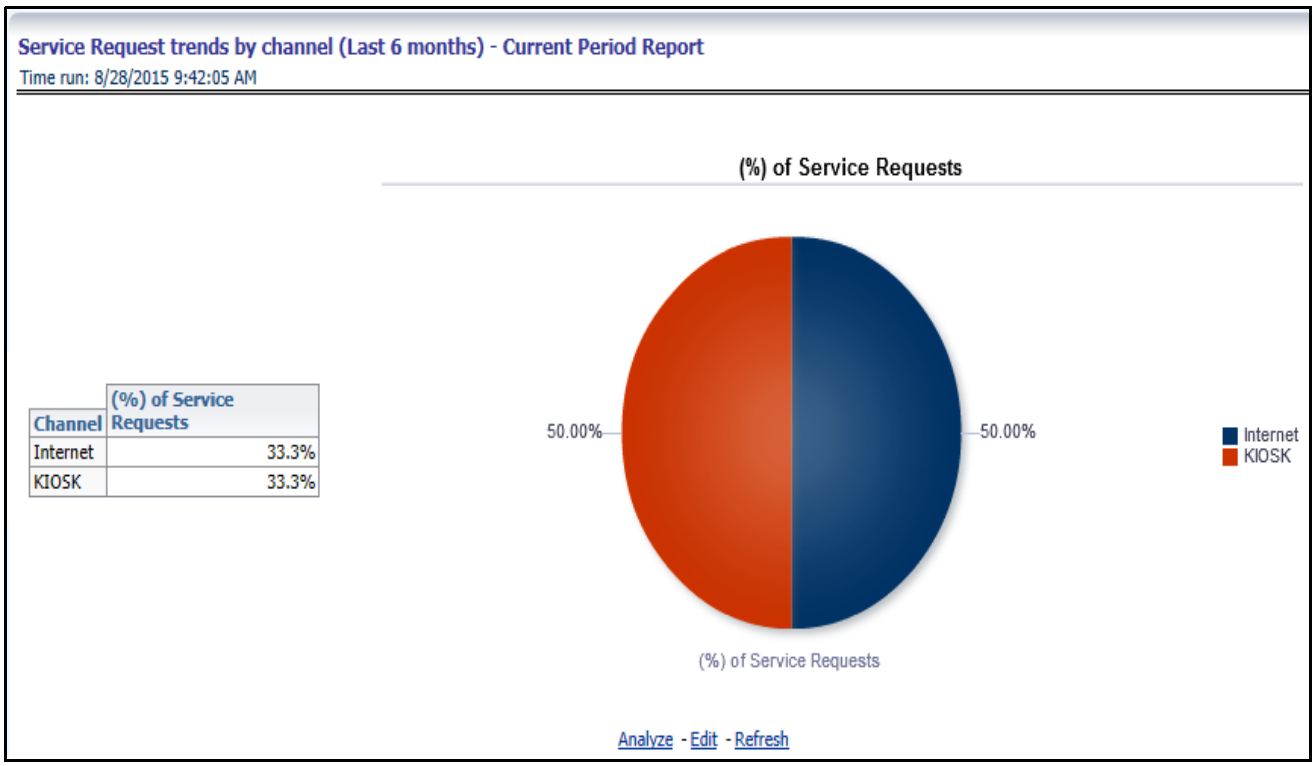
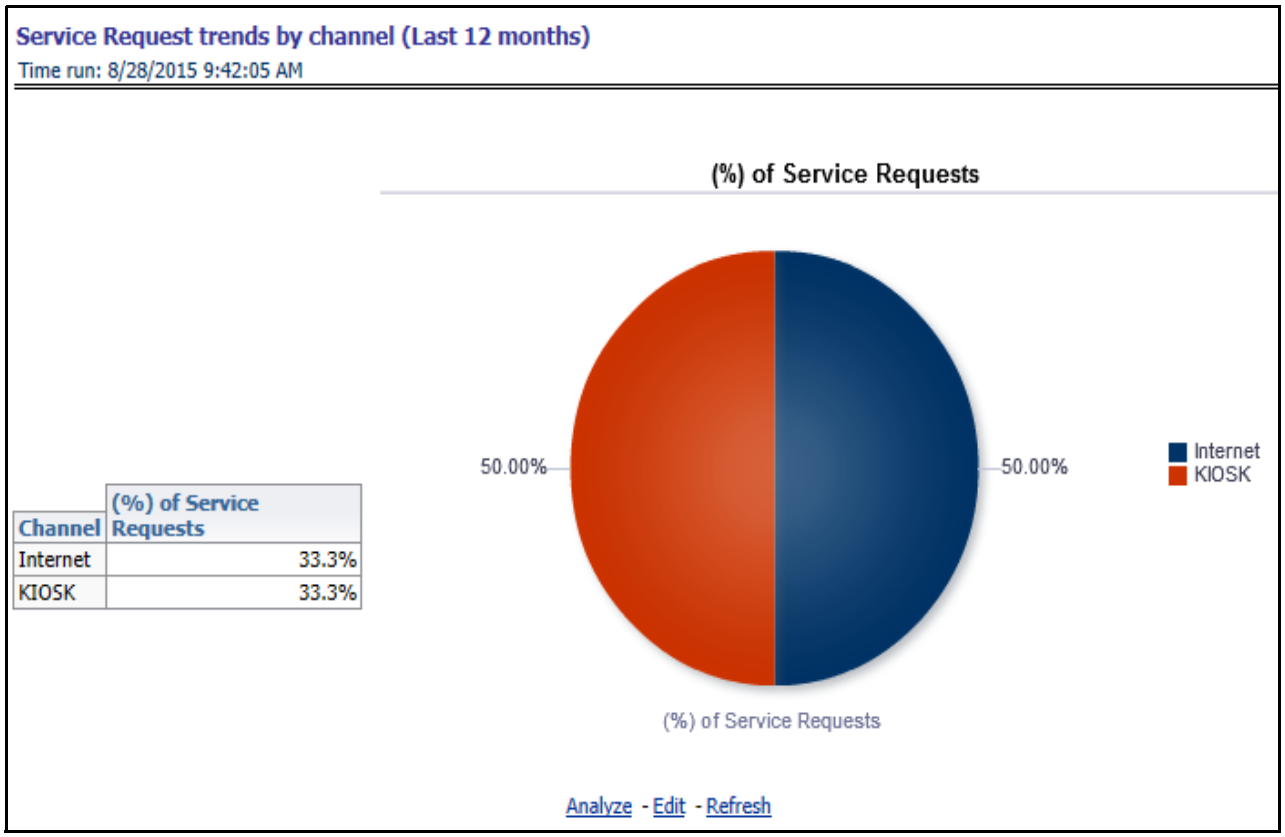


Figure 114. Service Request trends by channel (6 months back)

- Service Request trends by channel (12 months back): This report shows the distribution of service requests received in past 12 months across different channels.



Channel	(%) of Service Requests
Internet	33.3%
KIOSK	33.3%

Figure 115. Service Request trends by channel (12 months back)

- 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.

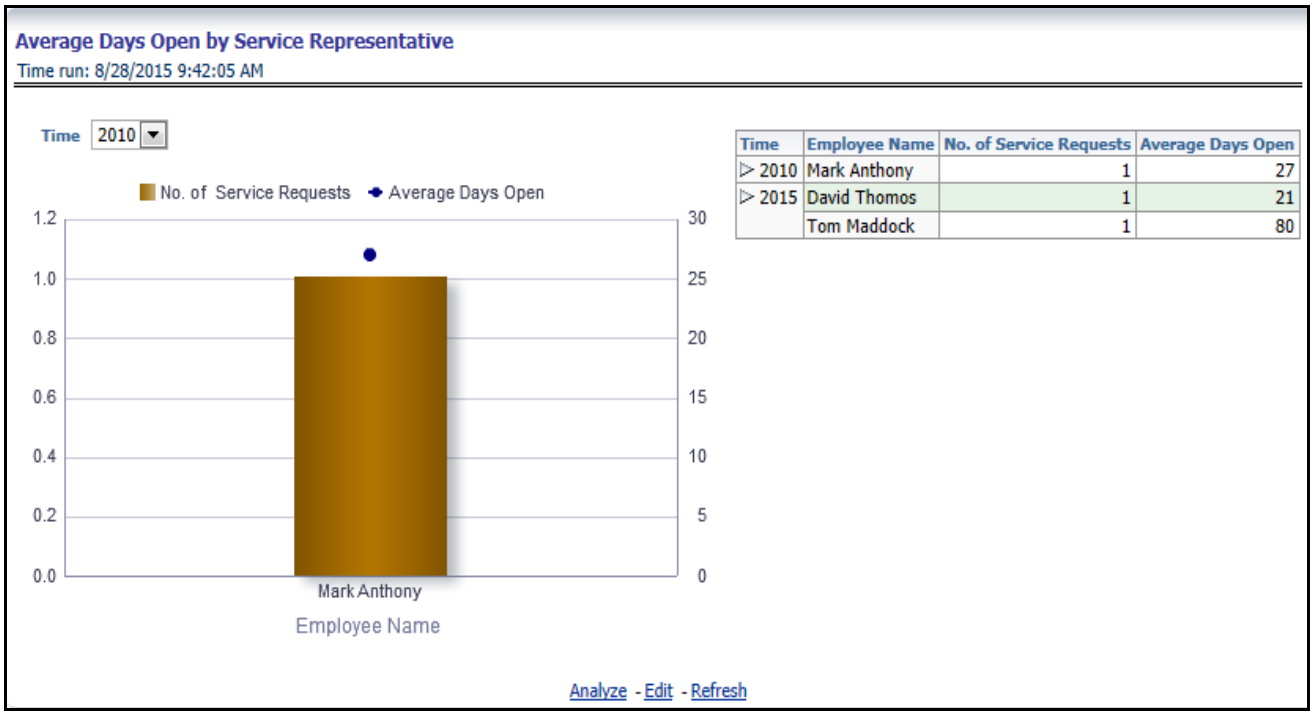


Figure 116. Average Days Open by Service Representative

- 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.

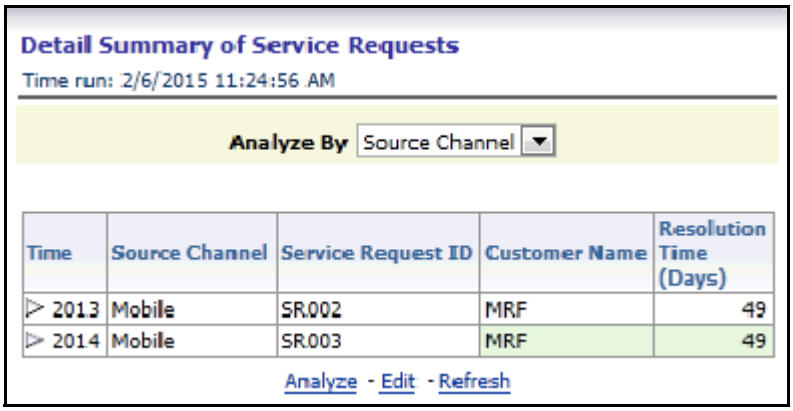


Figure 117. Detailed Summary of Service Requests

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.

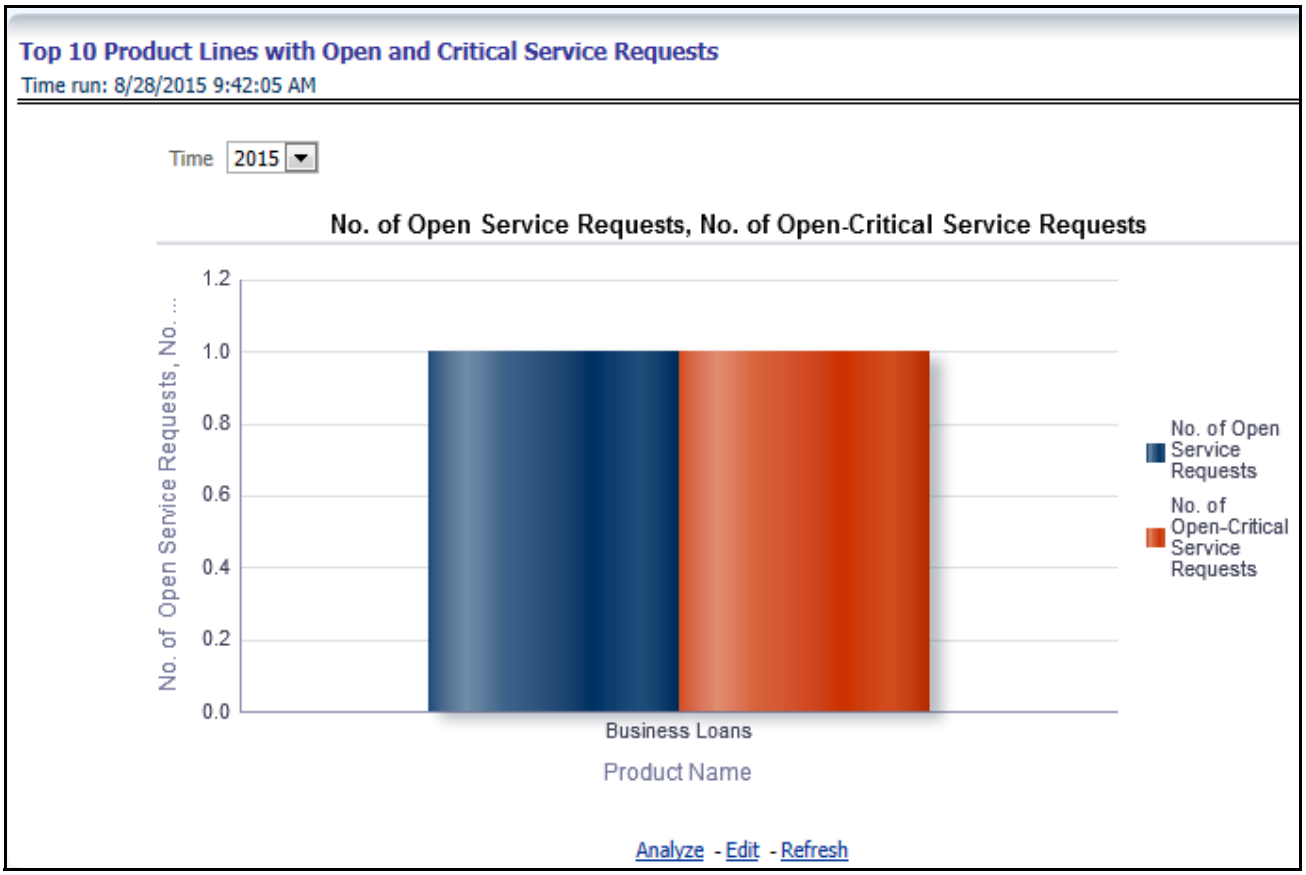


Figure 118. Top 10 Product Lines with Open and Critical Service Requests

- Top 10 Products by Customer Satisfaction: This report ranks the products in order of customer satisfaction.

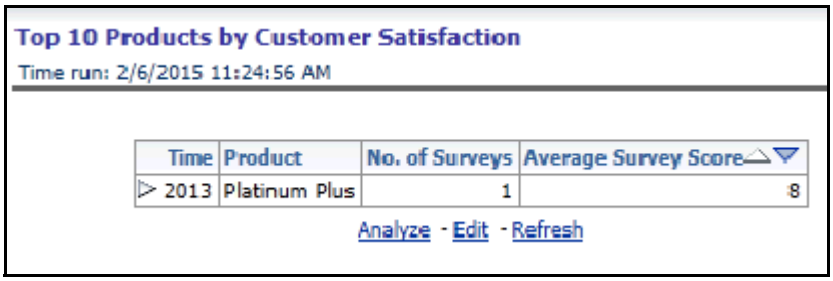


Figure 119. Top 10 Products by Customer Satisfaction

- 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.

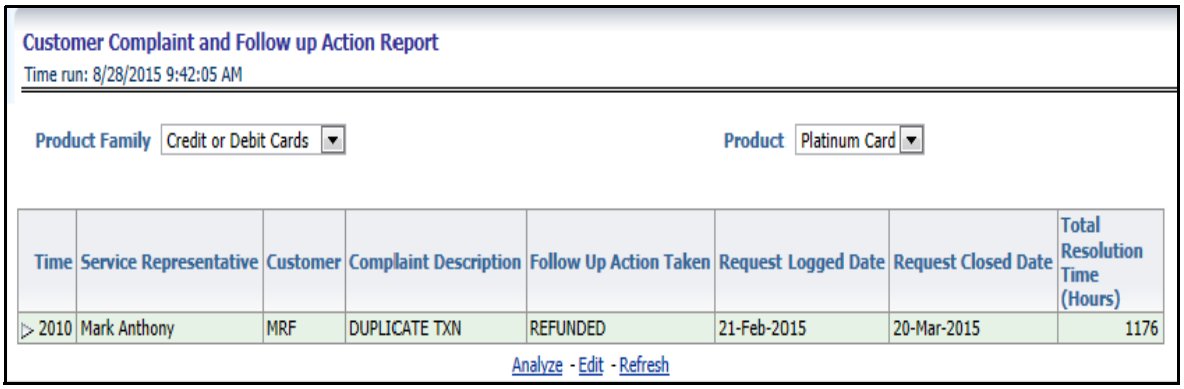


Figure 120. Customer Complaint and Follow up Action Report

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.

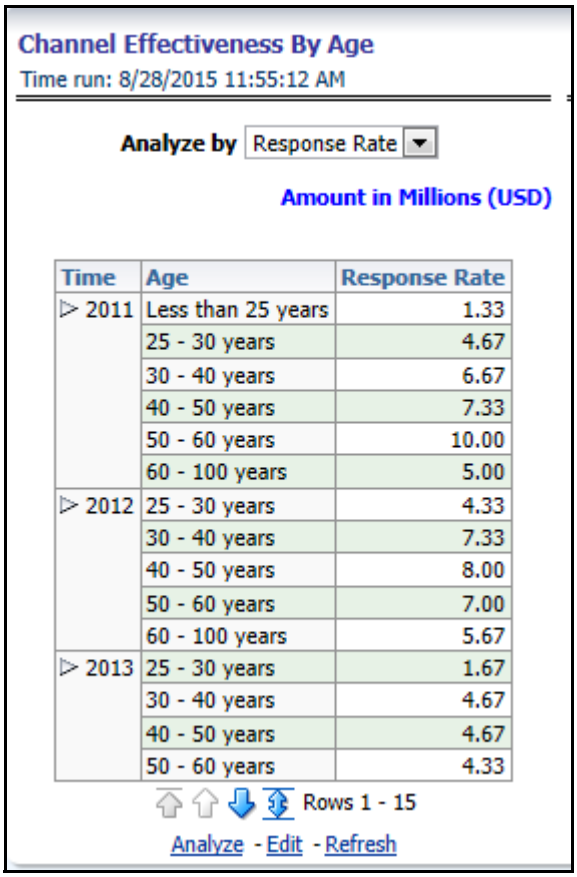
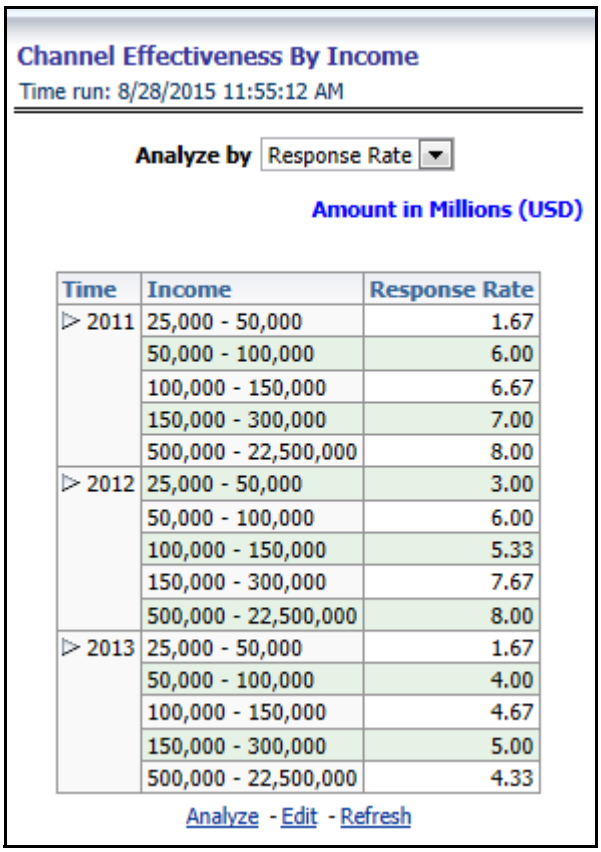


Figure 121. Channel Effectiveness By Age

- Channel Effectiveness By Income: This report displays the effectiveness of a channel in correspondence to customer income.



Channel Effectiveness By Income

Time run: 8/28/2015 11:55:12 AM

Analyze by Response Rate

Amount in Millions (USD)

Time	Income	Response Rate
▷ 2011	25,000 - 50,000	1.67
	50,000 - 100,000	6.00
	100,000 - 150,000	6.67
	150,000 - 300,000	7.00
	500,000 - 22,500,000	8.00
▷ 2012	25,000 - 50,000	3.00
	50,000 - 100,000	6.00
	100,000 - 150,000	5.33
	150,000 - 300,000	7.67
	500,000 - 22,500,000	8.00
▷ 2013	25,000 - 50,000	1.67
	50,000 - 100,000	4.00
	100,000 - 150,000	4.67
	150,000 - 300,000	5.00
	500,000 - 22,500,000	4.33

Analyze - Edit - Refresh

Figure 122. Channel Effectiveness By Income

- Channel Effectiveness By Gender: This report displays the effectiveness of a channel in correspondence to customer gender.

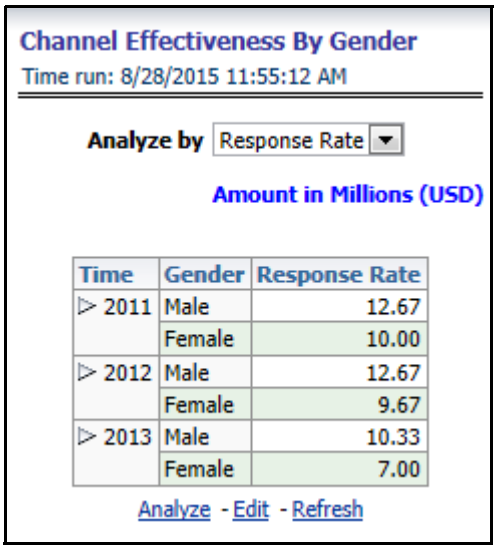


Figure 123. Channel Effectiveness By Gender

- Channel Effectiveness: This report displays the effectiveness of a channel over a period of time.

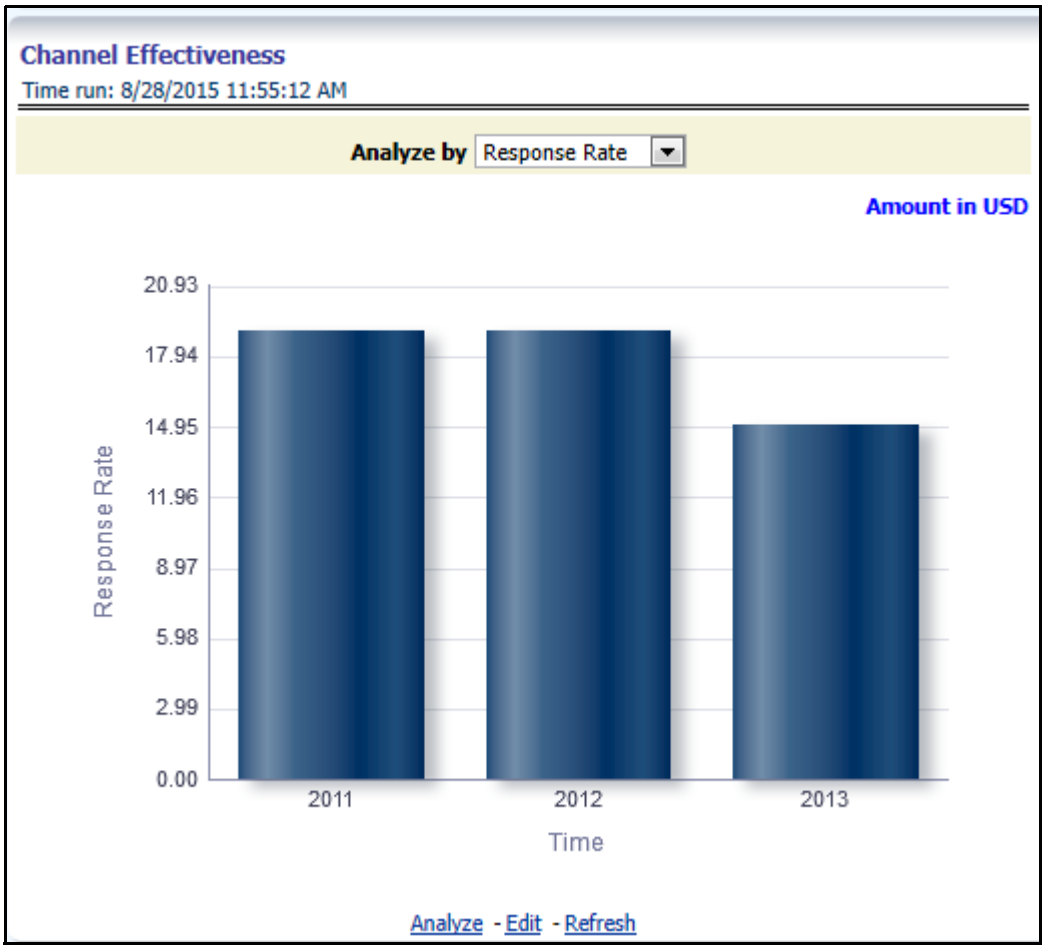
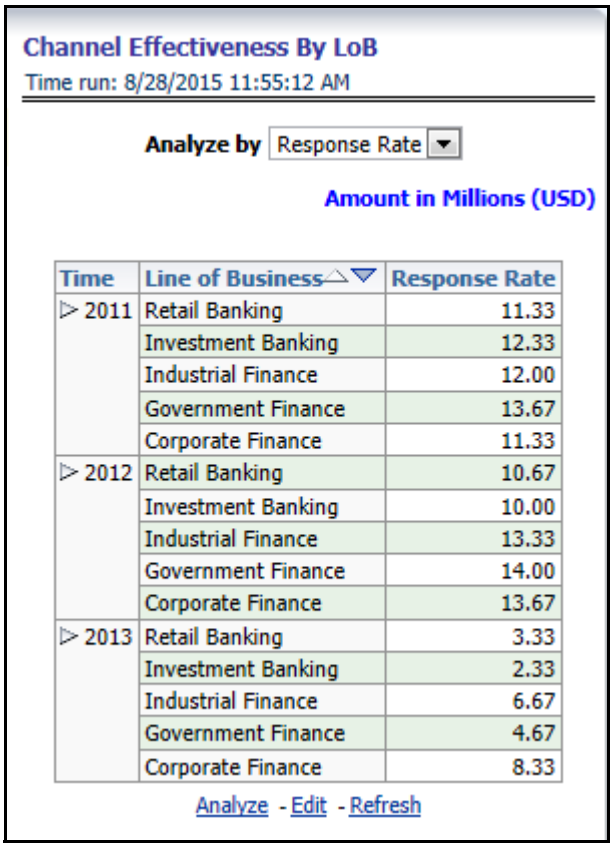


Figure 124. Channel Effectiveness

- Channel Effectiveness By LOB: This report displays the effectiveness of a channel for a particular line of business.



