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| --- | --- |
|  | |
| Türk Ekonomi Bankası | |
| Credit Risk | |
| Operational & ETL | |
| Requirements | |
| Prepared by | |
|  | |
|  | |
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| Reviewed By: |  |
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| 0.1 | Aug 1, 2017 | Muhammad Usman Shahrukh | Initial Draft |
| 0.2 | Aug 9, 2017 | Muhammad Usman Shahrukh | Added tables such as Account Status, Event and Customer interaction.  Modified a few existing tables. |

**Distribution List**

|  |  |
| --- | --- |
| Name | Company |
| Cenk Akin | TEB |
| Muge Zeren Yüksel | TEB |
| Gizem Özden | TEB |
| Ali Özer Çetin | TEB |
| Özgür KAYNAR | Komtas |
| Esat Dumlupınar | Komtas |

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# Purpose

The purpose of this document is to share the Operational and ETL requirements for Credit Risk Scoring. The following sections describe in detail the users, databases and tables that need to be created and tested/verified as they will serve as the base for this project.

# Databases

Following two databases will be created

|  |  |  |
| --- | --- | --- |
| **Database Name** | **Space Required** | **Purpose** |
| <database name>\_CRSC | 1.5 TB | Database to be used for all credit risk related analysis |
| <database name>\_METADATA | 1GB | Database to be used for TDWM metadata  \*Incase Teradata Warehouse Miner is used. |

Table 1 - Databases

# Base Tables

This section describes the details of the base tables which are required for Behavior Segmentation. Following are the properties common to all the tables except lookups

|  |  |
| --- | --- |
| **Primary Index** | CARD\_ID |
| **Type of Traffic** | Credit Transactions |
| **Inclusions** | \*Needs to be filled |
| **Exclusions** | \*Needs to be filled |
| **Run-date** | \*Needs to be filled |
| **Duration of Analysis** | \*Needs to be filled |

Table 3 - Common Properties

## Customer Base

This table will contain information about base selection.

### Table Name

CUSTOMER\_BASE\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| CARD\_ID | VARCHAR(20) | Unique identifier for the credit card that belongs to TEB's customer |
| STMT\_DT | DATE | Statement date |
| TGT | BYTEINT | Default/Non-Default |

Table 4 – CUSTOMER\_BASE\_BA

### Extraction Logic

Following steps represent extraction logic:

* Extract a list of 2 Years active customers as on run-date and get following information about each subscriber
  + Card ID
  + Statement Date
  + Target Label (Default/Non-Default)

### Aggregation Strategy/Grain

The grain of the table will be CARD\_ID

### Primary Index

CARD\_ID

## Merchant Segmentation Table -Daily

This table will contain information on a daily for credit card transactions and corresponding merchants.

Table created with stated columns below.

### Table Name

MERCH\_SEG\_DAILY\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| CARD\_ID | VARCHAR(20) | Unique identifier for the credit card that belongs to TEB's customer |
| MERCH\_KEY | BYTEINT | Refer to MERCH lookup table to get the Merchant where the card was used |
| TRANS\_DT | TIMESTAMP | Date of transaction for the card |
| CURR\_KEY | BYTEINT | Refer to CURR lookup for the currency in which the transaction was made |
| ECOM\_FLG | BYTEINT | 1 represents e-commerce transaction. 0 otherwise |
| LOC\_KEY | BYTEINT | Refer LOC lookup for the location of the merchant where the card was used |
| TRX\_AMNT\_TL | DEC(18,2) | Transaction amount in Turkish Lira |
| TRX\_AMNT\_FX | DEC(18,2) | Transaction amount in case of any other currency |
| TRX\_CNT | DEC(18,2) | The number of times that card was used i.e. the number of transactions |

### Extraction Logic

Followings steps represent extraction logic:

* For all the customers in CUSTOMER\_BASE\_CR table, for each credit card, collect following information
  + Merchant
  + Date/Time of Transaction
  + Currency
  + E-Commerce Flag
  + Location of the transaction

Information/ rules for all these can be found in the lookup tables

* For each unique combination of above mentioned fields, calculate the following
  + Amount of Transactions in Turkish Lira
  + Amount of Transaction in Foreign Currency if it exists
  + Count of Transactions

Note that all information should be as of run-date

### Grain

First 7columns will form the grain for this table. We need a separate row for each unique combination of these 7 columns.

### Primary Index

CARD\_ID

## Customer Card Information

This table will contain information about card information for the customer (Latest Snapshot)

Table created with stated columns below.

### Table Name

CUST\_CARD\_INFO\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| CARD\_ID | VARCHAR(20) | Unique identifier for the credit card that belongs to TEB's customer |
| CARD\_TYPE\_KEY | BYTEINT | Refer to lookup table CARD\_TYPE |
| CARD\_SEG\_KEY | BYTEINT | Refer to CARD\_SEG lookup table |
| DT\_OF\_ISSUE | DATE | Date of issue for the first card |
| DT\_OF\_ACTV | DATE | Date of activation for the latest card |
| DT\_OF\_CLSR | DATE | Date of closure of the card |
| PrimSuppVirt\_Type | VARCHAR(20) | Type of Credit Cards (Primary, Supplimentary or Virtual) |
| Card\_Segment | VARCHAR(20) | Credit Card Segments (Business, Platinum etc.) |
| Curr\_Limit | NUMERIC(19,4) | Current CC limit |
| Last\_Trx\_Date | DATE | Date of last CC transaction |
| Statement\_Date | DATE | Date of CC statement |
| Cash\_Limit | NUMERIC(19,4) | Current CC cash limit |
| Yearly\_Nonpayment\_Count | NUMERIC(3,0) | Unpaid statements month count in a year |
| Full\_Payment\_Stat | VARCHAR(1) | Full paid statement status |
| DaysPastDue | NUMERIC(8,0) | Days past due date |
| d\_gecerli\_eh | VARCHAR(1) | For legal card decision |
| kayitgecerli | VARCHAR(1) | For legal card decision |
| kartstatusu | VARCHAR(2) | For legal card decision |
| takipstatu | VARCHAR(2) | For legal card decision |
| kartaltstatu | VARCHAR(3) | For legal card decision |
| Cust\_Type | VARCHAR(30) | Customer segment |
| CC\_Close\_Reason | VARCHAR(18) | CC Close Reason |
| CC\_Close\_Subreason | VARCHAR(100) | CC Close Sub-Reason |
| Legal\_Followup | NUMERIC(28,6) | Legal followup flag |
| Last\_Payment\_Channel | VARCHAR(40) | Channel of last cc payment |
| Acq\_Channel | VARCHAR(30) | CC Acquisition channel |
| Product | VARCHAR(255) | Product type of credit card |
| Brand | VARCHAR(5) | Credit Card brand (Bonus, World…) |