Channel Effectiveness By LoB

Time run: 8/28/2015 11:55:12 AM

Analyze by Response Rate

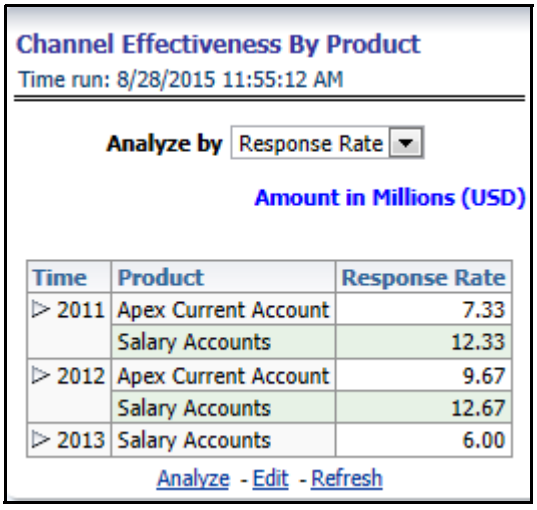
Amount in Millions (USD)

Time	Line of Business	Response Rate
▷ 2011	Retail Banking	11.33
	Investment Banking	12.33
	Industrial Finance	12.00
	Government Finance	13.67
	Corporate Finance	11.33
▷ 2012	Retail Banking	10.67
	Investment Banking	10.00
	Industrial Finance	13.33
	Government Finance	14.00
	Corporate Finance	13.67
▷ 2013	Retail Banking	3.33
	Investment Banking	2.33
	Industrial Finance	6.67
	Government Finance	4.67
	Corporate Finance	8.33

Analyze - Edit - Refresh

Figure 125. Channel Effectiveness By LOB

- Channel Effectiveness By Product: This report displays the effectiveness of a channel for a particular product.



Channel Effectiveness By Product

Time run: 8/28/2015 11:55:12 AM

Analyze by Response Rate

Amount in Millions (USD)

Time	Product	Response Rate
▷ 2011	Apex Current Account	7.33
	Salary Accounts	12.33
▷ 2012	Apex Current Account	9.67
	Salary Accounts	12.67
▷ 2013	Salary Accounts	6.00

Analyze - Edit - Refresh

Figure 126. Channel Effectiveness By Product

- Channel Effectiveness By Campaign Type: This report displays the effectiveness of a channel for a particular campaign.

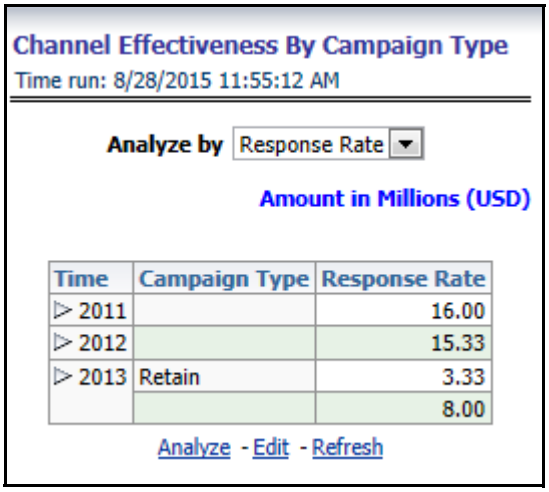


Figure 127. Channel Effectiveness By Campaign Type

- Channel Effectiveness across time periods: This report displays the effectiveness of a channel across time periods.

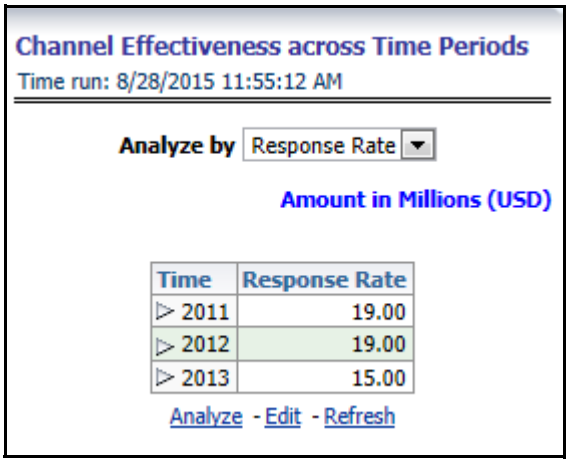


Figure 128. Channel Effectiveness across time periods

Customer View

The following tabs are present in the Customer View Dashboard:

- Customer Distribution
- Customer Profitability and Engagement
- Customer Trends

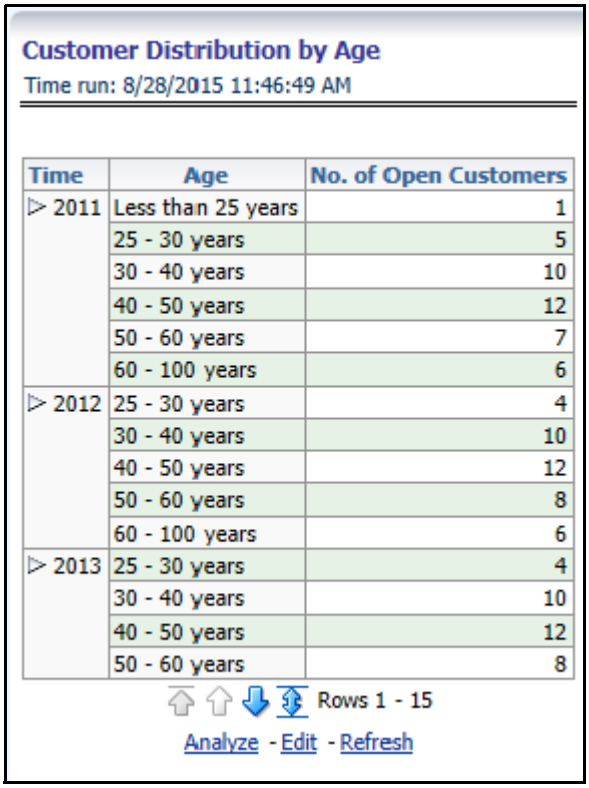
- Cross-sell
- Spend Analysis
- Customer Transactions
- Attrition Analysis
- Risk Summary

The following sections describe 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: 8/28/2015 11:46:49 AM

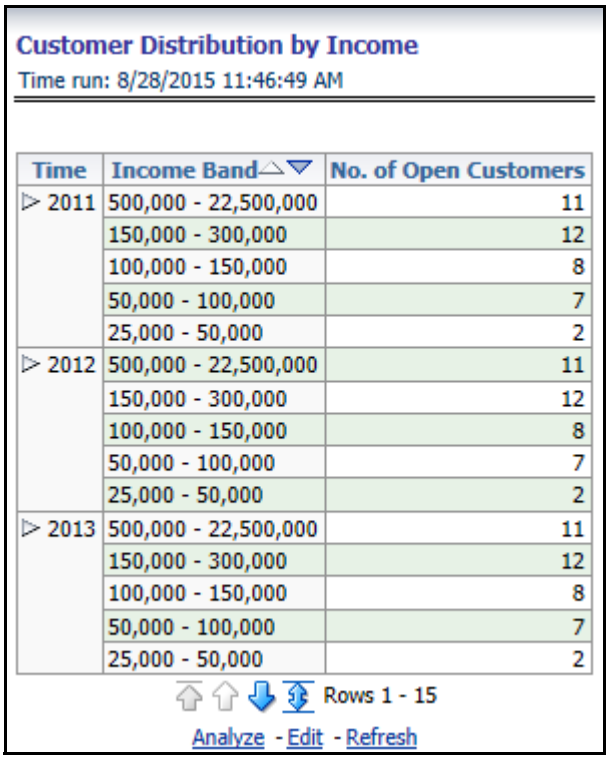
Time	Age	No. of Open Customers
▷ 2011	Less than 25 years	1
	25 - 30 years	5
	30 - 40 years	10
	40 - 50 years	12
	50 - 60 years	7
	60 - 100 years	6
▷ 2012	25 - 30 years	4
	30 - 40 years	10
	40 - 50 years	12
	50 - 60 years	8
	60 - 100 years	6
▷ 2013	25 - 30 years	4
	30 - 40 years	10
	40 - 50 years	12
	50 - 60 years	8

Rows 1 - 15

Analyze - Edit - Refresh

Figure 129. Customer Distribution by Age

- 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: 8/28/2015 11:46:49 AM

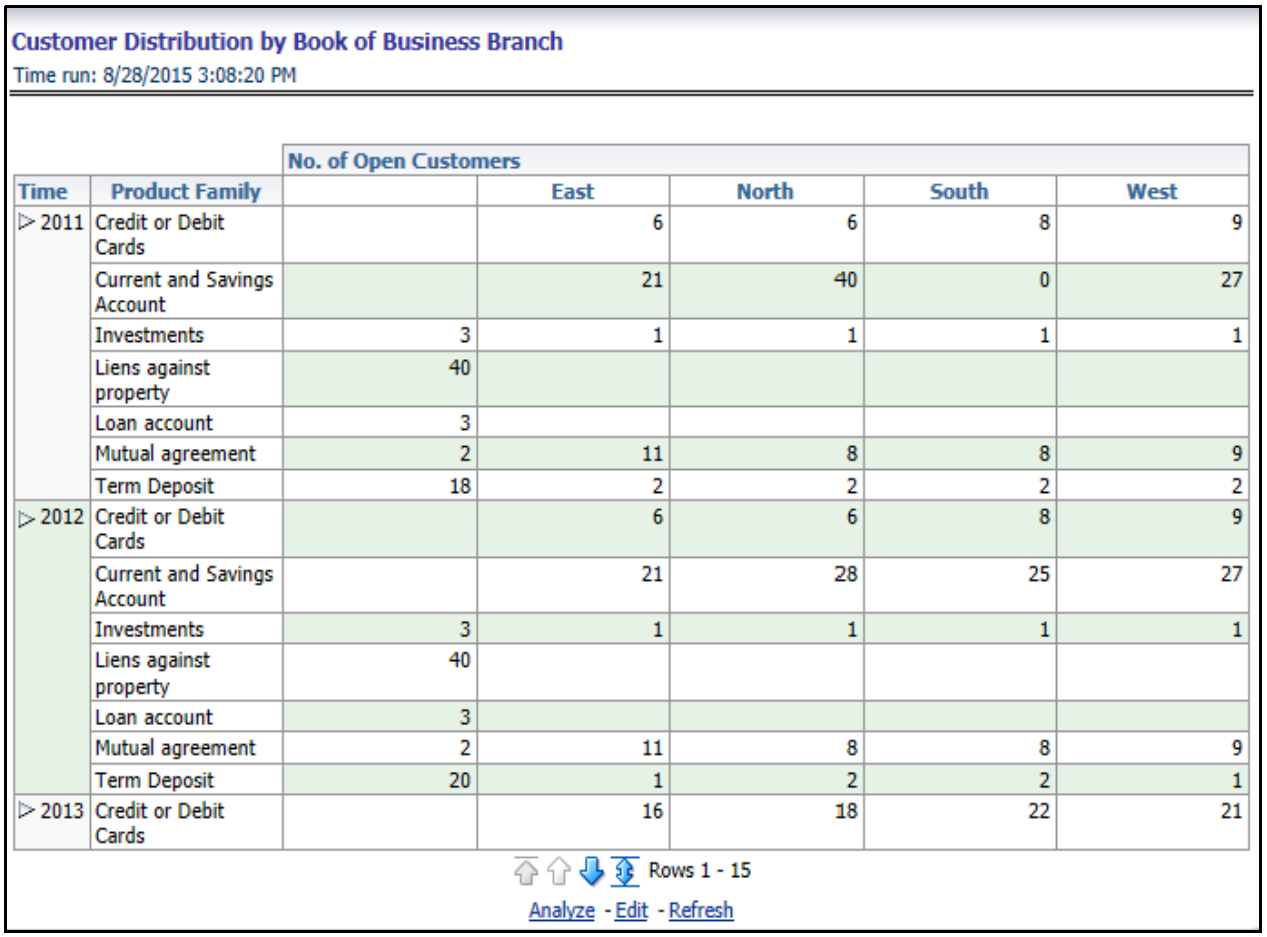
Time	Income Band	No. of Open Customers
▷ 2011	500,000 - 22,500,000	11
	150,000 - 300,000	12
	100,000 - 150,000	8
	50,000 - 100,000	7
	25,000 - 50,000	2
▷ 2012	500,000 - 22,500,000	11
	150,000 - 300,000	12
	100,000 - 150,000	8
	50,000 - 100,000	7
	25,000 - 50,000	2
▷ 2013	500,000 - 22,500,000	11
	150,000 - 300,000	12
	100,000 - 150,000	8
	50,000 - 100,000	7
	25,000 - 50,000	2

Rows 1 - 15

Analyze - Edit - Refresh

Figure 130. Customer Distribution by Income

- Customer Distribution by Book of Business Branch: This report gives details of distribution of open customers for a product across different regions.



Customer Distribution by Book of Business Branch

Time run: 8/28/2015 3:08:20 PM

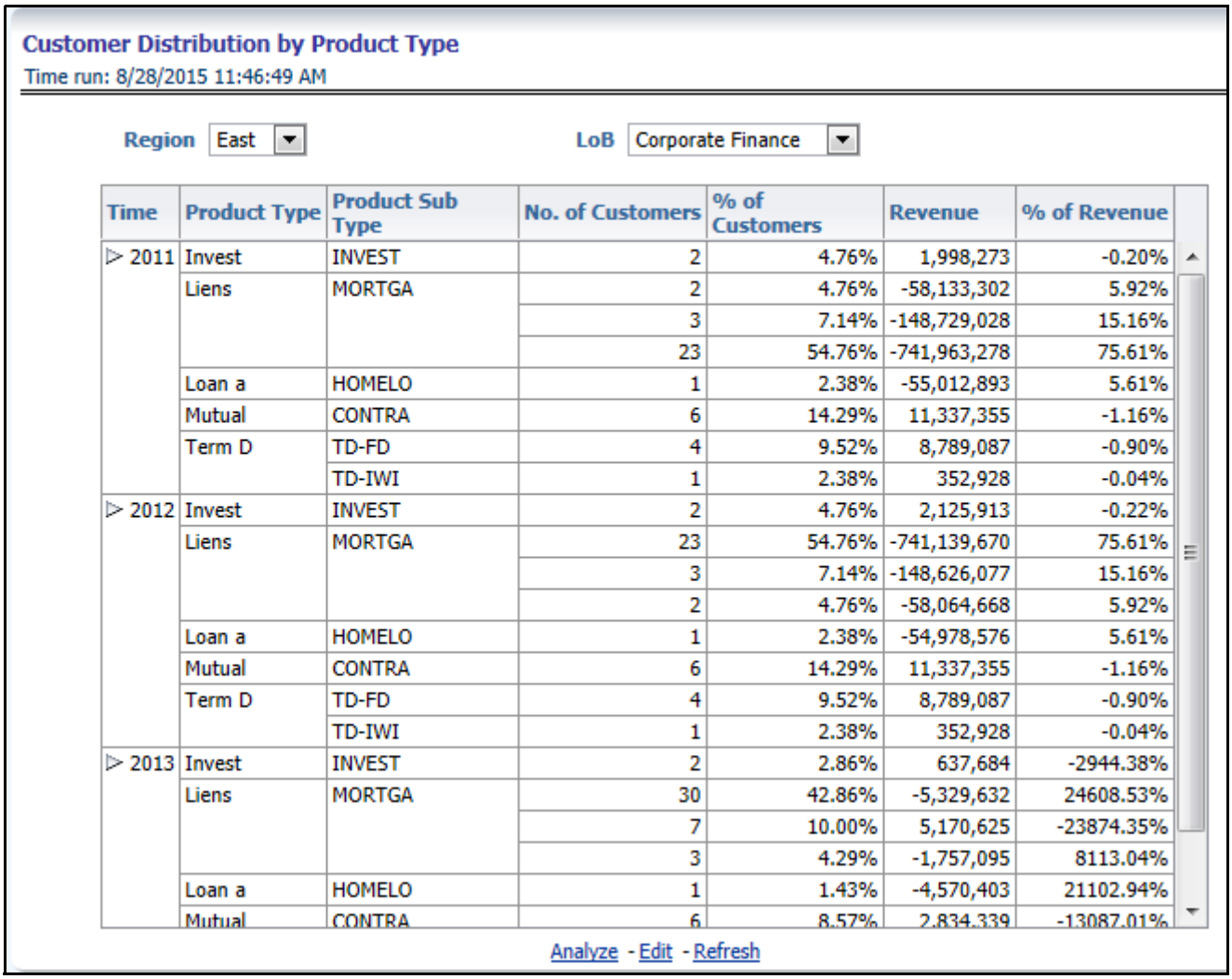
Time	Product Family	No. of Open Customers	East	North	South	West
▷ 2011	Credit or Debit Cards		6	6	8	9
	Current and Savings Account		21	40	0	27
	Investments	3	1	1	1	1
	Liens against property	40				
	Loan account	3				
	Mutual agreement	2	11	8	8	9
	Term Deposit	18	2	2	2	2
▷ 2012	Credit or Debit Cards		6	6	8	9
	Current and Savings Account		21	28	25	27
	Investments	3	1	1	1	1
	Liens against property	40				
	Loan account	3				
	Mutual agreement	2	11	8	8	9
	Term Deposit	20	1	2	2	1
▷ 2013	Credit or Debit Cards		16	18	22	21

Rows 1 - 15

Analyze - Edit - Refresh

Figure 131. Customer Distribution by Book of Businss Branch

- Customer Distribution by Product Type: This report provides details of distribution of customers for product types across regions, LoB and products.



Customer Distribution by Product Type

Time run: 8/28/2015 11:46:49 AM

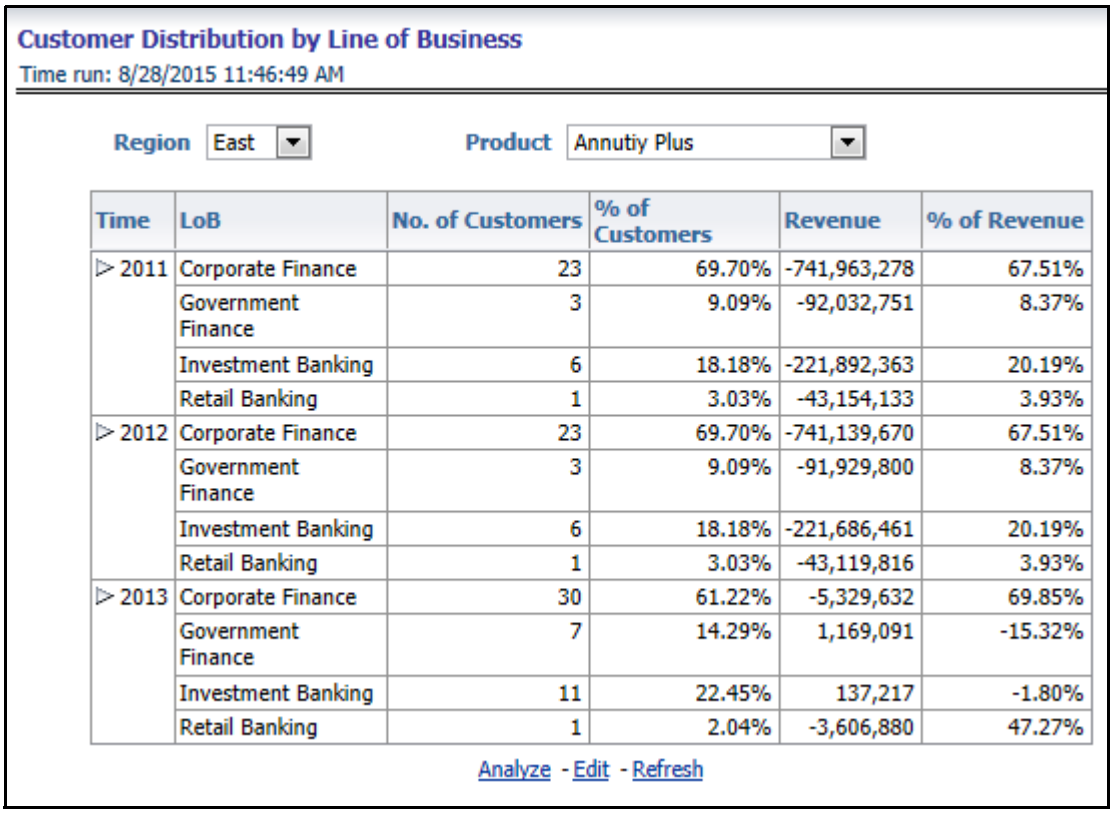
Region: East LoB: Corporate Finance

Time	Product Type	Product Sub Type	No. of Customers	% of Customers	Revenue	% of Revenue
▷ 2011	Invest	INVEST	2	4.76%	1,998,273	-0.20%
	Liens	MORTGA	2	4.76%	-58,133,302	5.92%
			3	7.14%	-148,729,028	15.16%
			23	54.76%	-741,963,278	75.61%
	Loan a	HOMELO	1	2.38%	-55,012,893	5.61%
	Mutual	CONTRA	6	14.29%	11,337,355	-1.16%
	Term D	TD-FD	4	9.52%	8,789,087	-0.90%
		TD-IWI	1	2.38%	352,928	-0.04%
▷ 2012	Invest	INVEST	2	4.76%	2,125,913	-0.22%
	Liens	MORTGA	23	54.76%	-741,139,670	75.61%
			3	7.14%	-148,626,077	15.16%
			2	4.76%	-58,064,668	5.92%
	Loan a	HOMELO	1	2.38%	-54,978,576	5.61%
	Mutual	CONTRA	6	14.29%	11,337,355	-1.16%
	Term D	TD-FD	4	9.52%	8,789,087	-0.90%
		TD-IWI	1	2.38%	352,928	-0.04%
▷ 2013	Invest	INVEST	2	2.86%	637,684	-2944.38%
	Liens	MORTGA	30	42.86%	-5,329,632	24608.53%
			7	10.00%	5,170,625	-23874.35%
			3	4.29%	-1,757,095	8113.04%
	Loan a	HOMELO	1	1.43%	-4,570,403	21102.94%
	Mutual	CONTRA	6	8.57%	2,834,339	-13087.01%

Analyze - Edit - Refresh

Figure 132. Customer Distribution by Product Type

- Customer Distribution by Line of Business: This report provides details of distribution of customers for LoB across regions and products.



Customer Distribution by Line of Business

Time run: 8/28/2015 11:46:49 AM

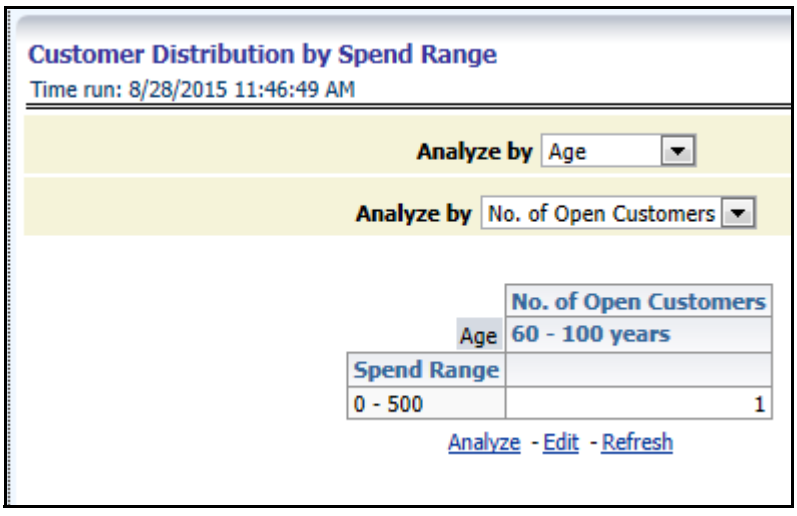
Region East Product Annutiy Plus

Time	LoB	No. of Customers	% of Customers	Revenue	% of Revenue
▷ 2011	Corporate Finance	23	69.70%	-741,963,278	67.51%
	Government Finance	3	9.09%	-92,032,751	8.37%
	Investment Banking	6	18.18%	-221,892,363	20.19%
	Retail Banking	1	3.03%	-43,154,133	3.93%
▷ 2012	Corporate Finance	23	69.70%	-741,139,670	67.51%
	Government Finance	3	9.09%	-91,929,800	8.37%
	Investment Banking	6	18.18%	-221,686,461	20.19%
	Retail Banking	1	3.03%	-43,119,816	3.93%
▷ 2013	Corporate Finance	30	61.22%	-5,329,632	69.85%
	Government Finance	7	14.29%	1,169,091	-15.32%
	Investment Banking	11	22.45%	137,217	-1.80%
	Retail Banking	1	2.04%	-3,606,880	47.27%

Analyze - Edit - Refresh

Figure 133. Customer Distribution by Line of Business

- 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: 8/28/2015 11:46:49 AM

Analyze by Age

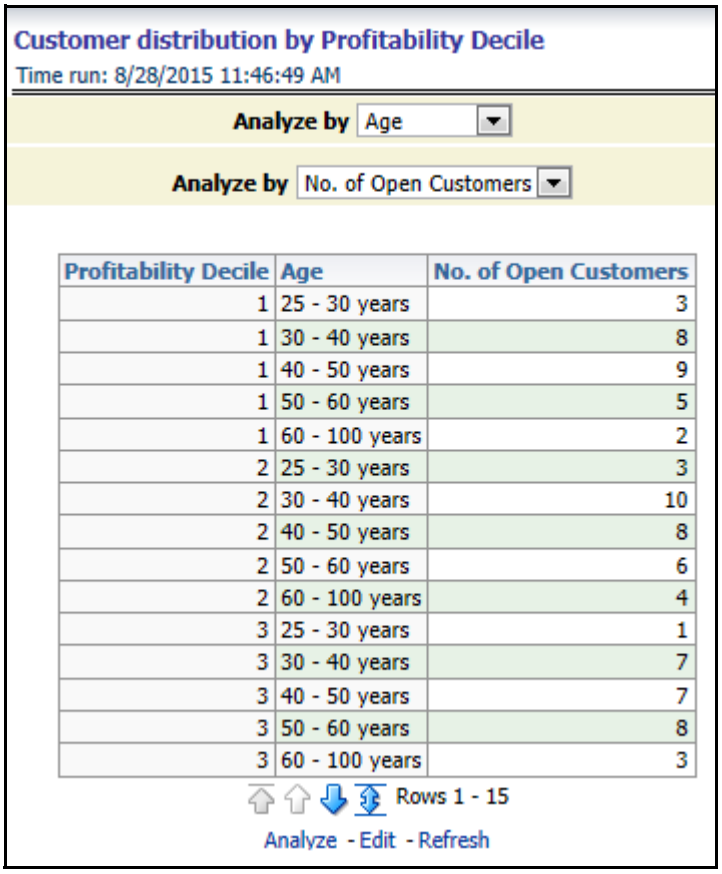
Analyze by No. of Open Customers

	No. of Open Customers
Age	60 - 100 years
Spend Range	
0 - 500	1

Analyze - Edit - Refresh

Figure 134. Customer Distribution by Spend Range

- 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: 8/28/2015 11:46:49 AM

Analyze by Age

Analyze by No. of Open Customers

Profitability Decile	Age	No. of Open Customers
1	25 - 30 years	3
1	30 - 40 years	8
1	40 - 50 years	9
1	50 - 60 years	5
1	60 - 100 years	2
2	25 - 30 years	3
2	30 - 40 years	10
2	40 - 50 years	8
2	50 - 60 years	6
2	60 - 100 years	4
3	25 - 30 years	1
3	30 - 40 years	7
3	40 - 50 years	7
3	50 - 60 years	8
3	60 - 100 years	3

Rows 1 - 15

Analyze - Edit - Refresh

Figure 135. Customer distribution by Profitability Decile Report

- Account Distribution: The distribution of accounts across dimensions is highlighted in this report.

Age	No. of Accounts ▷ 2013	% ▷ 2013
60 - 100 years	269	17.7%
50 - 60 years	377	24.8%
40 - 50 years	396	26.0%
30 - 40 years	337	22.2%
25 - 30 years	142	9.3%
Grand Total	**1,521**	**100.0%**

Figure 136. Account Distribution

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.

Figure 137. Net Income Customer Decile Distribution

- Net Income per Customer by Segment: This report shows the average income of a customer in a segment for different age groups.

Figure 138. Net Income per Customer by Segment

- Top Serviced Customers: This report provides details of the most serviced customers.

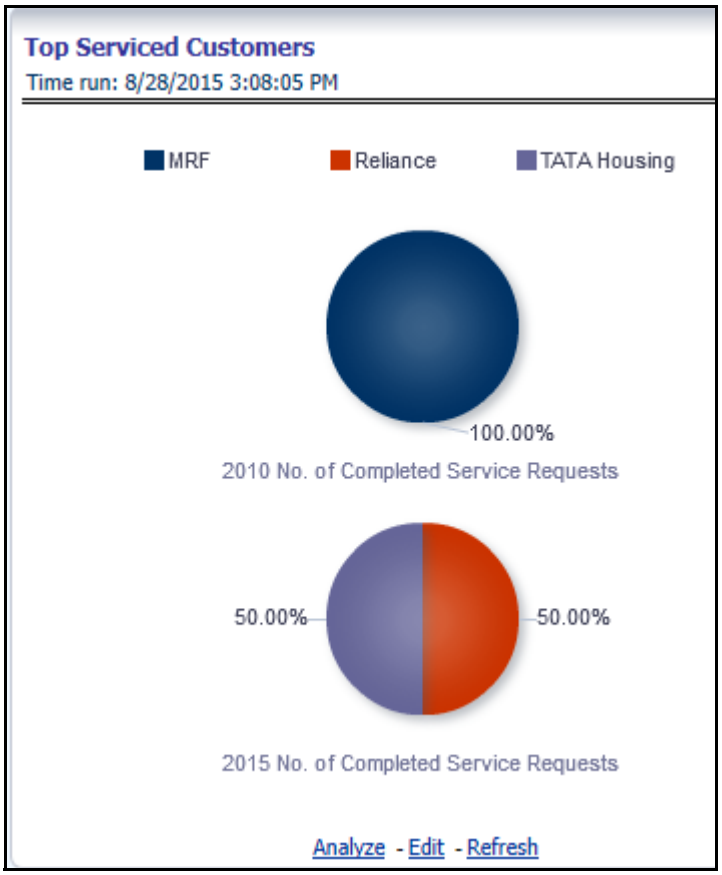


Figure 139. Top Serviced Customers

- Top 10 Serviced Products: This report provides details of the top 10 most serviced products.

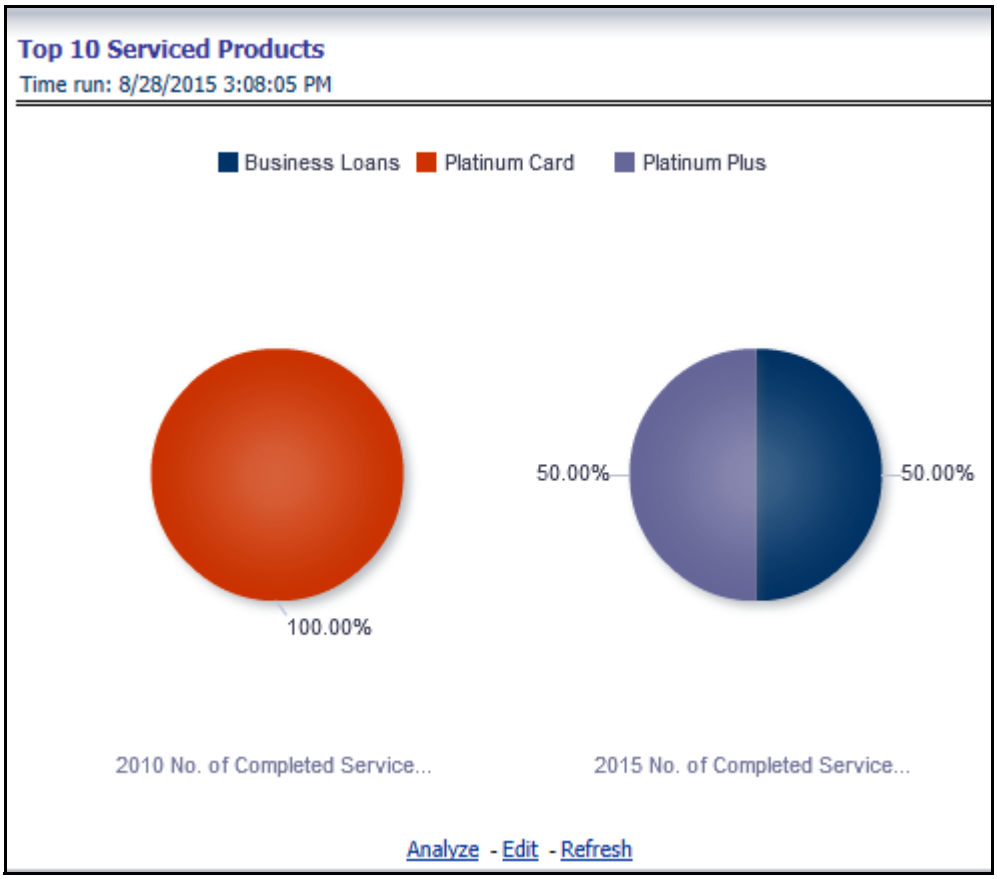


Figure 140. Top 10 Serviced Products

- Subsciptions 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.

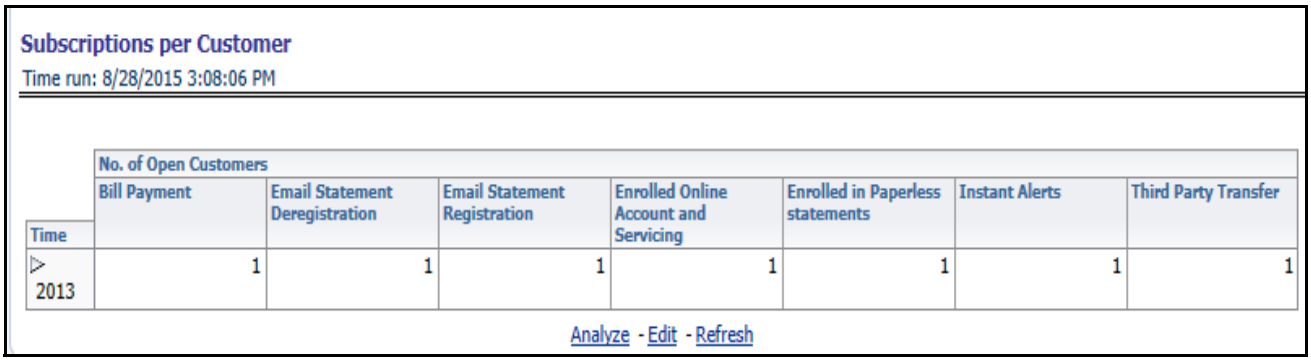
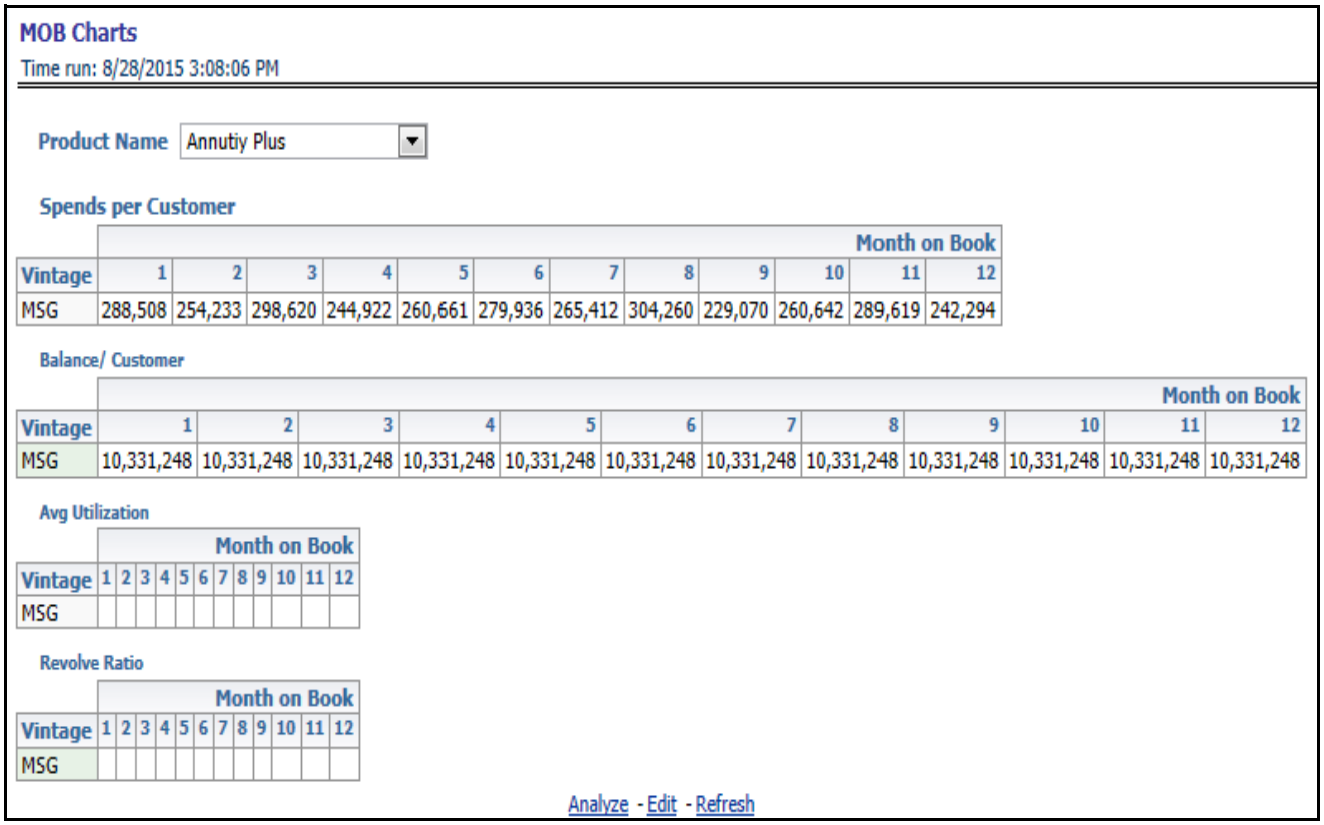


Figure 141. Subscriptions per Customer

- MOB charts: The average value of transactions for customers throughout a given period of time are detailed.



MOB Charts

Time run: 8/28/2015 3:08:06 PM

Product Name: Annutiy Plus

Spends per Customer

	Month on Book											
Vintage	1	2	3	4	5	6	7	8	9	10	11	12
MSG	288,508	254,233	298,620	244,922	260,661	279,936	265,412	304,260	229,070	260,642	289,619	242,294

Balance/ Customer

	Month on Book											
Vintage	1	2	3	4	5	6	7	8	9	10	11	12
MSG	10,331,248	10,331,248	10,331,248	10,331,248	10,331,248	10,331,248	10,331,248	10,331,248	10,331,248	10,331,248	10,331,248	10,331,248

Avg Utilization

	Month on Book											
Vintage	1	2	3	4	5	6	7	8	9	10	11	12
MSG												

Revolve Ratio

	Month on Book											
Vintage	1	2	3	4	5	6	7	8	9	10	11	12
MSG												

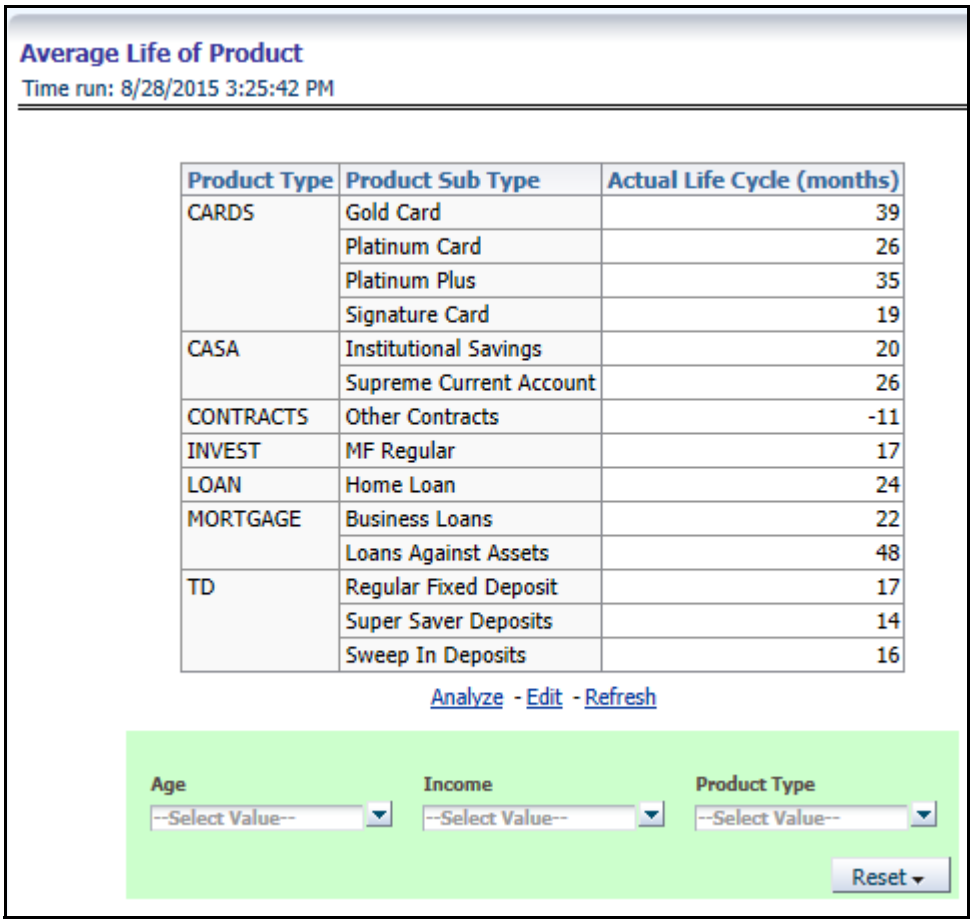
Analyze - Edit - Refresh

Figure 142. MOB charts

Customer Trends

This tab contains the following reports:

- Average life of Product: This report provides details of products in a given period of time.



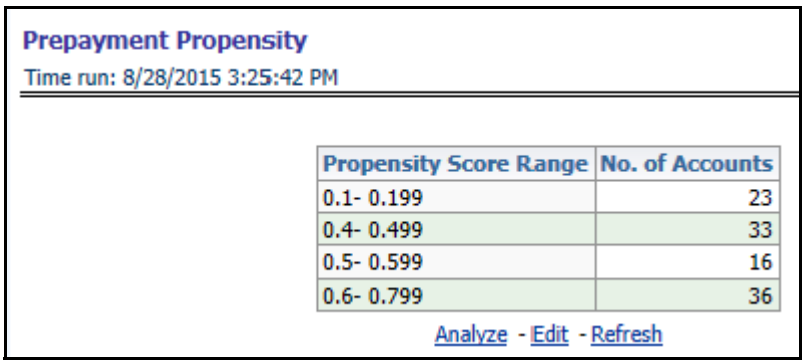
Average Life of Product

Time run: 8/28/2015 3:25:42 PM

Product Type	Product Sub Type	Actual Life Cycle (months)
CARDS	Gold Card	39
	Platinum Card	26
	Platinum Plus	35
	Signature Card	19
CASA	Institutional Savings	20
	Supreme Current Account	26
CONTRACTS	Other Contracts	-11
INVEST	MF Regular	17
LOAN	Home Loan	24
MORTGAGE	Business Loans	22
	Loans Against Assets	48
TD	Regular Fixed Deposit	17
	Super Saver Deposits	14
	Sweep In Deposits	16

Figure 143. Average life of products

- Pre-payment Propensity: This report provides details of the distribution of accounts across score ranges for a particular product and customer dimensions.



Prepayment Propensity

Time run: 8/28/2015 3:25:42 PM

Propensity Score Range	No. of Accounts
0.1- 0.199	23
0.4- 0.499	33
0.5- 0.599	16
0.6- 0.799	36

Figure 144. Pre-payment Propensity

- 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.

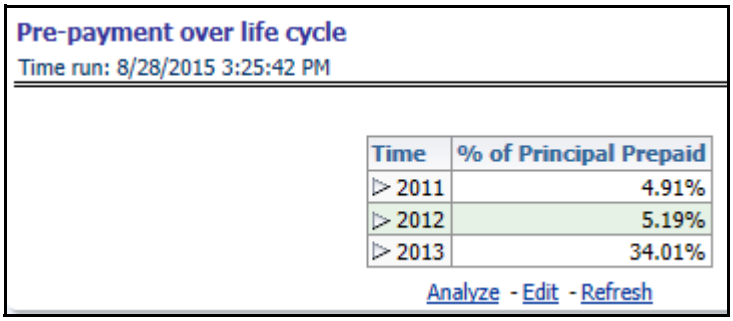


Figure 145. Pre-payment indicator over life cycle

- 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.

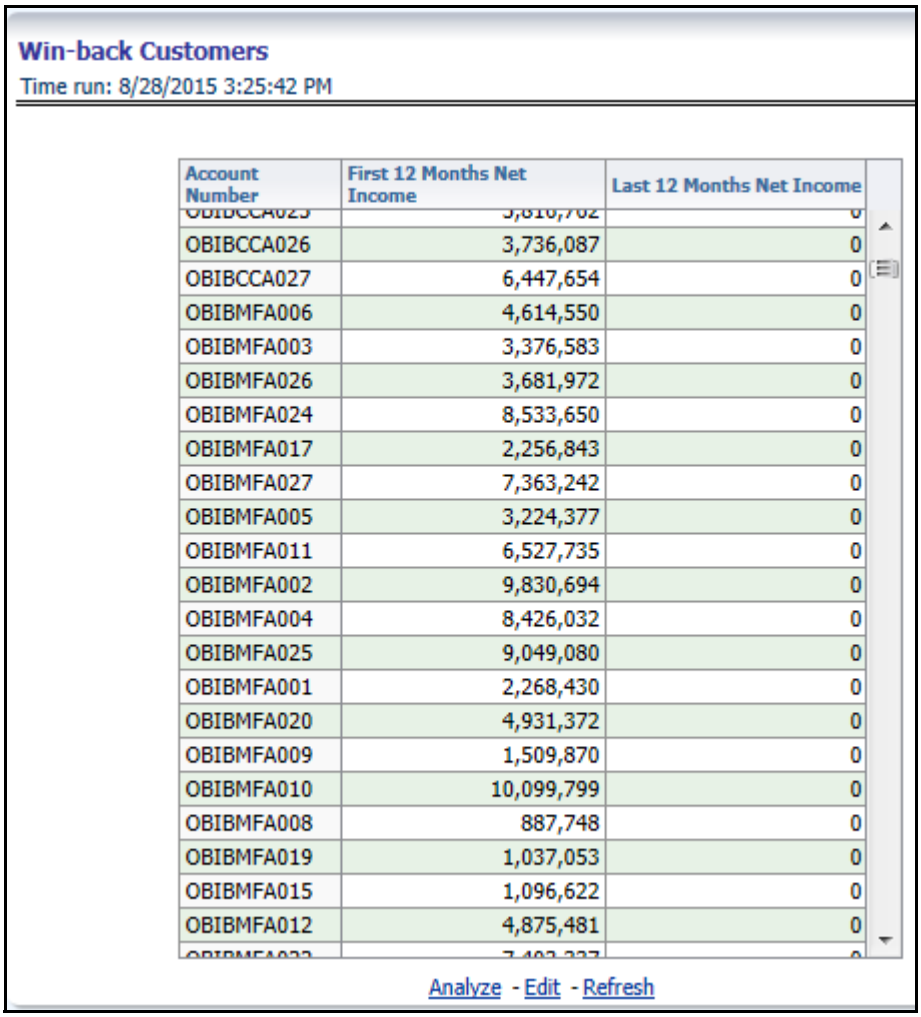


Figure 146. Win-back Customers

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.

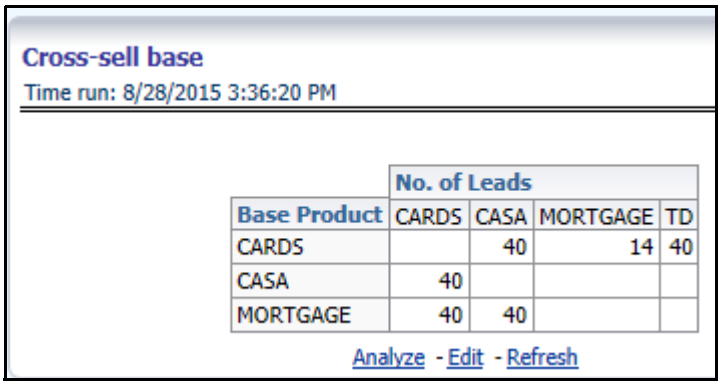


Figure 147. Cross-sell base

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

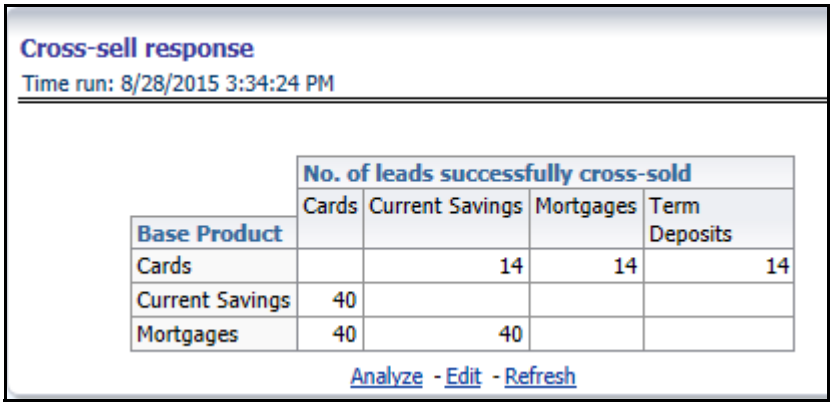
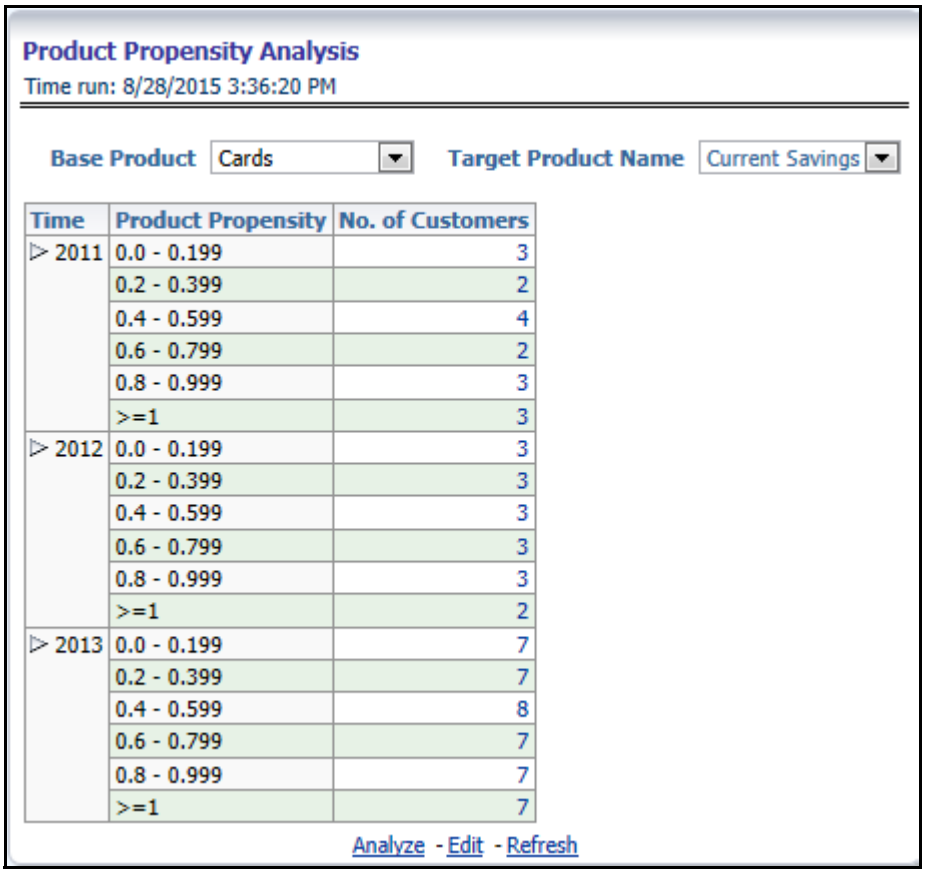


Figure 148. Cross-sell response

- 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.



Product Propensity Analysis

Time run: 8/28/2015 3:36:20 PM

Base Product: Cards Target Product Name: Current Savings

Time	Product Propensity	No. of Customers
▷ 2011	0.0 - 0.199	3
	0.2 - 0.399	2
	0.4 - 0.599	4
	0.6 - 0.799	2
	0.8 - 0.999	3
	>=1	3
▷ 2012	0.0 - 0.199	3
	0.2 - 0.399	3
	0.4 - 0.599	3
	0.6 - 0.799	3
	0.8 - 0.999	3
	>=1	2
▷ 2013	0.0 - 0.199	7
	0.2 - 0.399	7
	0.4 - 0.599	8
	0.6 - 0.799	7
	0.8 - 0.999	7
	>=1	7

Analyze - Edit - Refresh

Figure 149. Product propensity analysis

Spend Analysis

This tab contains the following reports:

- Retail POS Usage by Category (Last 6 months): This report shows the total spend for a POS usage category in last 6 months.

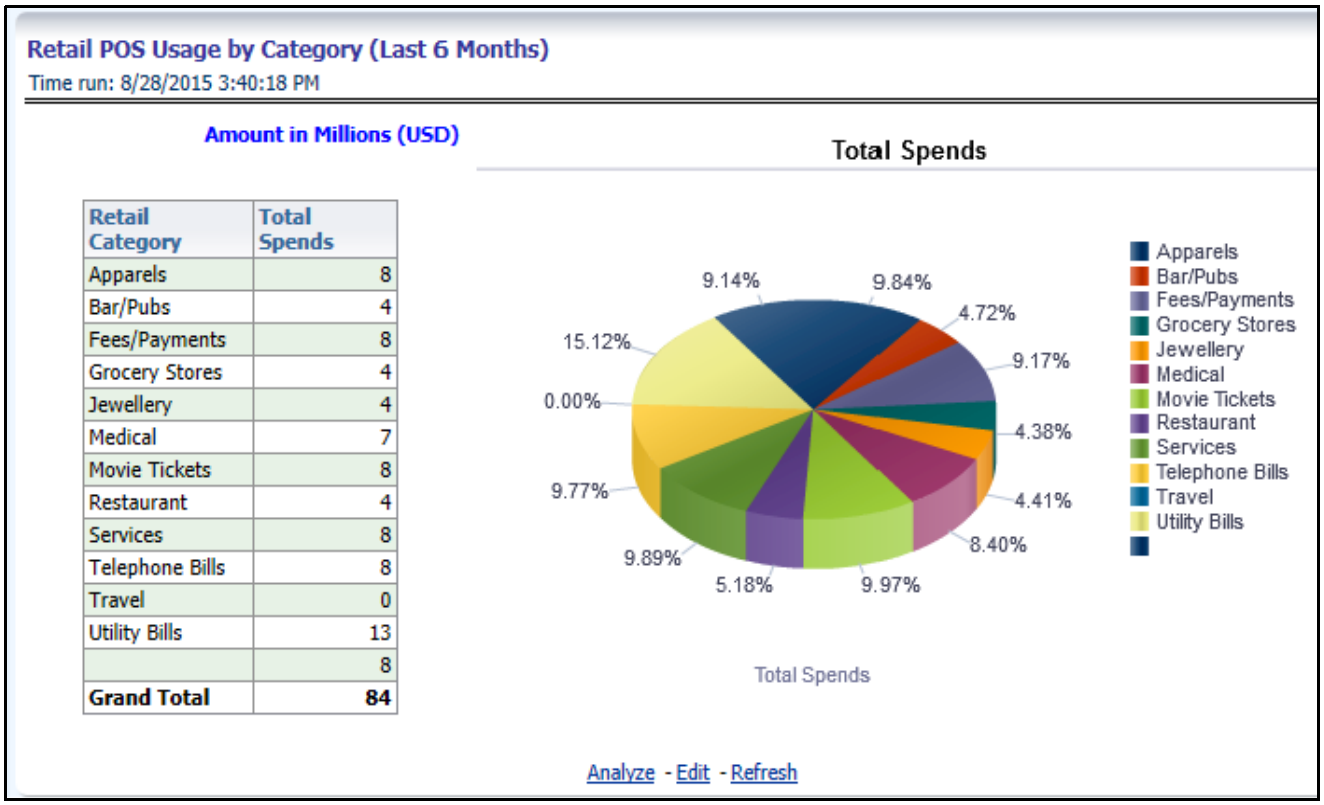


Figure 150. Retail POS Usage by Category (Last 6 months)

Retail POS Usage by Category (Last 12 months): This report shows the total spend for a POS usage category in last 12 months.

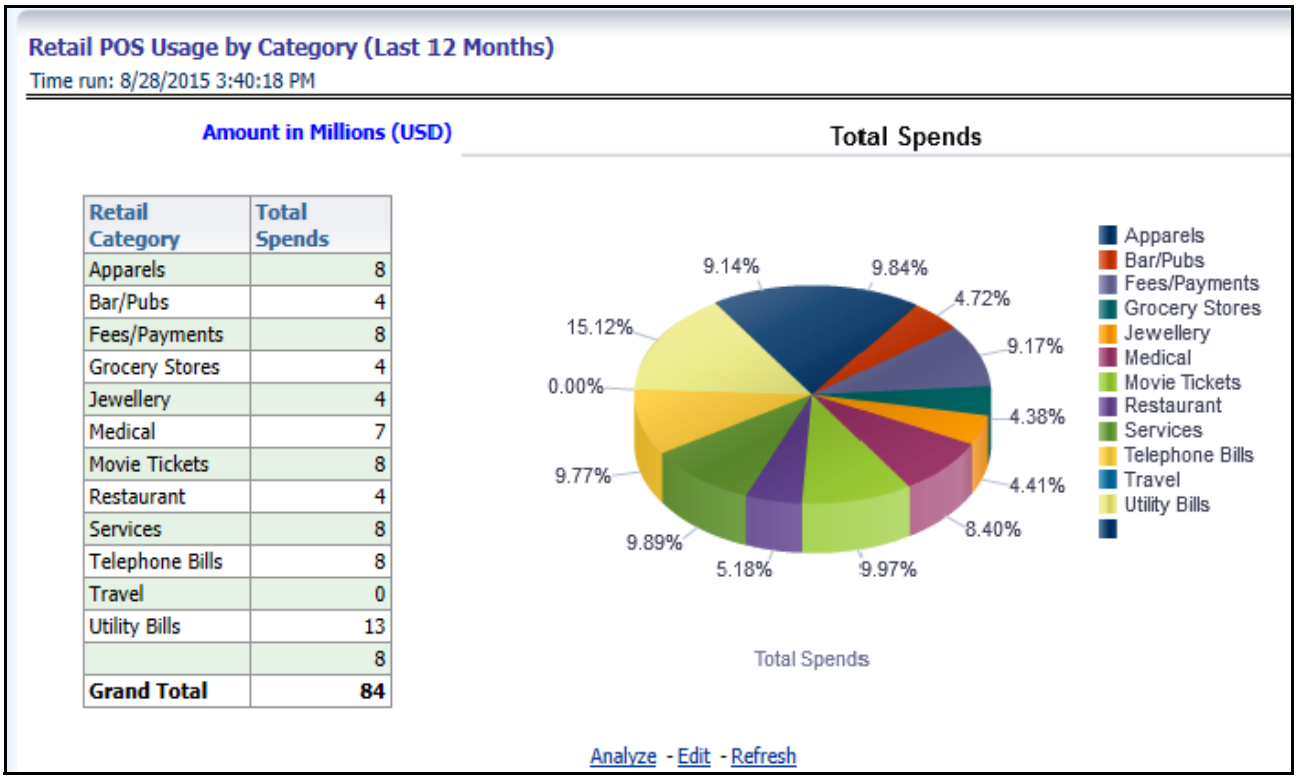


Figure 151. Retail POS Usage by Category (Last 12 months)

- Portfolio Spend Category Report: This report shows the total spends for a purchase category and the number of customers responsible for that spend.

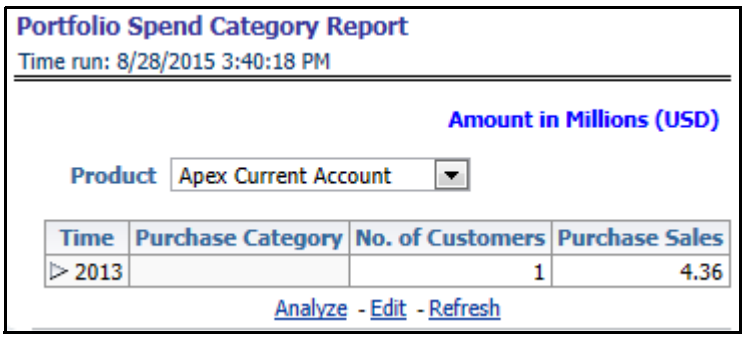
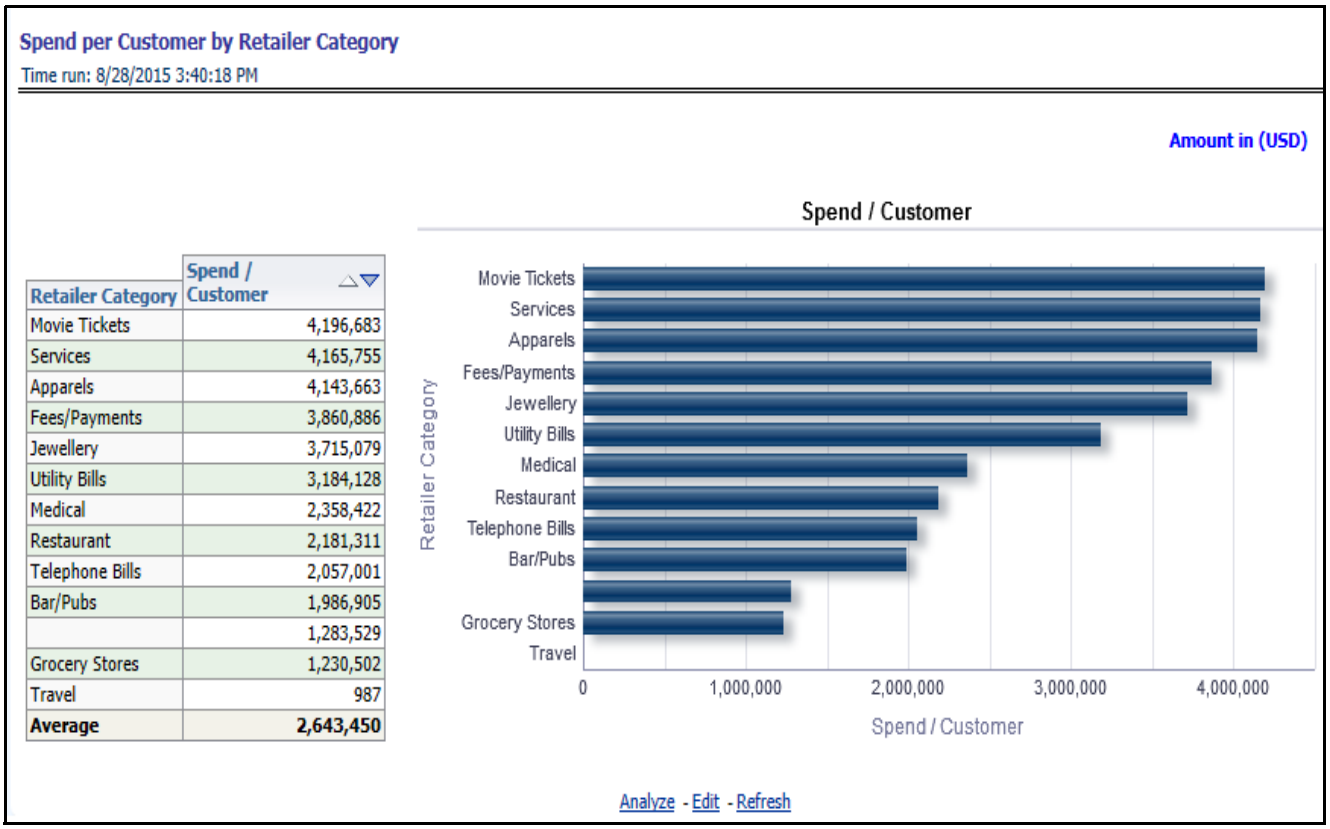


Figure 152. Portfolio Spend Category

- Spend per Transaction by Retailer Category: This report gives details of the average spend by a customer per transaction for a retailer category.

Figure 153. Spend per Transaction by Retailer Category

- Spend per Customer by Retailer Category: This report gives details of the average spend by a customer for a retailer category.



Retailer Category	Spend / Customer
Movie Tickets	4,196,683
Services	4,165,755
Apparels	4,143,663
Fees/Payments	3,860,886
Jewellery	3,715,079
Utility Bills	3,184,128
Medical	2,358,422
Restaurant	2,181,311
Telephone Bills	2,057,001
Bar/Pubs	1,986,905
	1,283,529
Grocery Stores	1,230,502
Travel	987
Average	**2,643,450**

Figure 154. Spend per Customer by Retailer Category

- Top 10 Retailer Categories: This report ranks the retailer categories based on the total spends made within that category.

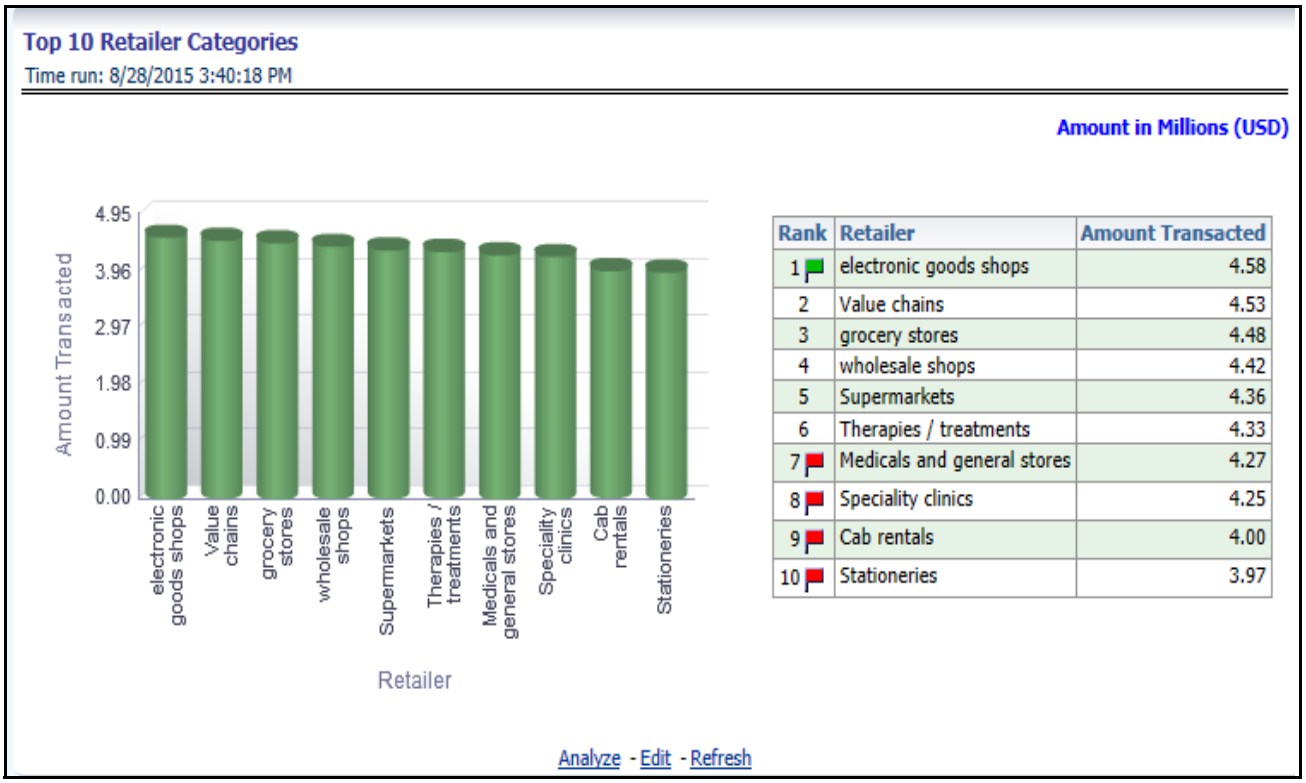


Figure 155. Top 10 Retailer Categories

- Spends Consistency: This report categorizes the customers based on the consistency they have maintained in spend amount.

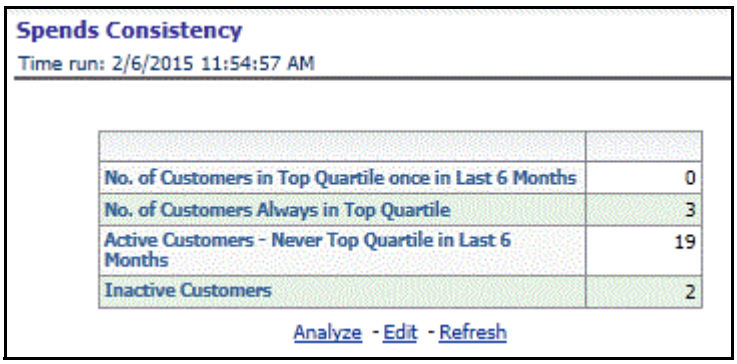


Figure 156. Spends Consistency Report

- Spend per Transaction by Customer Segment: This report gives details of the average spend by a customer per transaction within a customer segment.

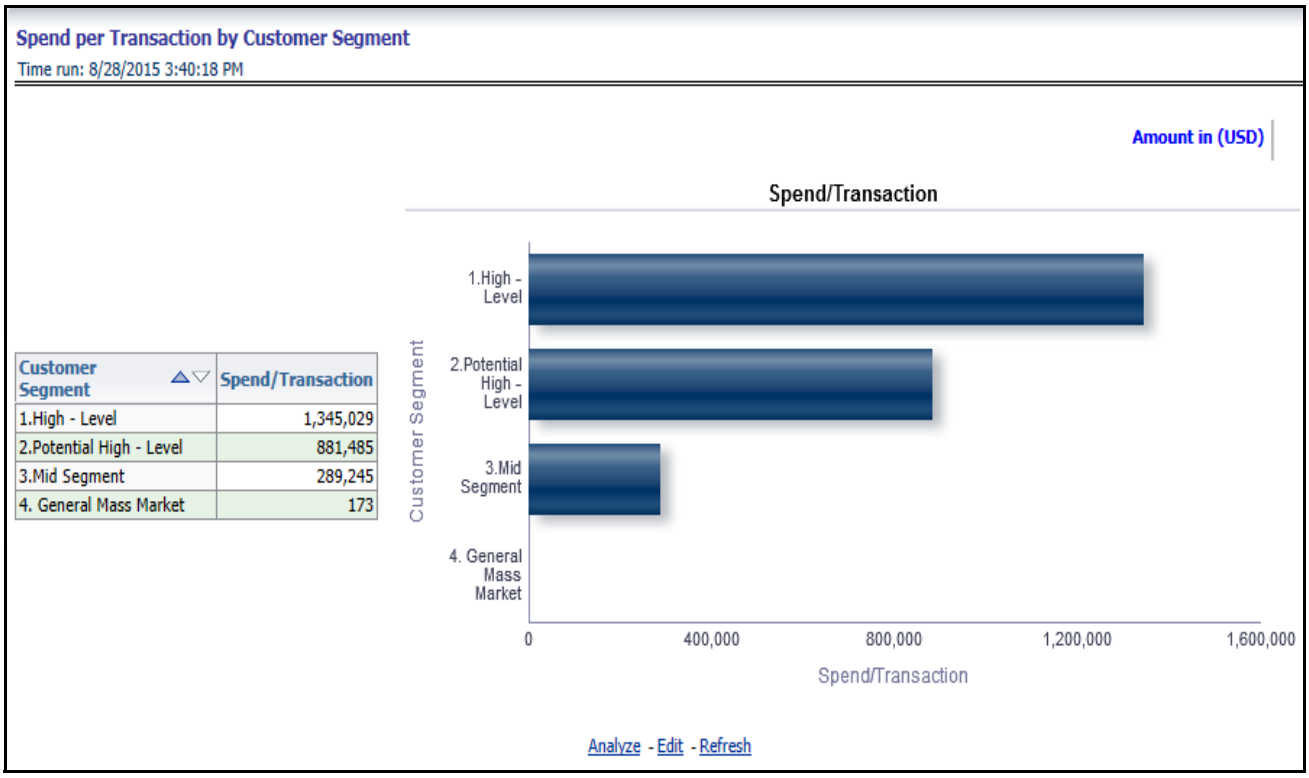


Figure 157. Spend per Transaction by Customer Segment

- Spend per Customer by Customer Segment: This report gives details of the average spend by a customer within a customer segment.

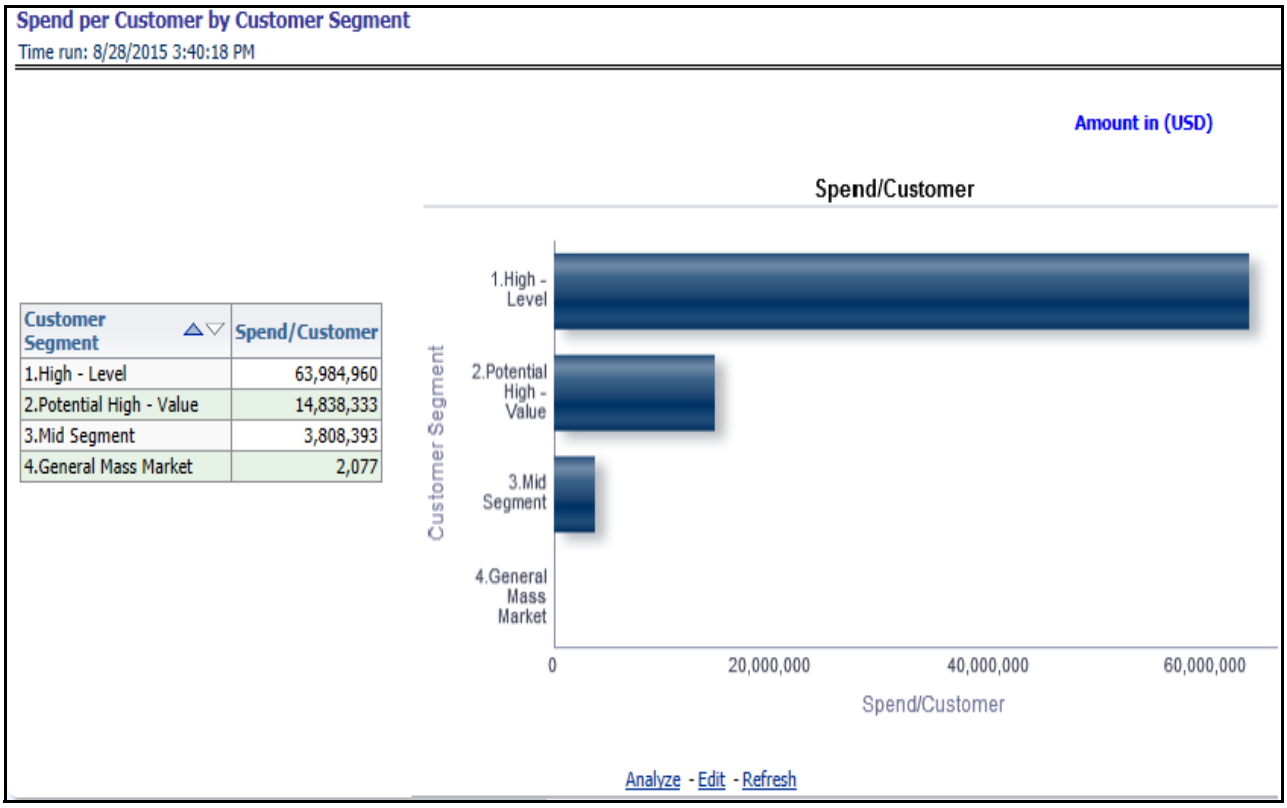
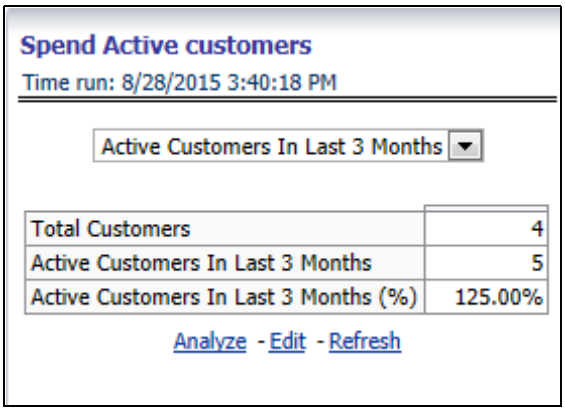


Figure 158. Spend per Customer by Customer Segment

- Spends: Customer Decile distribution: This report shows the average spends of a customer for each decile created based on spend amount.

Figure 159. Spends: Customer Decile distribution

- Spend Active Customers: This report shows the list of active customers created based on spend amount.



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.

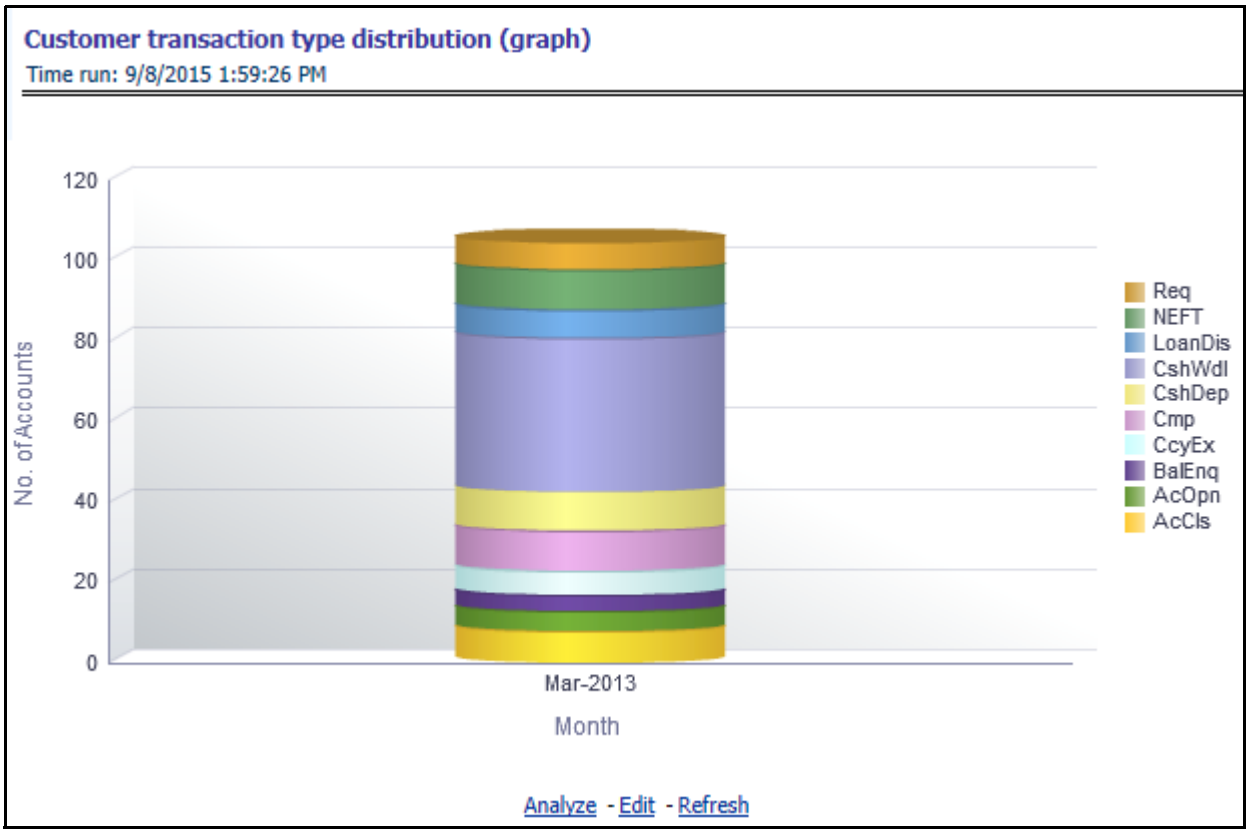
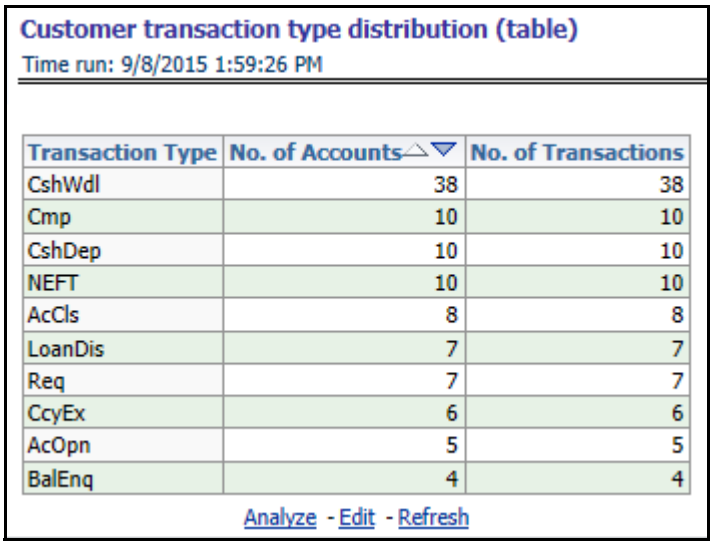


Figure 160. Customer transaction type distribution (graph)

- 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)

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Transaction Type	No. of Accounts	No. of Transactions
CshWdl	38	38
Cmp	10	10
CshDep	10	10
NEFT	10	10
AcCls	8	8
LoanDis	7	7
Req	7	7
CcyEx	6	6
AcOpn	5	5
BalEnq	4	4

Analyze - Edit - Refresh

Figure 161. Customer transaction type distribution (table)

- Customer Distribution by Average Transaction Value: This report provides the details of distribution of customers with respect to transaction amount.

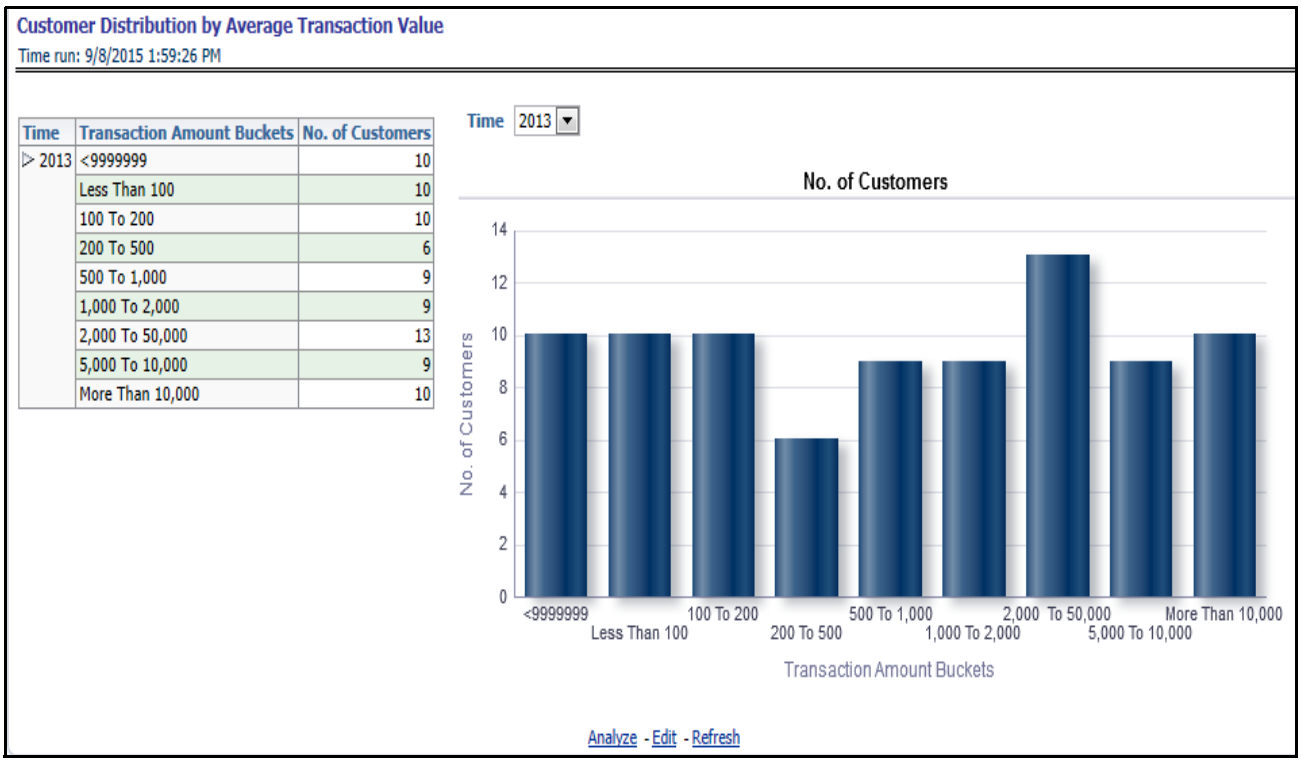


Figure 162. Customer Distribution by Average Transaction Value

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

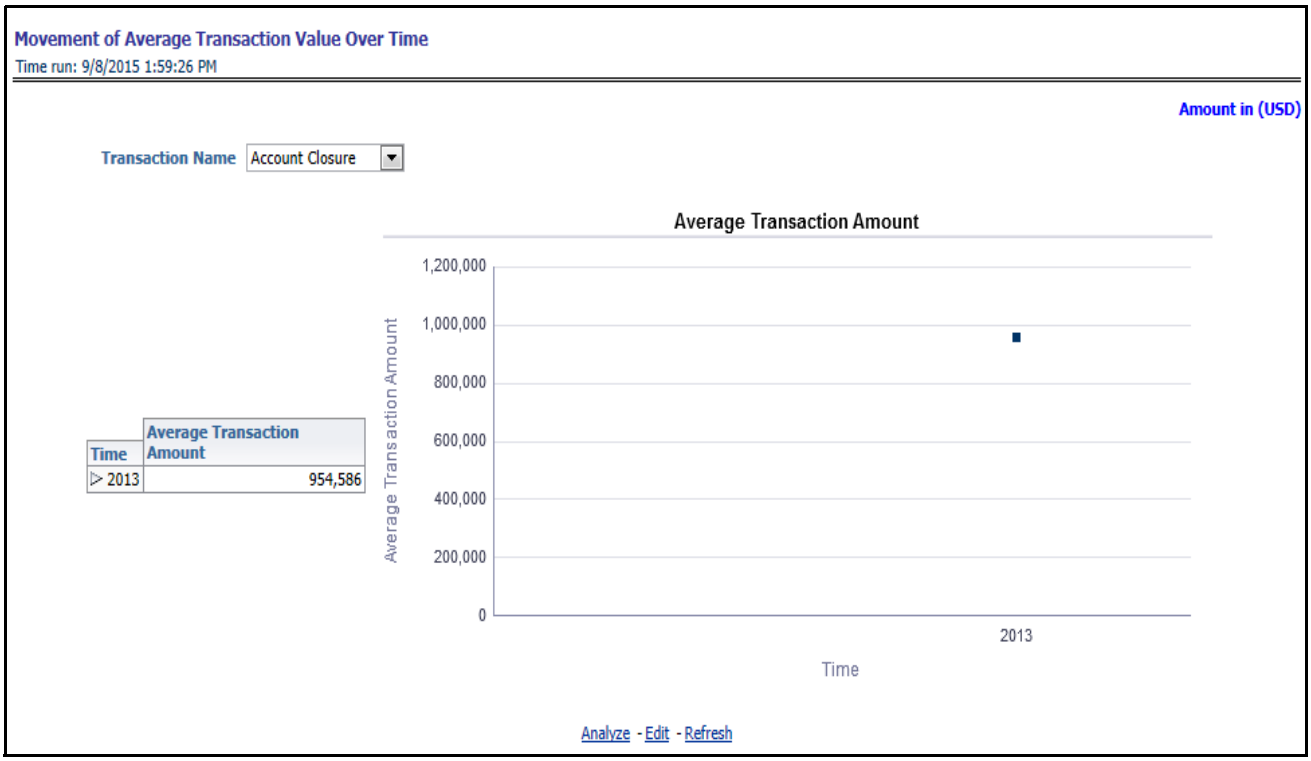


Figure 163. Movement of average transaction value over time

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

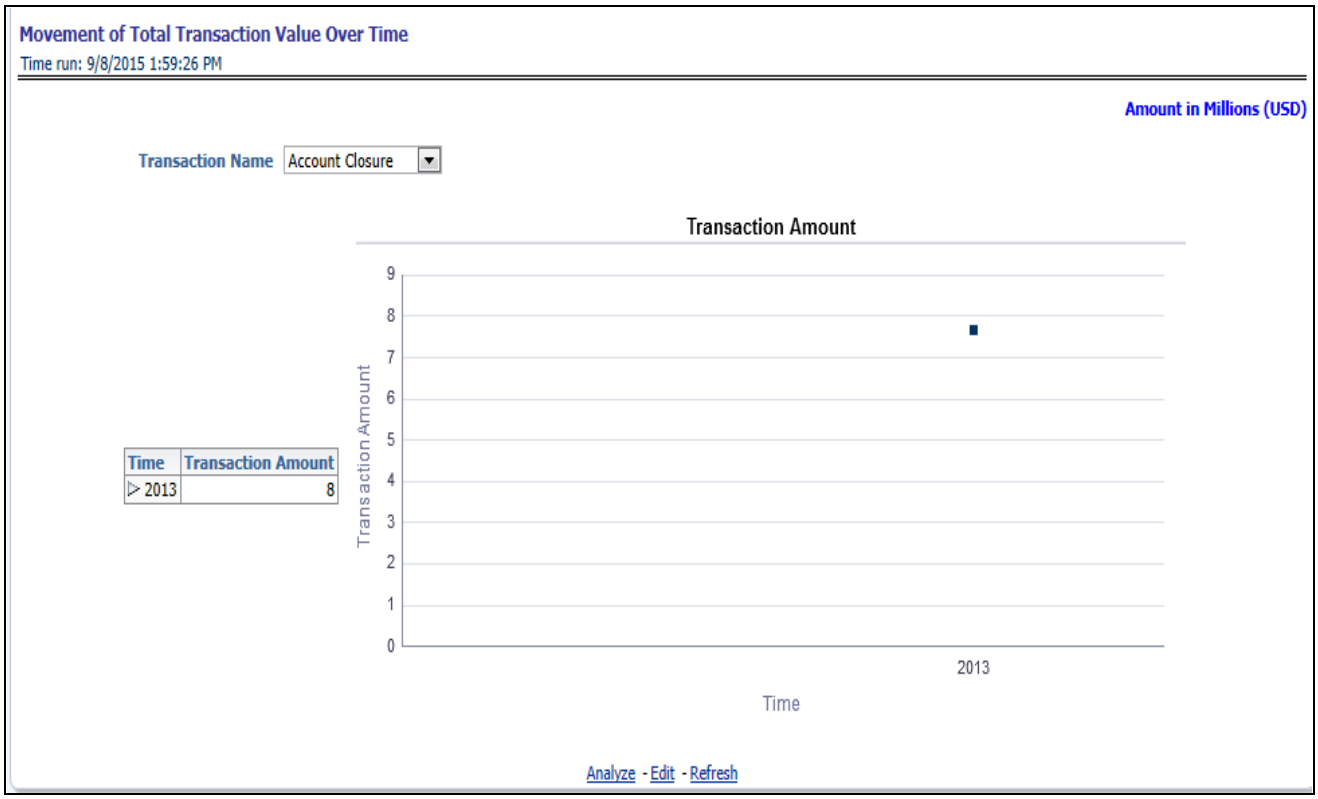
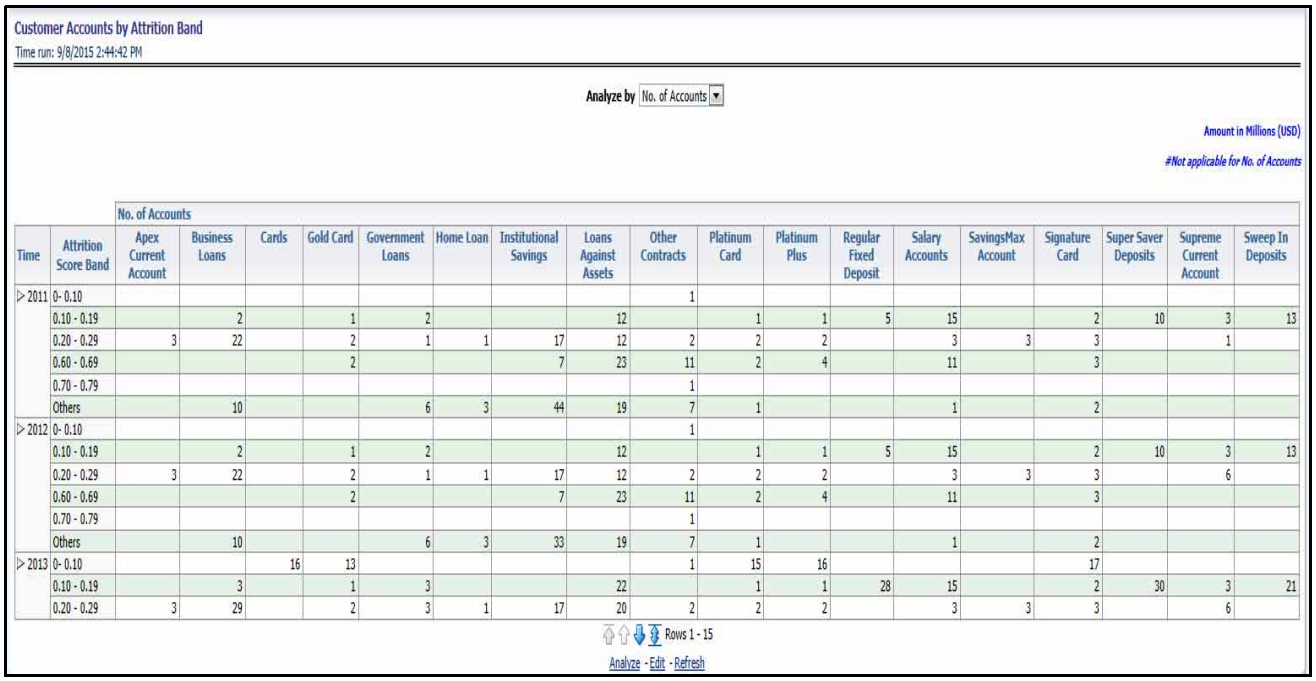


Figure 164. Movement of total transaction value over time

Attrition Analysis

This tab contains the following reports:

- Customer Accounts by Attrition Band: This report displays the distribution of accounts within each attrition band for each product type.



Customer Accounts by Attrition Band

Time run: 9/8/2015 2:44:42 PM

Analyze by No. of Accounts

Amount in Millions (USD)

#Not applicable for No. of Accounts

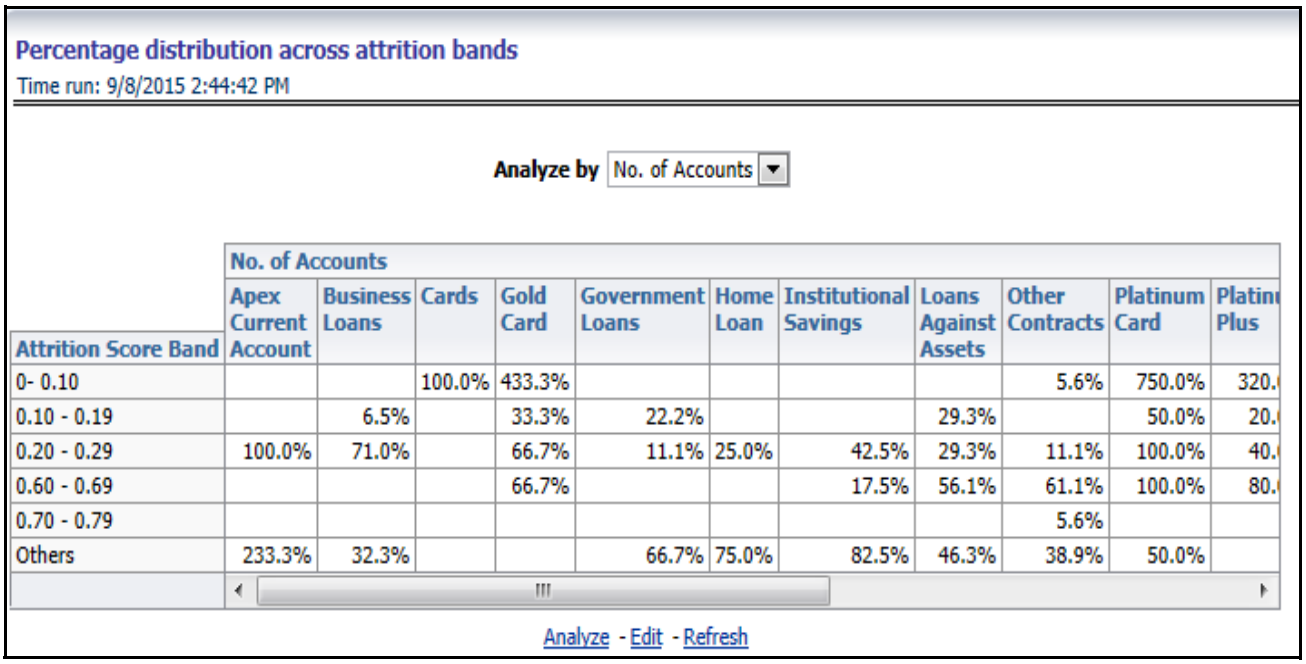
		No. of Accounts																	
Time	Attrition Score Band	Apex Current Account	Business Loans	Cards	Gold Card	Government Loans	Home Loan	Institutional Savings	Loans Against Assets	Other Contracts	Platinum Card	Platinum Plus	Regular Fixed Deposit	Salary Accounts	SavingsMax Account	Signature Card	Super Saver Deposits	Supreme Current Account	Sweep In Deposits
▷ 2011	0- 0.10									1									
	0.10 - 0.19		2		1	2			12		1	1	5	15		2	10	3	13
	0.20 - 0.29	3	22		2	1	1	17	12	2	2	2		3	3	3		1	
	0.60 - 0.69				2			7	23	11	2	4		11		3			
	0.70 - 0.79									1									
	Others		10			6	3	44	19	7	1			1		2			
▷ 2012	0- 0.10									1									
	0.10 - 0.19		2		1	2			12		1	1	5	15		2	10	3	13
	0.20 - 0.29	3	22		2	1	1	17	12	2	2	2		3	3	3		6	
	0.60 - 0.69				2			7	23	11	2	4		11		3			
	0.70 - 0.79									1									
	Others		10			6	3	33	19	7	1			1		2			
▷ 2013	0- 0.10			16	13					1	15	16				17			
	0.10 - 0.19		3		1	3			22		1	1	28	15		2	30	3	21
	0.20 - 0.29	3	29		2	3	1	17	20	2	2	2		3	3	3		6	

Rows 1 - 15

Analyze - Edit - Refresh

Figure 165. Customer Accounts by Attrition Band

- 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: 9/8/2015 2:44:42 PM

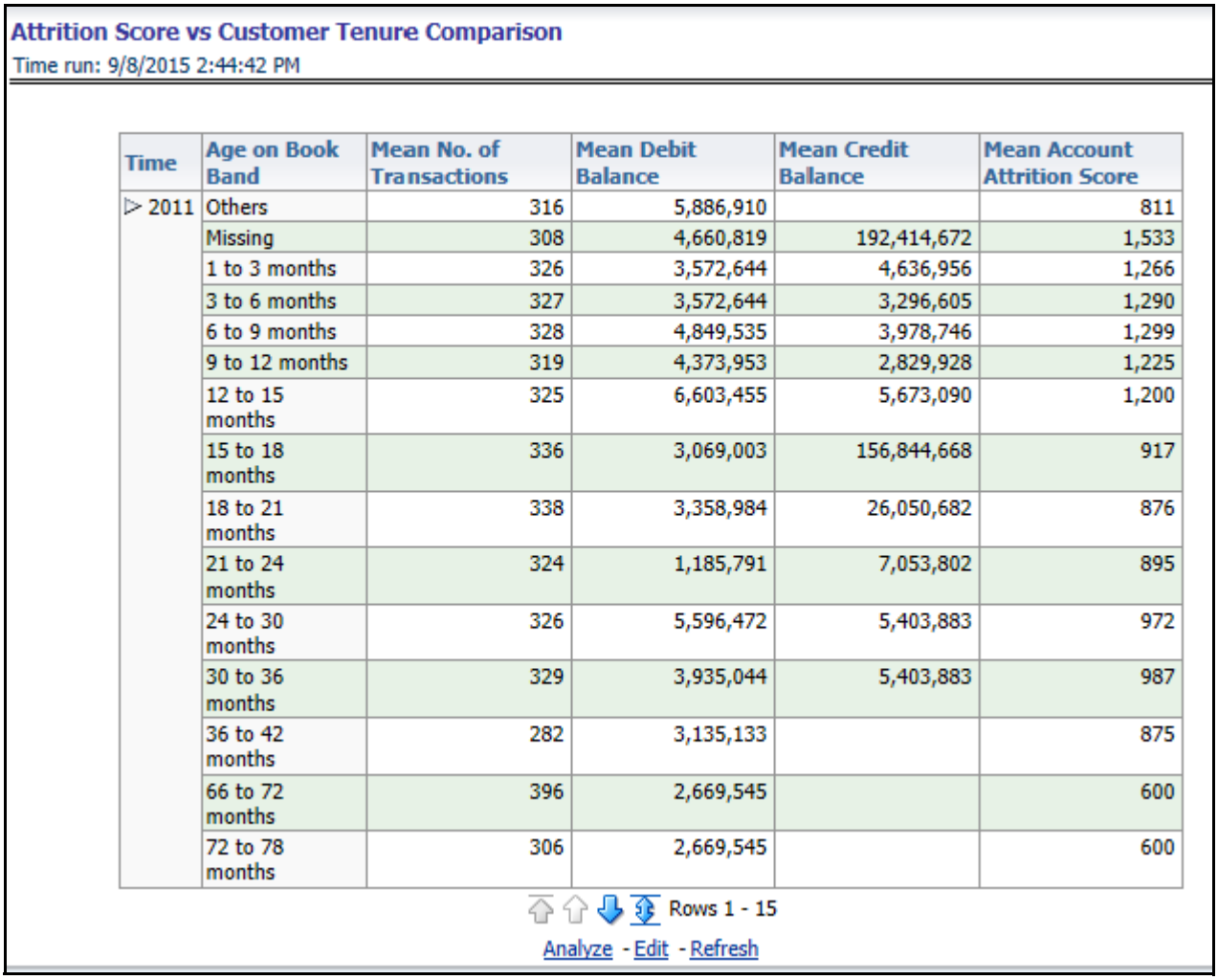
Analyze by No. of Accounts

	No. of Accounts										
Attrition Score Band	Apex Current Account	Business Loans	Cards	Gold Card	Government Loans	Home Loan	Institutional Savings	Loans Against Assets	Other Contracts	Platinum Card	Platinu Plus
0- 0.10			100.0%	433.3%					5.6%	750.0%	320.(
0.10 - 0.19		6.5%		33.3%	22.2%			29.3%		50.0%	20.(
0.20 - 0.29	100.0%	71.0%		66.7%	11.1%	25.0%	42.5%	29.3%	11.1%	100.0%	40.(
0.60 - 0.69				66.7%			17.5%	56.1%	61.1%	100.0%	80.(
0.70 - 0.79									5.6%		
Others	233.3%	32.3%			66.7%	75.0%	82.5%	46.3%	38.9%	50.0%	

Analyze - Edit - Refresh

Figure 166. Percentage distribution across attrition bands

- Attrition score vs Customer tenure Comparison: This report provides the details of the transaction for a segment of existing customers with active accounts.



Attrition Score vs Customer Tenure Comparison

Time run: 9/8/2015 2:44:42 PM

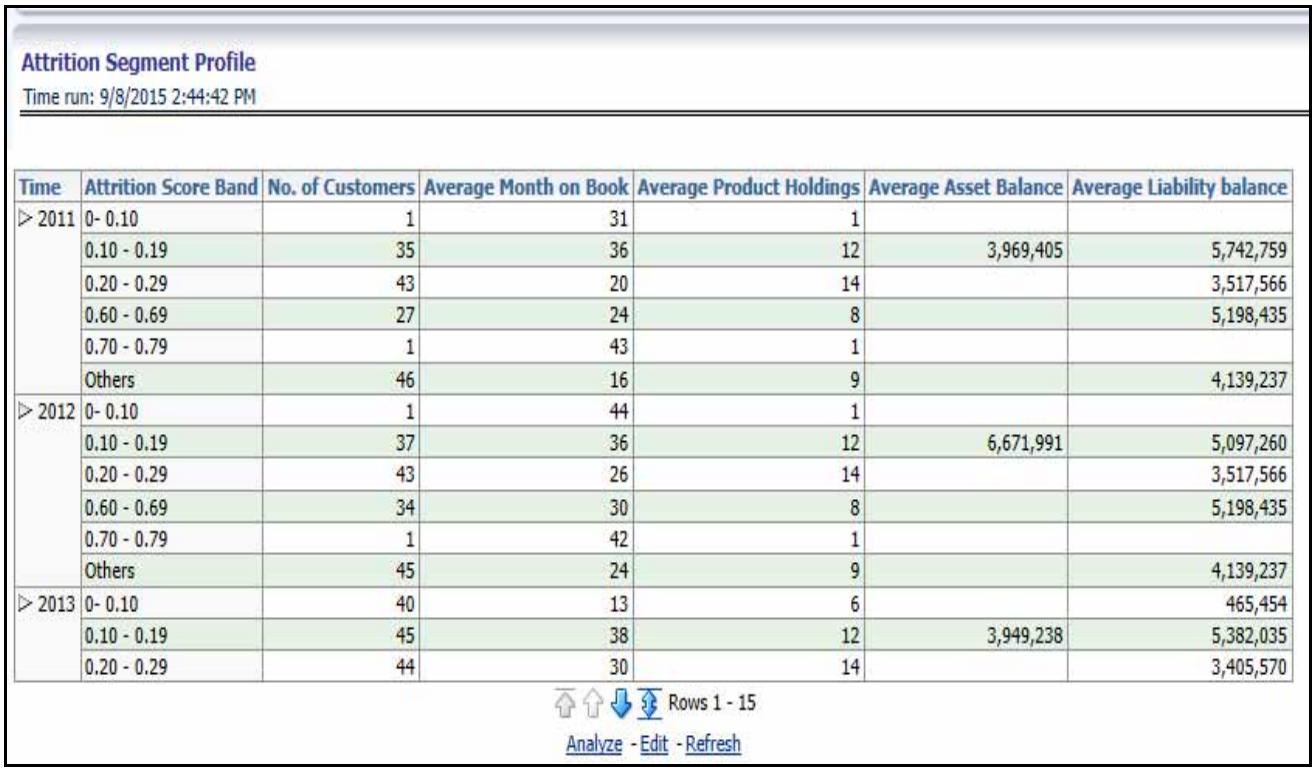
Time	Age on Book Band	Mean No. of Transactions	Mean Debit Balance	Mean Credit Balance	Mean Account Attrition Score
▷ 2011	Others	316	5,886,910		811
	Missing	308	4,660,819	192,414,672	1,533
	1 to 3 months	326	3,572,644	4,636,956	1,266
	3 to 6 months	327	3,572,644	3,296,605	1,290
	6 to 9 months	328	4,849,535	3,978,746	1,299
	9 to 12 months	319	4,373,953	2,829,928	1,225
	12 to 15 months	325	6,603,455	5,673,090	1,200
	15 to 18 months	336	3,069,003	156,844,668	917
	18 to 21 months	338	3,358,984	26,050,682	876
	21 to 24 months	324	1,185,791	7,053,802	895
	24 to 30 months	326	5,596,472	5,403,883	972
	30 to 36 months	329	3,935,044	5,403,883	987
	36 to 42 months	282	3,135,133		875
	66 to 72 months	396	2,669,545		600
	72 to 78 months	306	2,669,545		600

Rows 1 - 15

Analyze - Edit - Refresh

Figure 167. Attrition score vs Customer tenure Comparison

- Attrition Segment Profile: This report provides details of the profile of segment of customers in a particular attrition band.



Attrition Segment Profile

Time run: 9/8/2015 2:44:42 PM

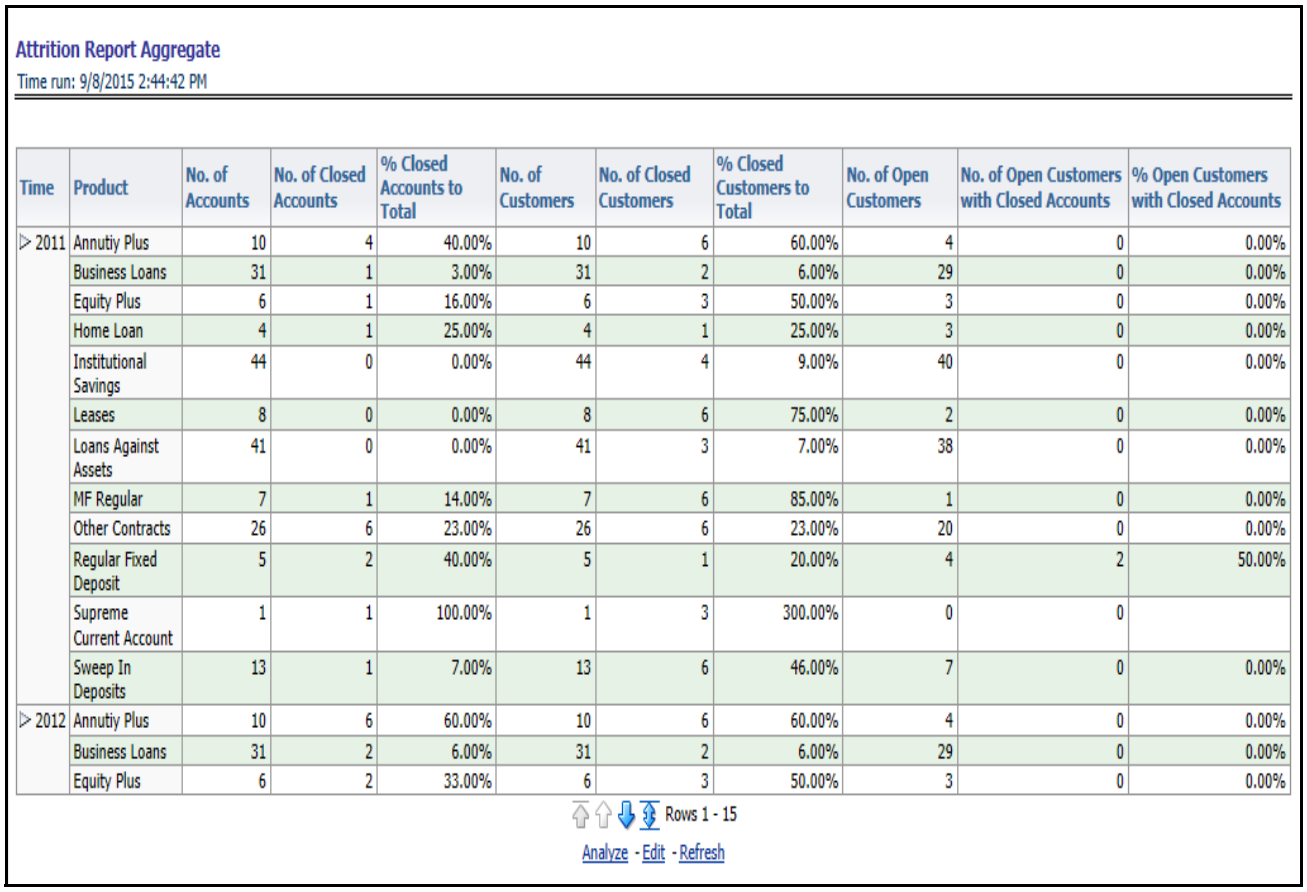
Time	Attrition Score Band	No. of Customers	Average Month on Book	Average Product Holdings	Average Asset Balance	Average Liability balance
▷ 2011	0- 0.10	1	31	1		
	0.10 - 0.19	35	36	12	3,969,405	5,742,759
	0.20 - 0.29	43	20	14		3,517,566
	0.60 - 0.69	27	24	8		5,198,435
	0.70 - 0.79	1	43	1		
	Others	46	16	9		4,139,237
▷ 2012	0- 0.10	1	44	1		
	0.10 - 0.19	37	36	12	6,671,991	5,097,260
	0.20 - 0.29	43	26	14		3,517,566
	0.60 - 0.69	34	30	8		5,198,435
	0.70 - 0.79	1	42	1		
	Others	45	24	9		4,139,237
▷ 2013	0- 0.10	40	13	6		465,454
	0.10 - 0.19	45	38	12	3,949,238	5,382,035
	0.20 - 0.29	44	30	14		3,405,570

Rows 1 - 15

Analyze - Edit - Refresh

Figure 168. Attrition Segment Profile

- Attrition Report Aggregate: This report provides the percentage of accounts and customers attriting across products.



Attrition Report Aggregate

Time run: 9/8/2015 2:44:42 PM

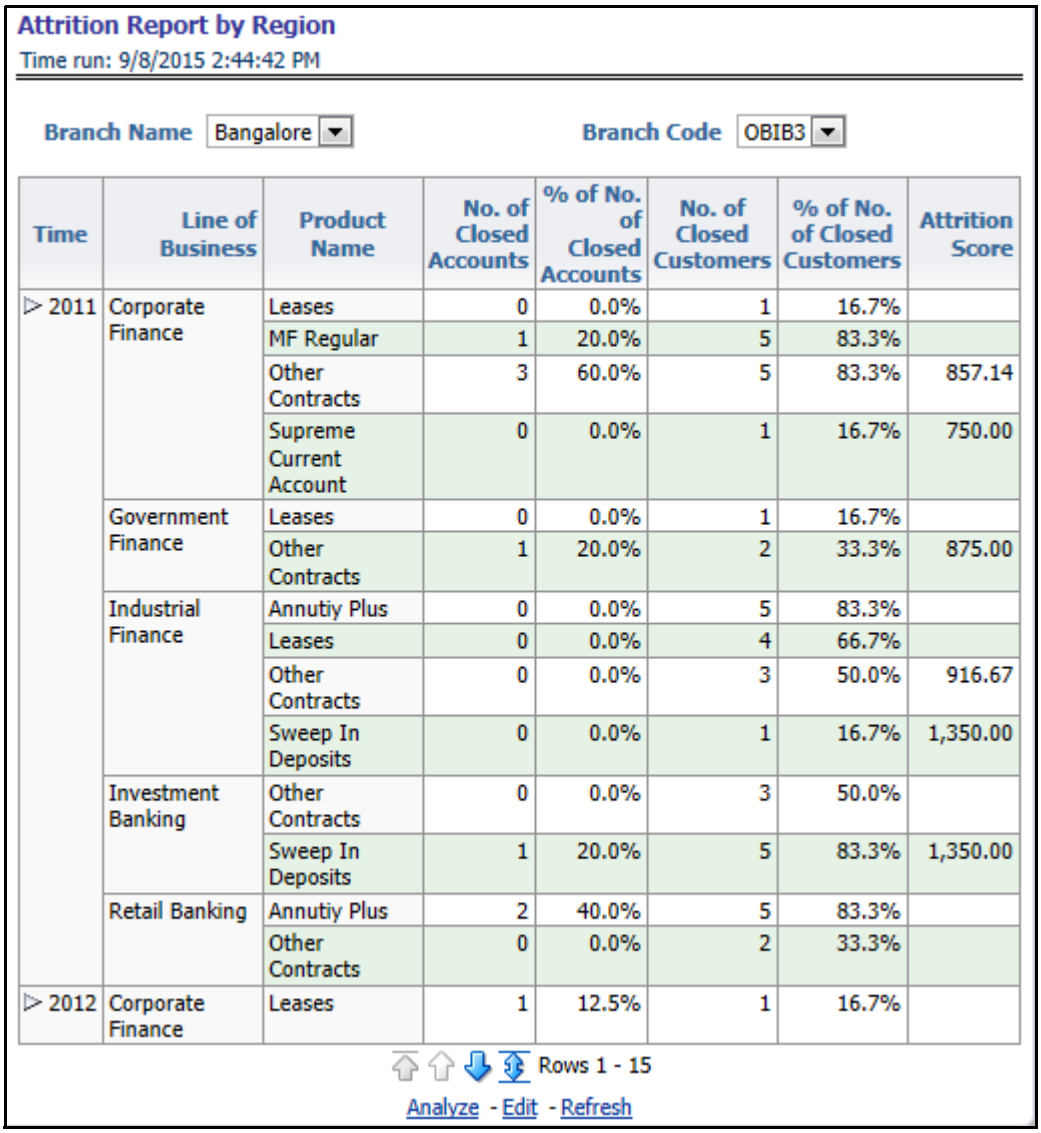
Time	Product	No. of Accounts	No. of Closed Accounts	% Closed Accounts to Total	No. of Customers	No. of Closed Customers	% Closed Customers to Total	No. of Open Customers	No. of Open Customers with Closed Accounts	% Open Customers with Closed Accounts
▷ 2011	Annutiy Plus	10	4	40.00%	10	6	60.00%	4	0	0.00%
	Business Loans	31	1	3.00%	31	2	6.00%	29	0	0.00%
	Equity Plus	6	1	16.00%	6	3	50.00%	3	0	0.00%
	Home Loan	4	1	25.00%	4	1	25.00%	3	0	0.00%
	Institutional Savings	44	0	0.00%	44	4	9.00%	40	0	0.00%
	Leases	8	0	0.00%	8	6	75.00%	2	0	0.00%
	Loans Against Assets	41	0	0.00%	41	3	7.00%	38	0	0.00%
	MF Regular	7	1	14.00%	7	6	85.00%	1	0	0.00%
	Other Contracts	26	6	23.00%	26	6	23.00%	20	0	0.00%
	Regular Fixed Deposit	5	2	40.00%	5	1	20.00%	4	2	50.00%
	Supreme Current Account	1	1	100.00%	1	3	300.00%	0	0	
	Sweep In Deposits	13	1	7.00%	13	6	46.00%	7	0	0.00%
▷ 2012	Annutiy Plus	10	6	60.00%	10	6	60.00%	4	0	0.00%
	Business Loans	31	2	6.00%	31	2	6.00%	29	0	0.00%
	Equity Plus	6	2	33.00%	6	3	50.00%	3	0	0.00%

Rows 1 - 15

Analyze - Edit - Refresh

Figure 169. Attrition Report Aggregate

- Attrition Report by Region: This report provides the details of attrition for a particular region.



Attrition Report by Region

Time run: 9/8/2015 2:44:42 PM

Branch Name: Bangalore Branch Code: OBIB3

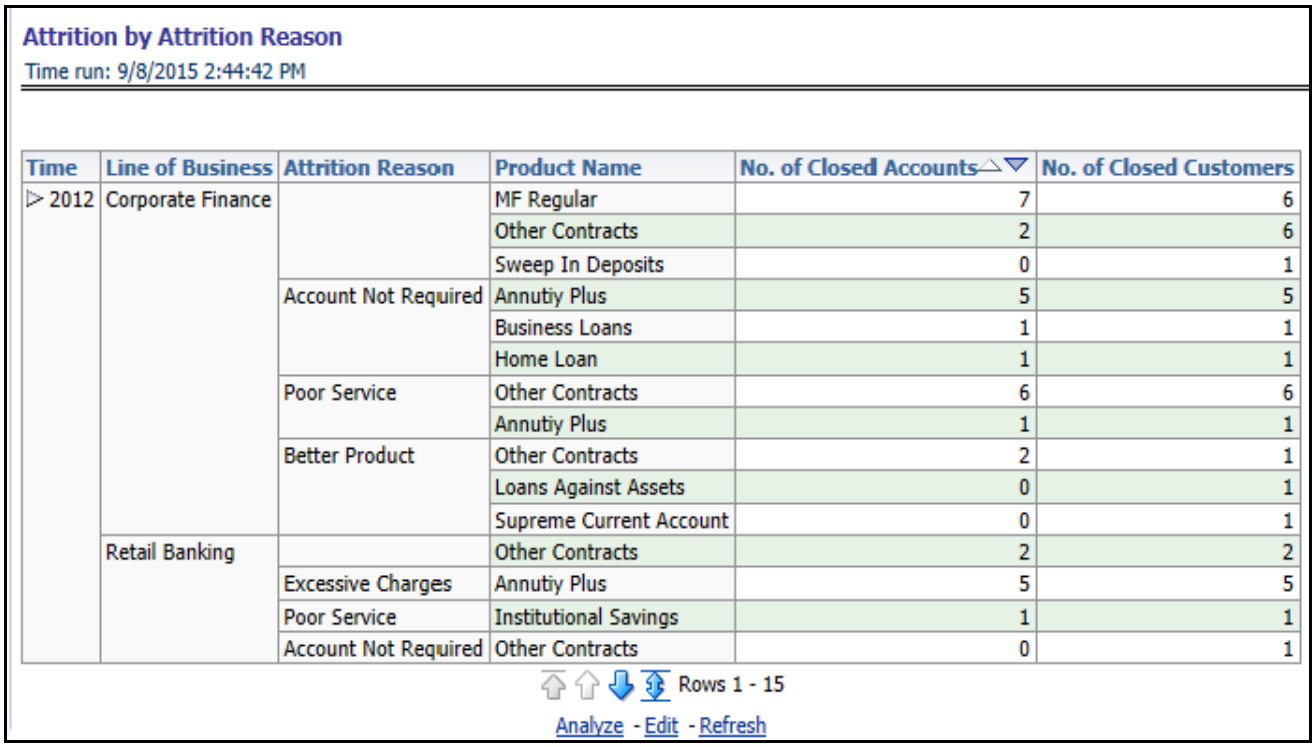
Time	Line of Business	Product Name	No. of Closed Accounts	% of No. of Closed Accounts	No. of Closed Customers	% of No. of Closed Customers	Attrition Score
▷ 2011	Corporate Finance	Leases	0	0.0%	1	16.7%	
		MF Regular	1	20.0%	5	83.3%	
		Other Contracts	3	60.0%	5	83.3%	857.14
		Supreme Current Account	0	0.0%	1	16.7%	750.00
	Government Finance	Leases	0	0.0%	1	16.7%	
		Other Contracts	1	20.0%	2	33.3%	875.00
	Industrial Finance	Annutiy Plus	0	0.0%	5	83.3%	
		Leases	0	0.0%	4	66.7%	
		Other Contracts	0	0.0%	3	50.0%	916.67
		Sweep In Deposits	0	0.0%	1	16.7%	1,350.00
	Investment Banking	Other Contracts	0	0.0%	3	50.0%	
		Sweep In Deposits	1	20.0%	5	83.3%	1,350.00
	Retail Banking	Annutiy Plus	2	40.0%	5	83.3%	
		Other Contracts	0	0.0%	2	33.3%	
▷ 2012	Corporate Finance	Leases	1	12.5%	1	16.7%	

Rows 1 - 15

Analyze - Edit - Refresh

Figure 170. Attrition Report by Region

- Attrition by Attrition Reason: This report provides details of the reason of attrition across products and LoBs.



Attrition by Attrition Reason

Time run: 9/8/2015 2:44:42 PM

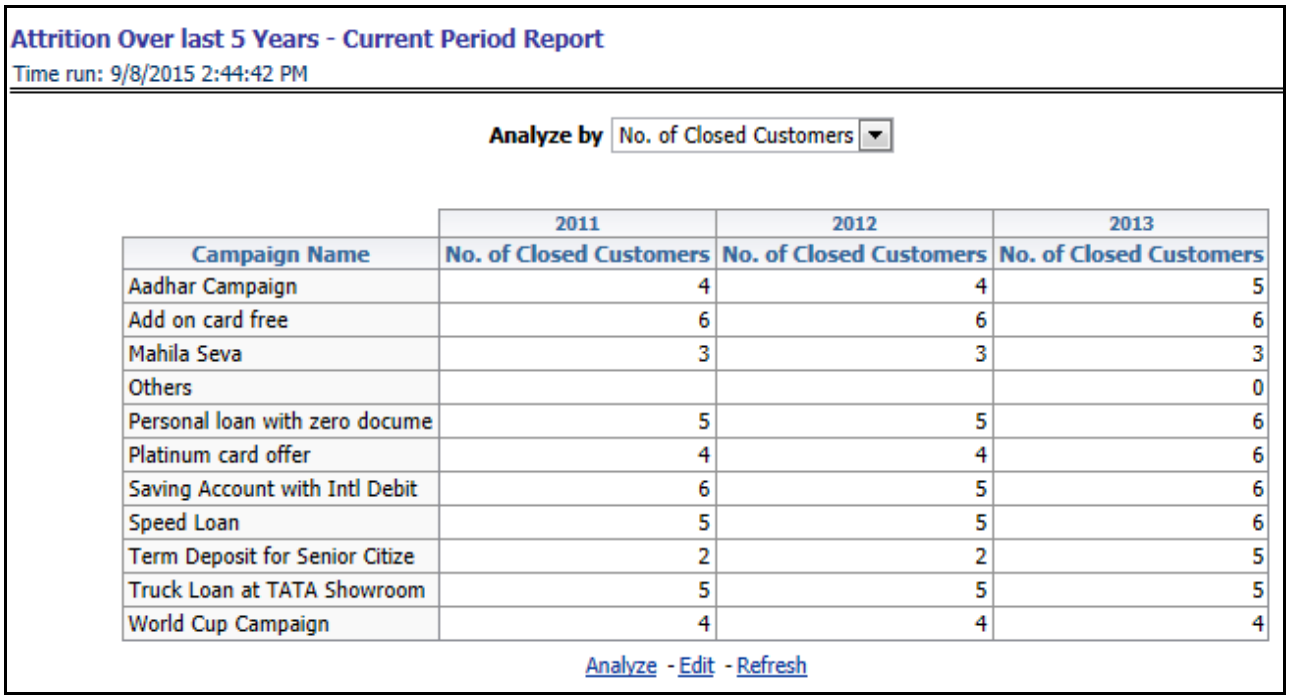
Time	Line of Business	Attrition Reason	Product Name	No. of Closed Accounts	No. of Closed Customers
▷ 2012	Corporate Finance		MF Regular	7	6
			Other Contracts	2	6
			Sweep In Deposits	0	1
		Account Not Required	Annutiy Plus	5	5
			Business Loans	1	1
			Home Loan	1	1
		Poor Service	Other Contracts	6	6
			Annutiy Plus	1	1
		Better Product	Other Contracts	2	1
			Loans Against Assets	0	1
			Supreme Current Account	0	1
	Retail Banking		Other Contracts	2	2
		Excessive Charges	Annutiy Plus	5	5
		Poor Service	Institutional Savings	1	1
		Account Not Required	Other Contracts	0	1

Rows 1 - 15

Analyze - Edit - Refresh

Figure 171. Attrition Report by Attrition Reason

- 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: 9/8/2015 2:44:42 PM

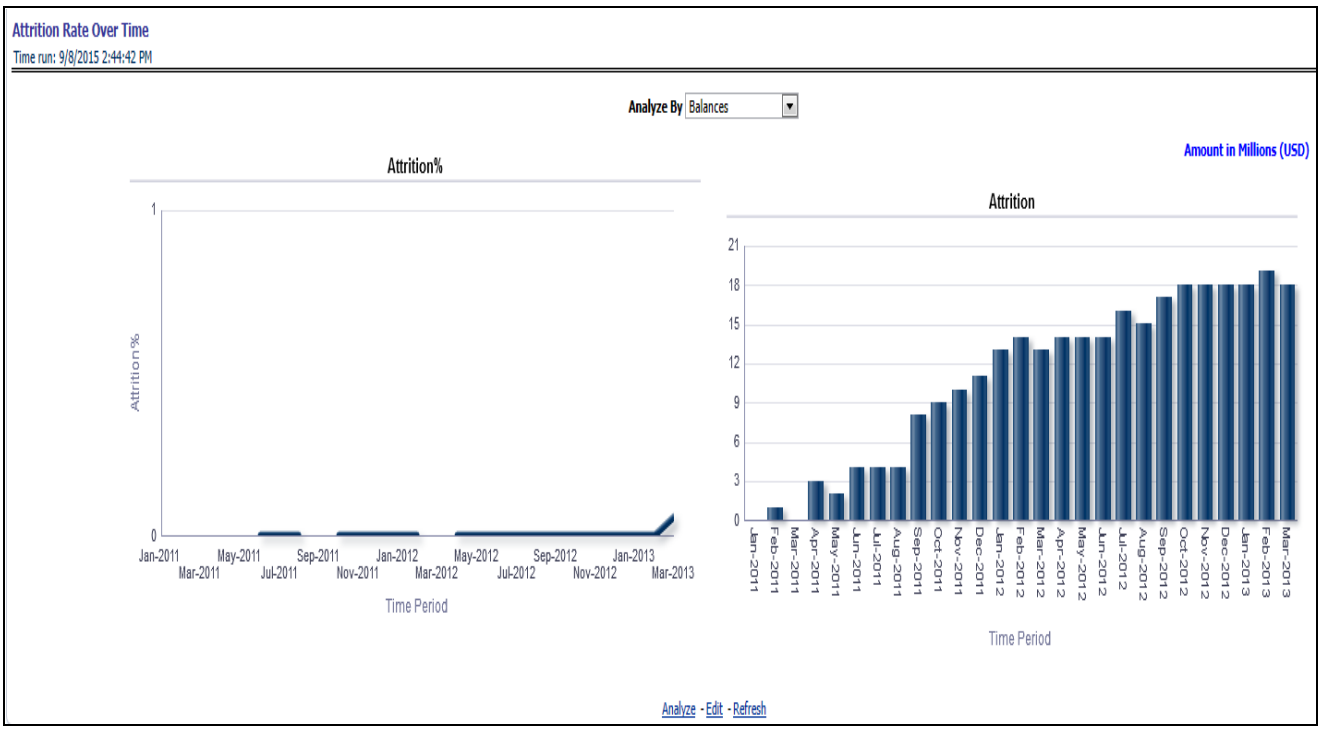
Analyze by No. of Closed Customers

	2011	2012	2013
Campaign Name	No. of Closed Customers	No. of Closed Customers	No. of Closed Customers
Aadhar Campaign	4	4	5
Add on card free	6	6	6
Mahila Seva	3	3	3
Others			0
Personal loan with zero docume	5	5	6
Platinum card offer	4	4	6
Saving Account with Intl Debit	6	5	6
Speed Loan	5	5	6
Term Deposit for Senior Citize	2	2	5
Truck Loan at TATA Showroom	5	5	5
World Cup Campaign	4	4	4

Analyze - Edit - Refresh

Figure 172. Attrition Over last 5 Years - Current Report Period

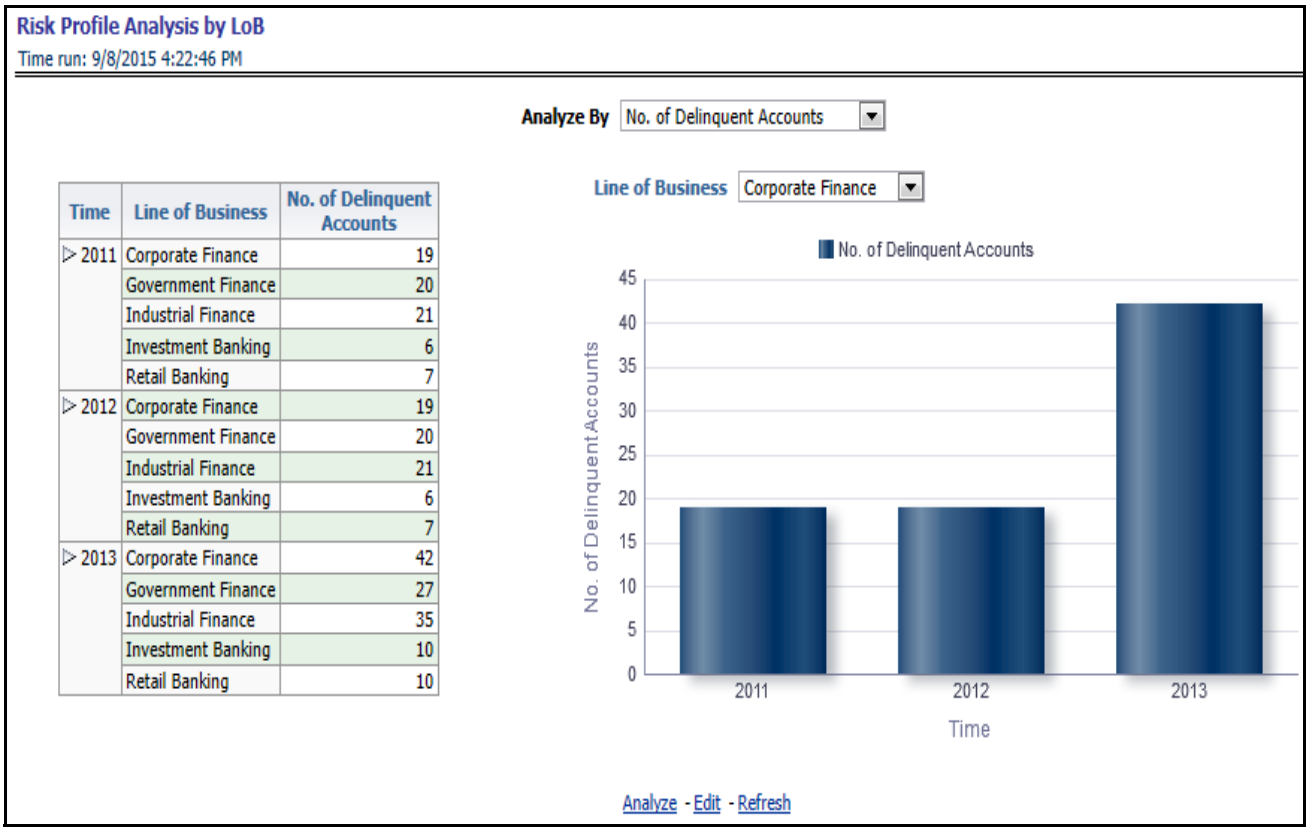
- Attrition rate over time: This report provides the details of attrition of accounts and balance in a time series format in absolute terms as well as a proportion to the portfolio of accounts.



Risk Summary

This tab contains the following reports:

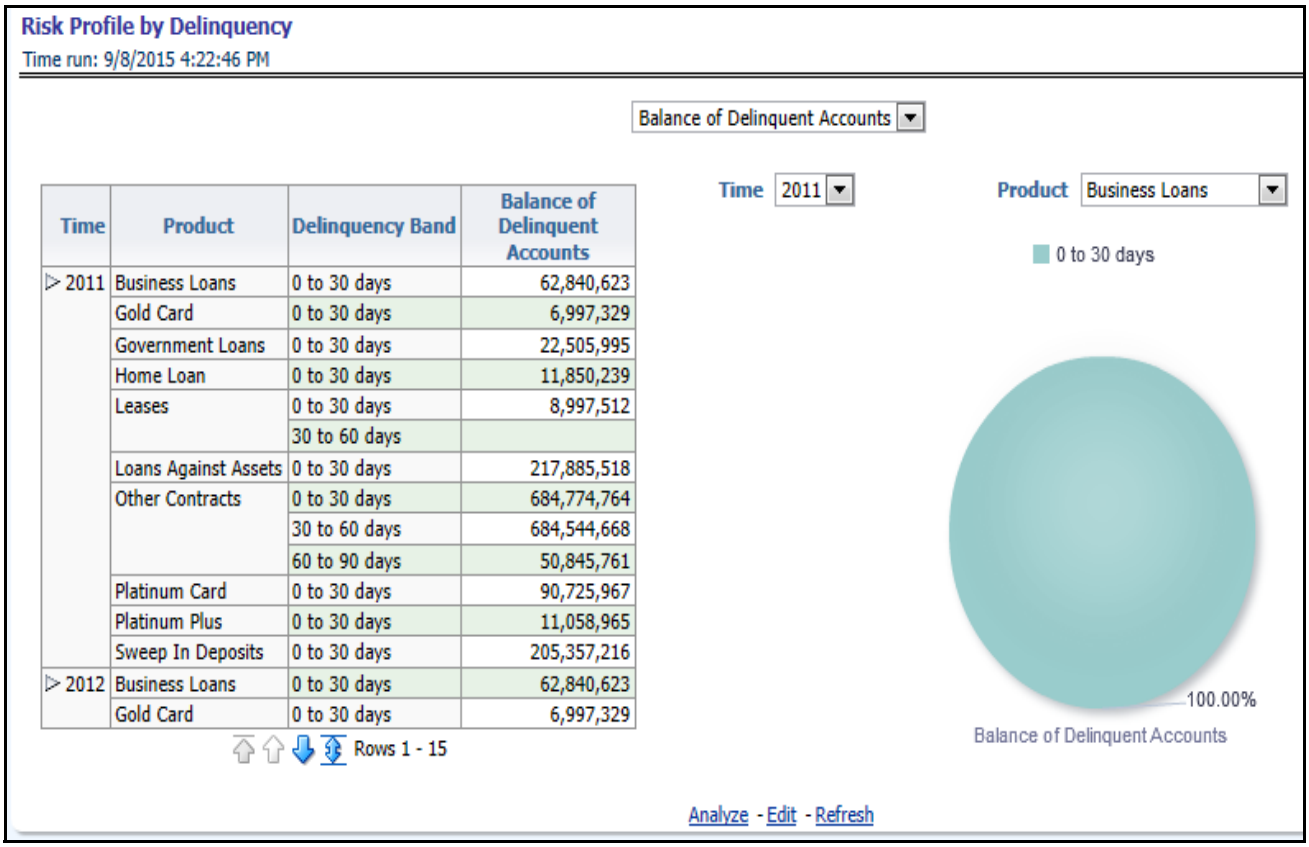
- Risk Profile Analysis by LoB: This report shows the number of delinquent accounts in each line of business.



Time	Line of Business	No. of Delinquent Accounts
▷ 2011	Corporate Finance	19
	Government Finance	20
	Industrial Finance	21
	Investment Banking	6
	Retail Banking	7
▷ 2012	Corporate Finance	19
	Government Finance	20
	Industrial Finance	21
	Investment Banking	6
	Retail Banking	7
▷ 2013	Corporate Finance	42
	Government Finance	27
	Industrial Finance	35
	Investment Banking	10
	Retail Banking	10

Figure 173. Risk Profile Analysis by LoB

- Risk Profile by Delinquency: This report shows the number of delinquent accounts for a product type.



Time	Product	Delinquency Band	Balance of Delinquent Accounts
▷ 2011	Business Loans	0 to 30 days	62,840,623
	Gold Card	0 to 30 days	6,997,329
	Government Loans	0 to 30 days	22,505,995
	Home Loan	0 to 30 days	11,850,239
	Leases	0 to 30 days	8,997,512
		30 to 60 days	
	Loans Against Assets	0 to 30 days	217,885,518
	Other Contracts	0 to 30 days	684,774,764
		30 to 60 days	684,544,668
		60 to 90 days	50,845,761
	Platinum Card	0 to 30 days	90,725,967
	Platinum Plus	0 to 30 days	11,058,965
	Sweep In Deposits	0 to 30 days	205,357,216
▷ 2012	Business Loans	0 to 30 days	62,840,623
	Gold Card	0 to 30 days	6,997,329

Figure 174. Risk Profile by Delinquency

- 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.

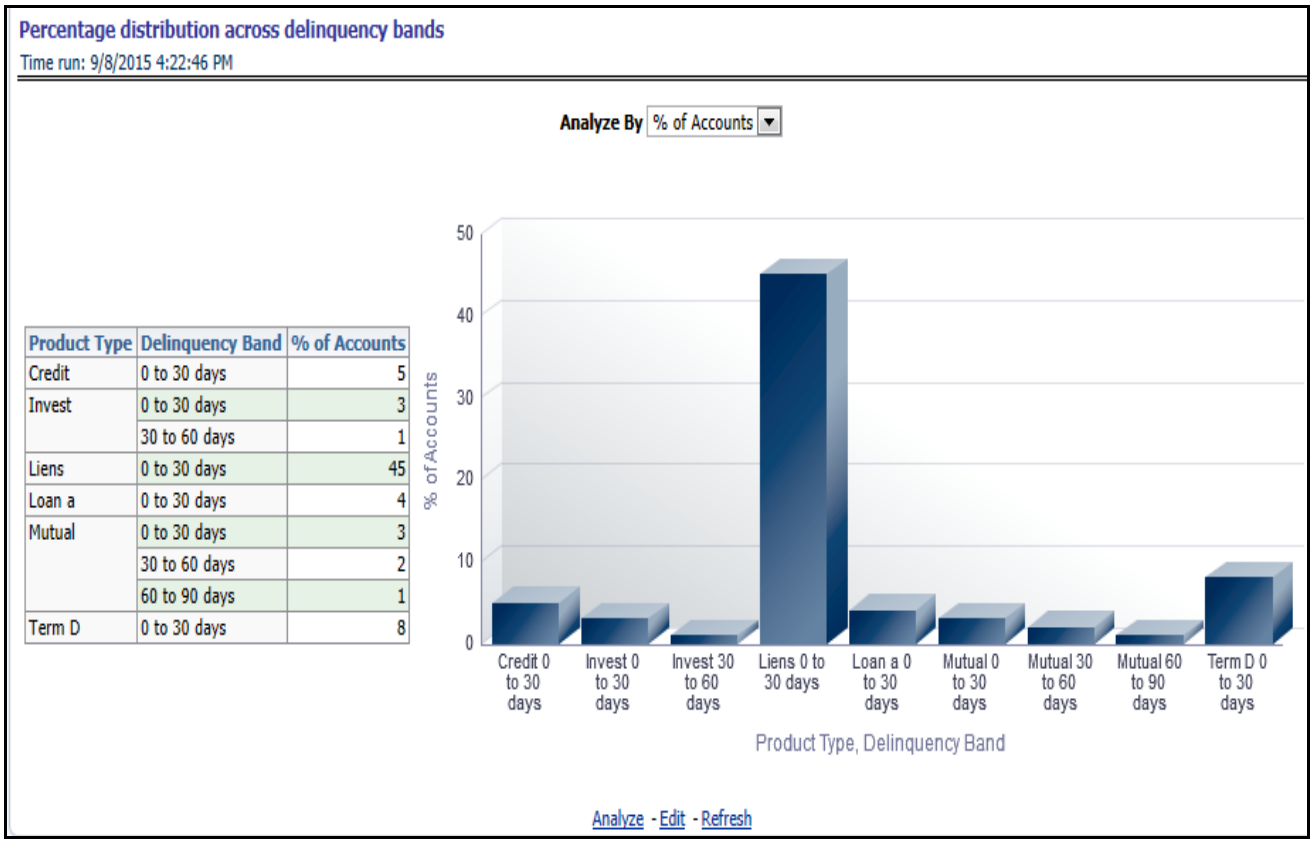
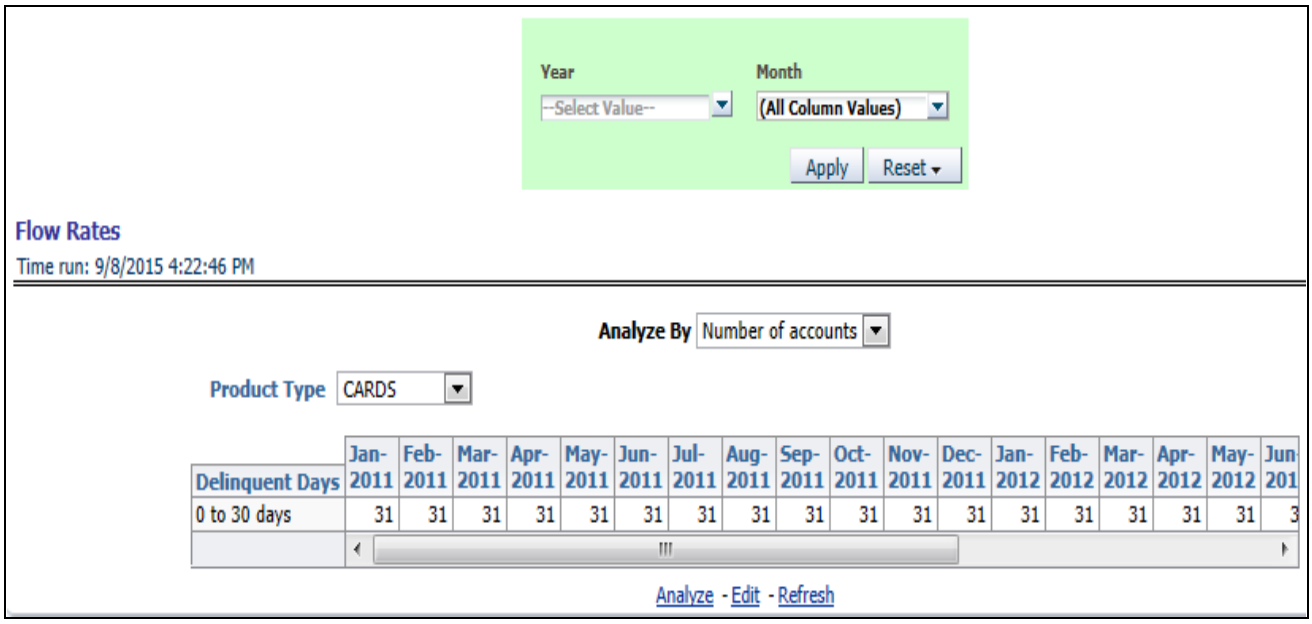


Figure 175. Percentage distribution across delinquency bands

- Flow rates: This report provides details of the number of accounts and balance in a particular delinquency band for each month and the movement of accounts and balances from one delinquency band to another over a period of time.



Predictive Models

The following reports are present in the Predictive Models dashboard:

- Average Customer LTV by Age: This report shows the average LTV and enhanced LTV value for a customer age group.

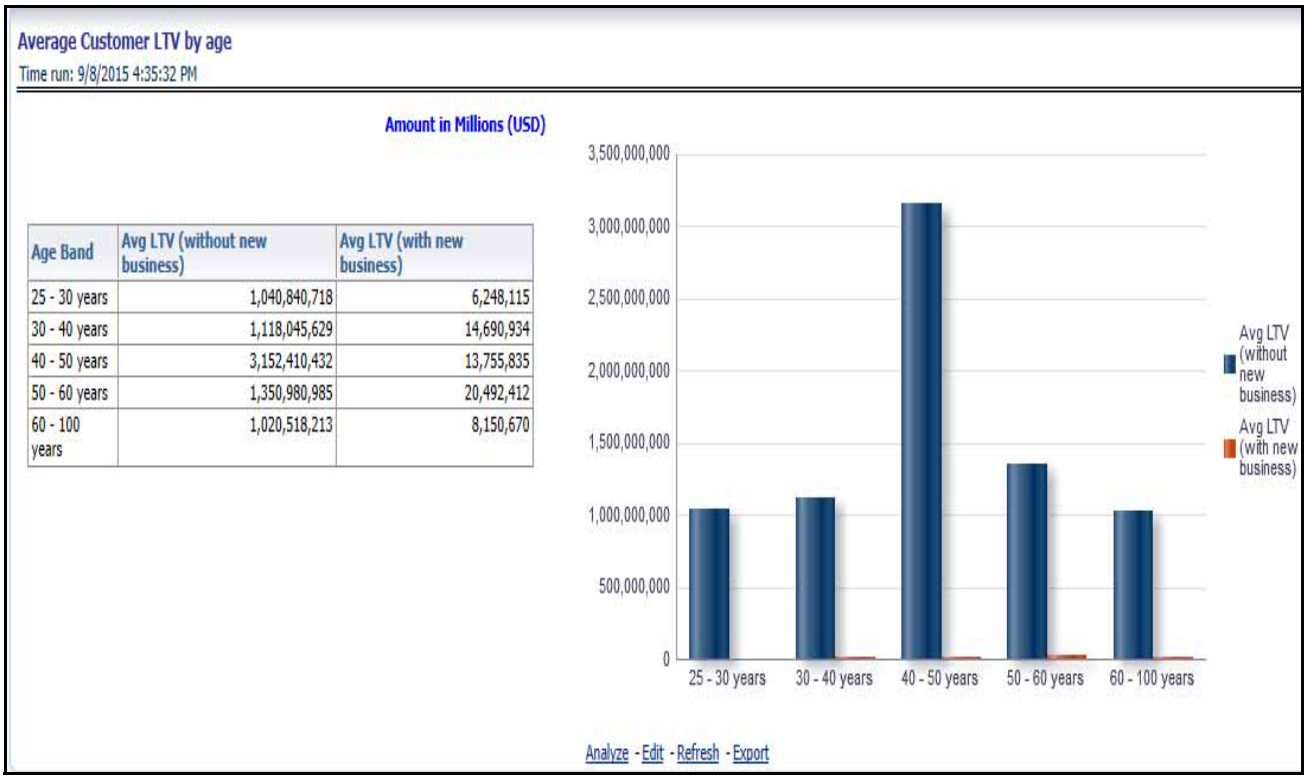


Figure 176. Average Customer LTV by Age

- Average Customer LTV by Region: This report shows the average LTV and enhanced LTV value for a customer group created on the basis of region.

Figure 177. Average Customer LTV by Region

- Average Customer LTV by Income Band: This report shows the average LTV and enhanced LTV value for a customer group created on the basis of income range.

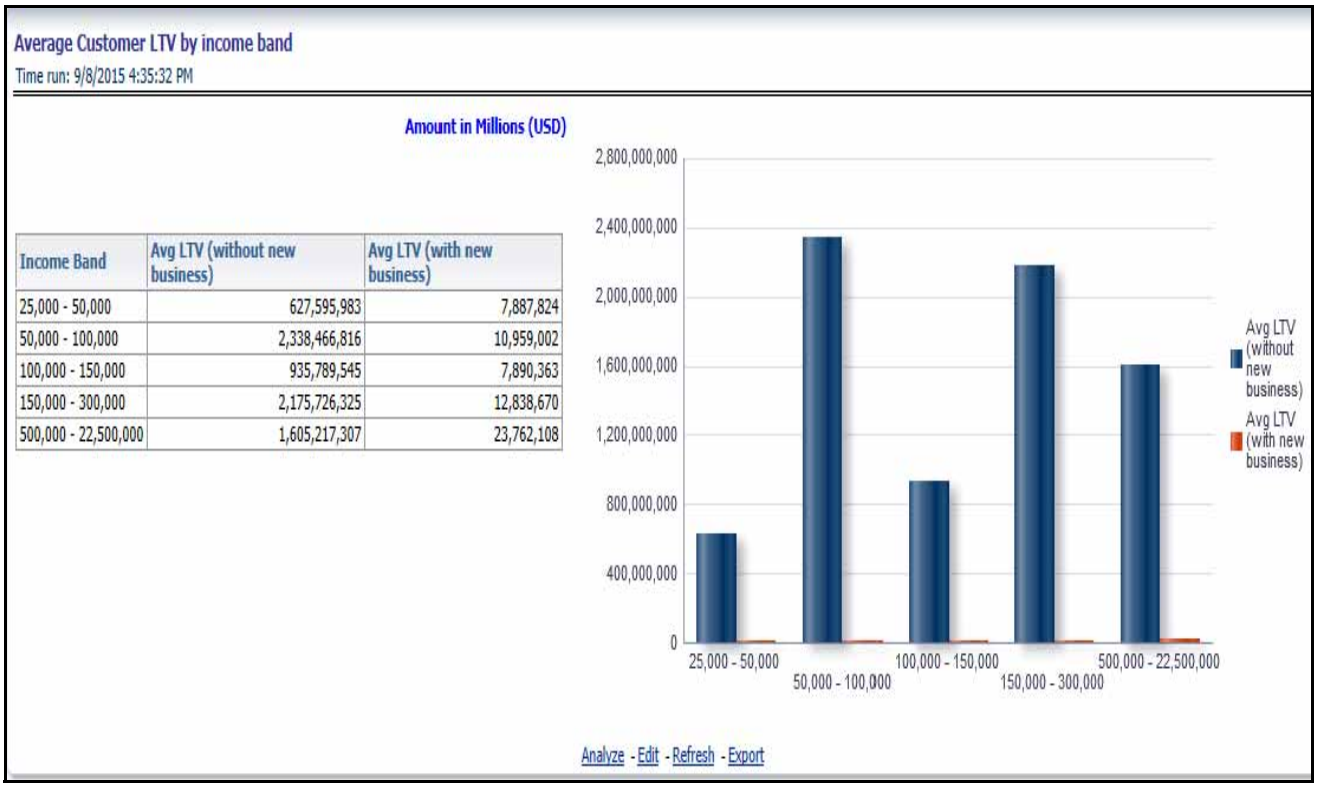
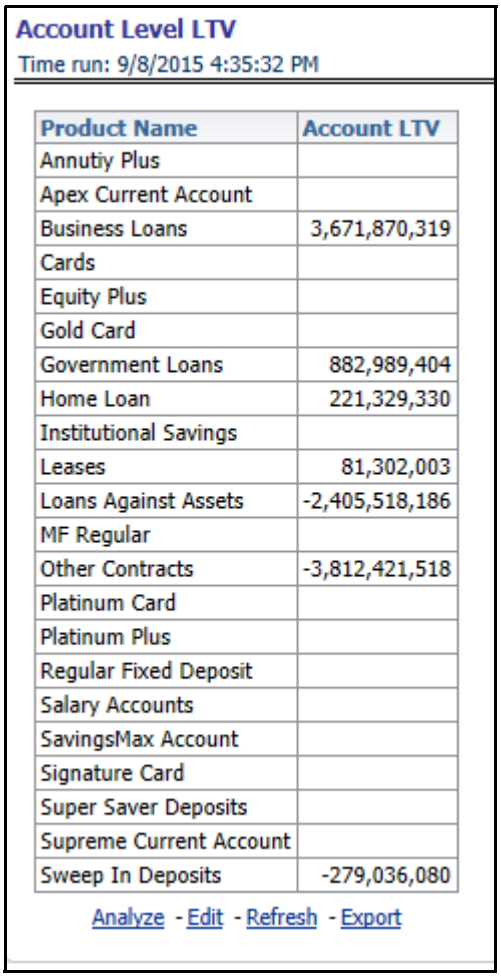


Figure 178. Average Customer LTV by Income Band

- Average Customer LTV by gender: This report shows the average LTV and enhanced LTV value for a customer group created on the basis of gender.

Figure 179. Average Customer LTV by gender

- Account Level LTV: This report shows the life-time value of an account and the selection of accounts is facilitated through drop-down selection of dimensions.



Account Level LTV

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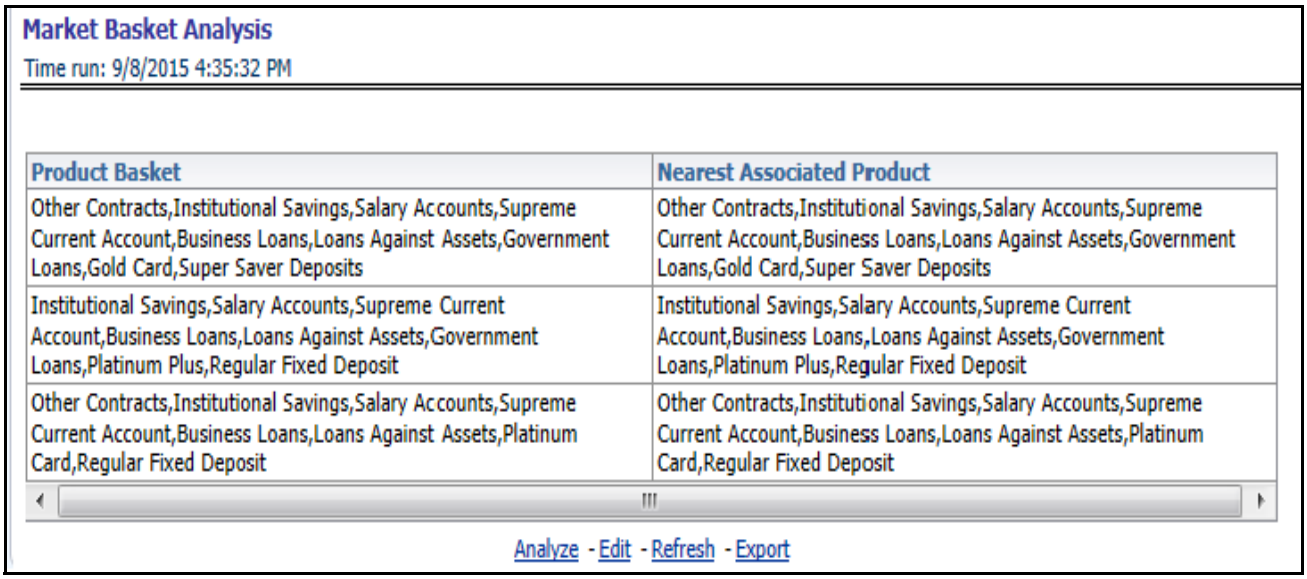
Product Name	Account LTV
Annutiy Plus	
Apex Current Account	
Business Loans	3,671,870,319
Cards	
Equity Plus	
Gold Card	
Government Loans	882,989,404
Home Loan	221,329,330
Institutional Savings	
Leases	81,302,003
Loans Against Assets	-2,405,518,186
MF Regular	
Other Contracts	-3,812,421,518
Platinum Card	
Platinum Plus	
Regular Fixed Deposit	
Salary Accounts	
SavingsMax Account	
Signature Card	
Super Saver Deposits	
Supreme Current Account	
Sweep In Deposits	-279,036,080

Analyze - Edit - Refresh - Export

Figure 180. Account Level LTV

- Market Basket Analysis: This report shows the most popular group of products as baskets and the nearest associated product for that basket.



Market Basket Analysis

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Product Basket	Nearest Associated Product
Other Contracts,Institutional Savings,Salary Accounts,Supreme Current Account,Business Loans,Loans Against Assets,Government Loans,Gold Card,Super Saver Deposits	Other Contracts,Institutional Savings,Salary Accounts,Supreme Current Account,Business Loans,Loans Against Assets,Government Loans,Gold Card,Super Saver Deposits
Institutional Savings,Salary Accounts,Supreme Current Account,Business Loans,Loans Against Assets,Government Loans,Platinum Plus,Regular Fixed Deposit	Institutional Savings,Salary Accounts,Supreme Current Account,Business Loans,Loans Against Assets,Government Loans,Platinum Plus,Regular Fixed Deposit
Other Contracts,Institutional Savings,Salary Accounts,Supreme Current Account,Business Loans,Loans Against Assets,Platinum Card,Regular Fixed Deposit	Other Contracts,Institutional Savings,Salary Accounts,Supreme Current Account,Business Loans,Loans Against Assets,Platinum Card,Regular Fixed Deposit

Analyze - Edit - Refresh - Export

Figure 181. Market Basket Analysis

CHAPTER 12

Visibility

This chapter discusses the following topics:

Introduction

Visibility is implemented in order to restrict the user's access to the data and the metadata. The user can view based on the role and the privileges assigned to the user.

Visibility has been implemented using two security models:

- OBIEE Security
- Data Security

OBIEE Security

This has been implemented using the Roles and Privileges settings, the dashboard level, Report level, and the object level.

Data Security

This has been implemented with a sequence of tables used for controlling the data access to the user.

The set of tables are:

- FSI_M_USER - This table stores all the users who are not relationship managers and are business users who have access to data at different levels. The user id in this table should match the user's login id of OBIEE.
- FSI_M_USER_MANAER_MAP - This table stores all the users who are relation ship managers. V_User_name should hold the Obiee login Id of the user who is a relationship manager. The Manager Code column should match with the entry in dim_management.
- FCT_ACCT_MANAGER_REL - This table restricts the user who is a relationship manager to certain account of customer/Customers. This defines the user at the lowest granularity.
- DIM_CUSTOMER - This table is to define if the user has access to all the accounts the customer holds. This is again to define the relationship manager visbility. This data will be moved from dim_party . Dim_party will be sourced from stg_party_master.

- FSI_USER_DATA_ACCESS - This is a mapper table enabled on AAI Mapper that provides UI for the user to set the visibility. The visibility of the user can be set at the following levels using the mapper - Product, Branch, Legal Entity, and Line of Business.
- FSI_USR_CTRL_ACCESS - This table contains all the records for each user and the access available to the user for every date. The data is sourced from FSI_M_USER_MANAGER_MAP, FSI_USER_DATA_ACCESS, DIM_MANAGEMENT, FCT_COMMON_ACCOUNT_SUMMARY, FCT_ACCT_MANAGER_REL, and DIM_CUSTOMER. The Parent Child hierarchies (derived entities) need to be refreshed before this table load. The names of the hierarchies are MGRPC and CUSTPC. The User has access to all the child nodes in the manager Hierarchy and all the customer hierarchies the user is managing, and the customer hierarchies managed by the child node managers as well.
- CTRLACC - This is a materialized view on the table FSI_USR_CTRL_ACCESS giving the distinct user access to accounts, customers, products, line of business, and legal entity. This view is used for applying visibility on the rpd. This is created as a derived entity and there is a job to refresh this derived entity.

Note: Users insertion in FSI_M_USER and FSI_M_USER_MANAGER_MAP has to be done directly into the table. For example, in presence of Single Signon System, these tables need to be loaded with data from single signon system directly.

CHAPTER 13

Marketing Triggers

This chapter contains the following topics:

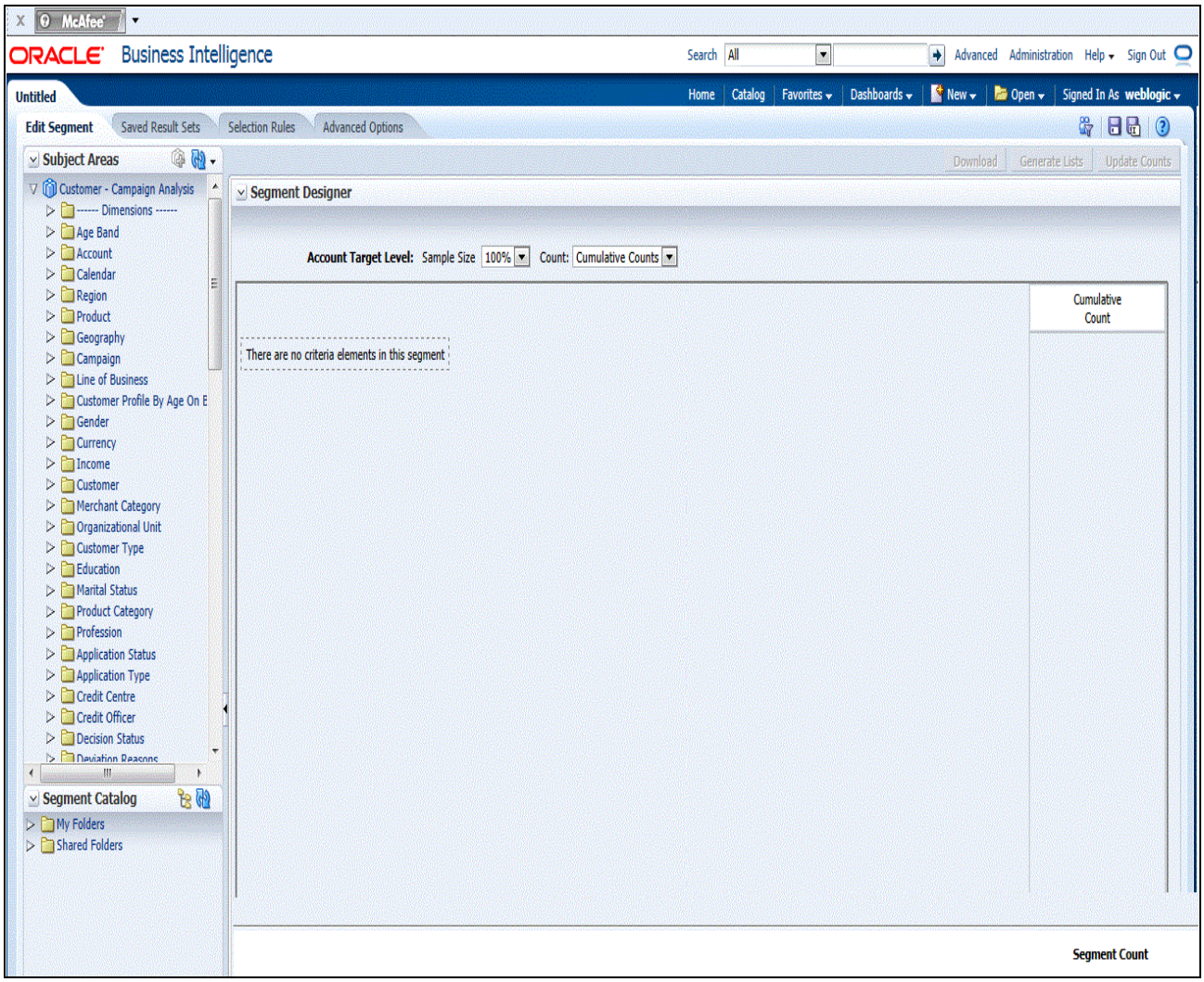
Introduction

Marketing Triggers enables you to identify account or customers based on the respective dimensions or measure values.

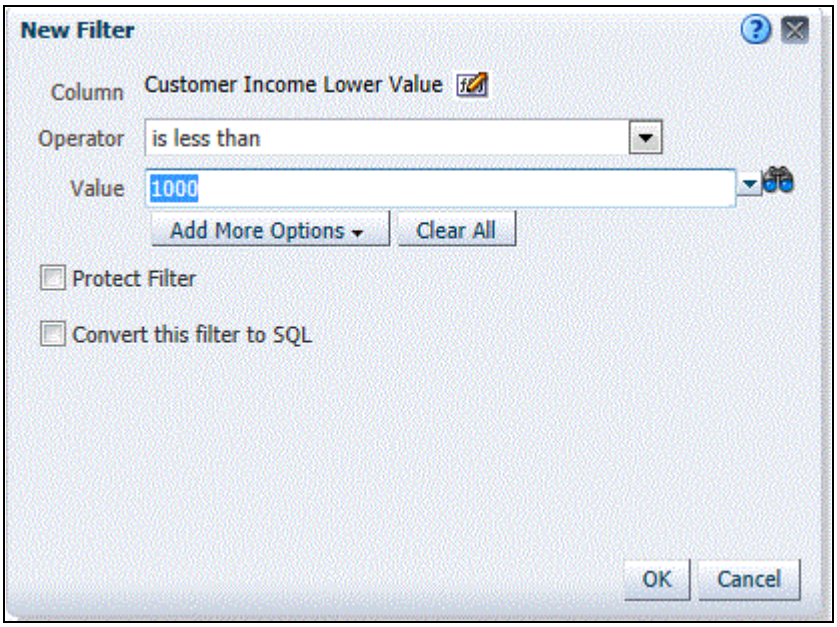
Creating new marketing triggers

Follow these steps to create new marketing triggers:

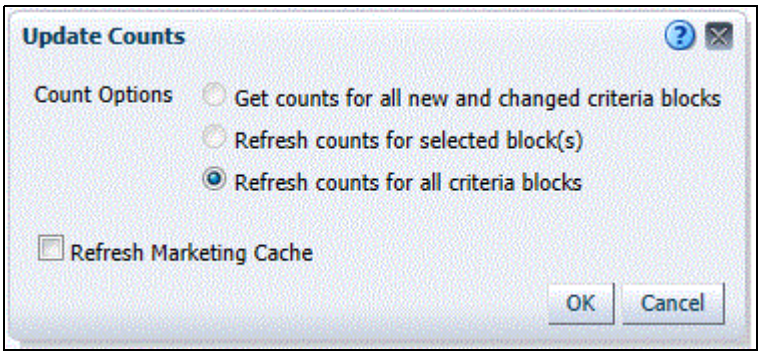
1. Navigate to New>Segment.
2. Select Target Level. The *marketing trigger* window is displayed.



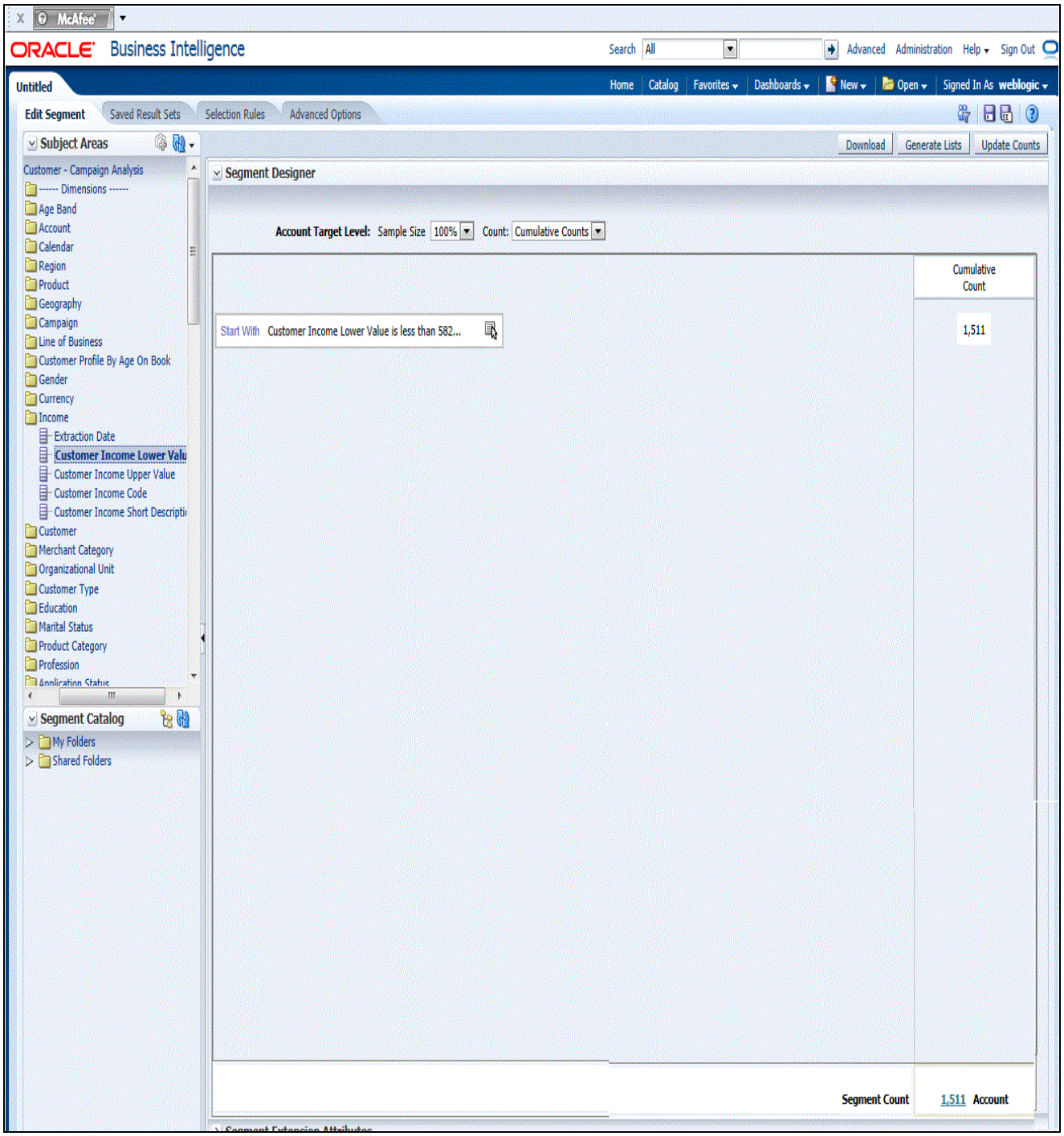
3. Expand the subject area and double-click any entity for which trigger needs to be done.
4. A *New Filter* window is displayed. Enter the appropriate filter conditions and values.



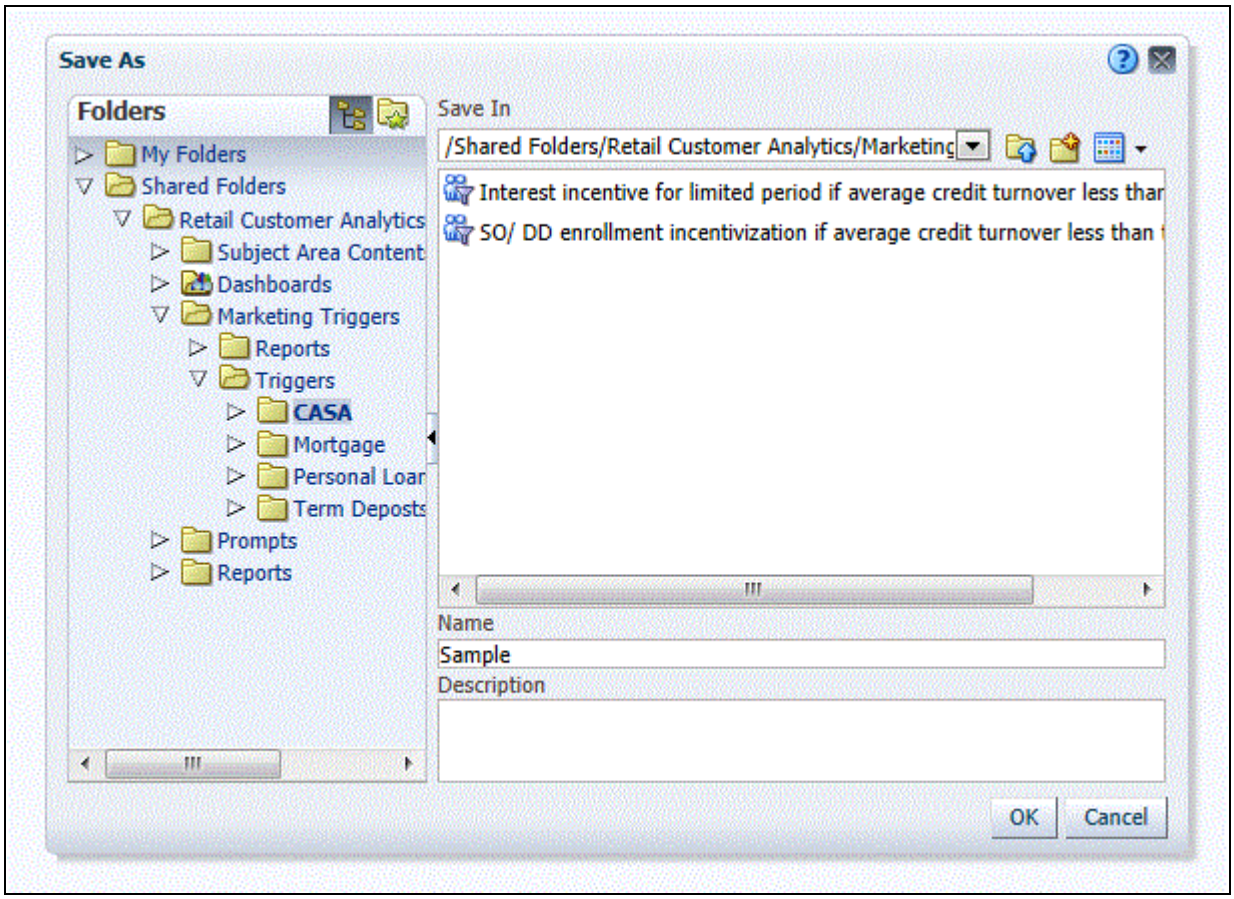
5. Click OK. A new filter is added.
6. Click Update Count to update the filter.



7. Click OK. The updated count is displayed.



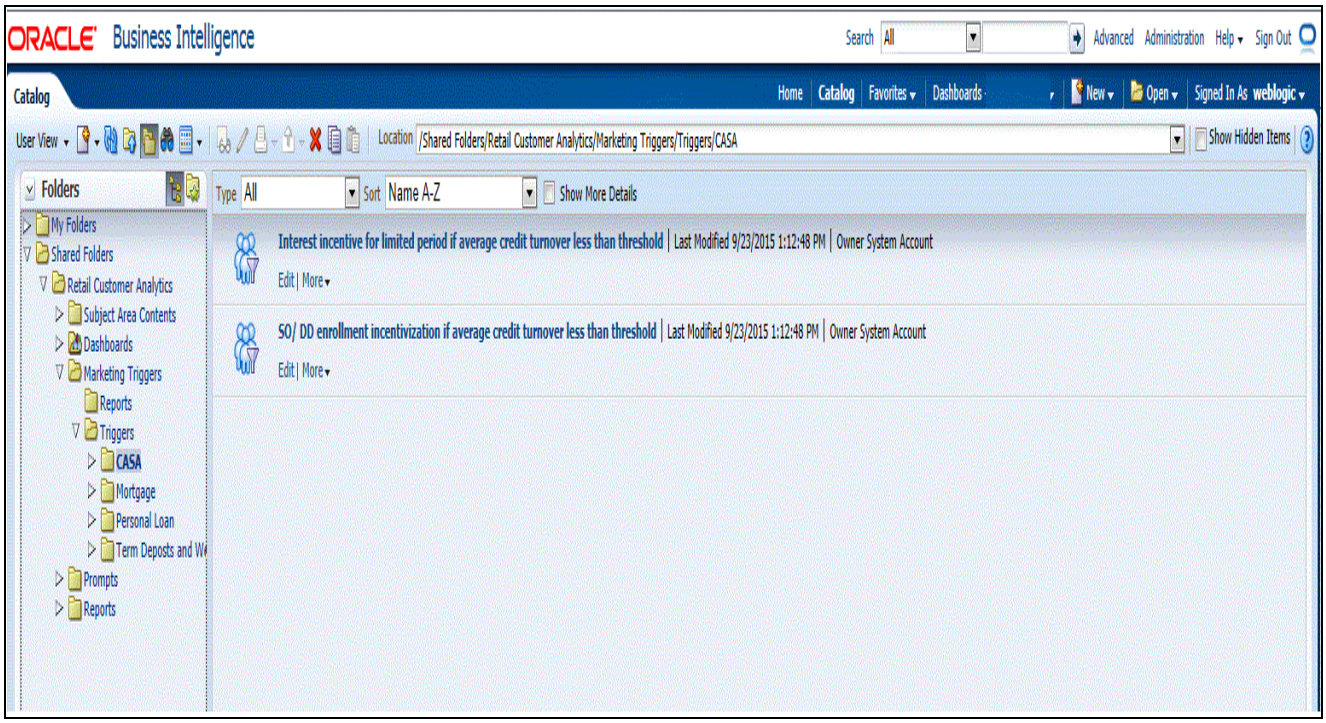
8. Click Generate List to view the filter in list-mode.



9. Save the list.

Viewing default marketing triggers

Click Catalog to view default marketing triggers.


ORACLE Business Intelligence
Search All
Advanced
Administration
Help
Sign Out
Catalog
Home
Catalog
Favorites
Dashboards
New
Open
Signed In As weblogic
User View
Location /Shared Folders/Retail Customer Analytics/Marketing Triggers/Triggers/CASA
Show Hidden Items
Folders
My Folders
Shared Folders
Retail Customer Analytics
Subject Area Contents
Dashboards
Marketing Triggers
Reports
Triggers
CASA
Mortgage
Personal Loan
Term Deposits and W
Prompts
Reports
Type All
Sort Name A-Z
Show More Details
Interest incentive for limited period if average credit turnover less than threshold | Last Modified 9/23/2015 1:12:48 PM | Owner System Account
Edit | More
SO/ DD enrollment incentivization if average credit turnover less than threshold | Last Modified 9/23/2015 1:12:48 PM | Owner System Account
Edit | More

APPENDIX A Sandbox Population

Requesting and Authorizing to Populate Sandbox

Note: 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.

APPENDIX B How to Define a Batch

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 shown in the following table.

Table 1. Batch Details

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.