Table 5 – CUST\_CARD\_INFO\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For all the Customers in CUSTOMER\_BASE\_CR table, for Credit Card, collect following information
  + Card Type (Mastercard, Visa, Diner)
  + Card Segment (Silver, Gold, Platinum etc.)
  + Date of issue of the first card
  + Date of activation for the latest card
  + Date of closure of the card

Information/ rules for all these can be found in the lookup tables

Note that all information should be as of run-date.

### Grain

First 2 columns will form the grain for this table. We need a separate row for each unique combination of these 2 columns.

### Primary Index

CARD\_ID

## Related Supplementary Credit Cards

This table will contain information about relationship of Supplementary Credit Cards to the parent Credit Card

Table created with stated columns below.

### Table name

SUP\_CC\_RLT\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | NUMERIC(8) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| CARD\_ID | VARCHAR(20) | Unique identifier for the credit card that belongs to TEB's customer |
| SUPP\_CARD\_ID | VARCHAR(20) | Unique identifier for the supplementary credit card that belongs to TEB's customer |
| Supp\_Card\_Cust\_ID | NUMERIC(8) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| d\_gecerli\_eh | VARCHAR(1) | For legal card decision |
| kayitgecerli | VARCHAR(1) | For legal card decision |
| kartstatusu | VARCHAR(2) | For legal card decision |
| takipstatu | VARCHAR(2) | For legal card decision |
| kartaltstatu | VARCHAR(3) | For legal card decision |

Table 6 – SUP\_CC\_RLT\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For all the subscribers in CUSTOMER\_BASE\_CR table, for each Credit Card, collect following information
  + Related supplementary credit card

Information/ rules for all these can be found in the lookup tables

Note that all information should be as of run-date.

### Grain

First 3 columns will form the grain for this table. We need a separate row for each unique combination of these 3 columns.

### Primary index

CARD\_ID

## Customer Information

Table created with stated columns below.

FILTER:

Customer\_type = Real and Business\_Line in (Individual&Star) or Portfolio\_Type in (Individual&Star)

These filters shows that customer is in target population which is real individual customers.

### Table Name

CUST\_INFO\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(30) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| INC | DEC(18,2) | Monthly income declared by the customer |
| STD\_INC | DEC(18,2) | Steady income every month (Cyclical behaviour) |
| OCCUP\_KEY | BYTEINT | The occupation of the customer (Industry) |
| GND | VARCHAR(1) | Gender of the customer |
| EDCTN\_KEY | BYTEINT | Education level of the customer |
| EMPLNT\_KEY | BYTEINT | Employment Detail (Self Employed/Employed/Owner) |
| DOB | DATE | Date of birth |
| CUST\_ACQ\_DT | DATE | Customer acquisition date |
| HM\_ADDR\_CITY\_KEY | BYTEINT | Home city as declared in the government documents |
| HM\_ADDR\_DIST\_KEY | BYTEINT | Home district as declared in the government documents |
| ADDR\_CITY\_KEY | BYTEINT | The city where the bank can reach out to the customer |
| ADDR\_DIST\_KEY | BYTEINT | The district where the bank can reach out to the customer |
| SALARY\_CUST\_FLG | VARCHAR(1) | Customer has Salary account in TEB (Y/N) |
| MN\_BRNCH\_KEY | BYTEINT | The main branch for the customer |
| CURR\_LIMIT | BYTEINT | Credit limit for the credit card |
| CUST\_TYPE\_KEY | BYTEINT | Refer to CUST\_TYPE lookup table |

Table 7 – CUST\_INFO\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For all the Customers in CUSTOMER\_BASE\_BA table, collect following information
  + Monthly income declared by the customer
  + Steady Income of the customer (Should have cyclical behavior)
  + Occupation (IT Manager, Engineer, Accountant)
  + Gender
  + Employment
  + Date of Birth
  + Customer acquisition date
  + Home city
  + Home district
  + City of current address
  + District of current address
  + Family size
  + Main branch
  + Customer Type (Affluent, Mediocre etc.)
  + Credit Card Limit (The limit is shared amongst cards)

Information/ rules for all these can be found in the lookup tables

Note that all information should be as of run-date.

### Grain

First column will form the grain for this table. We need a separate row for each customer.

### Primary Index

CUST\_ID

## Customer Monthly Information

Cust\_info is created. Prepared code will be updated in the same way with date.

FILTER:

Customer\_type = Real and Business\_Line in (Individual&Star) or Portfolio\_Type in (Individual&Star)

These filters shows that customer is in target population which is real individual customers.

### Table Name

CUST\_MNTH\_INFO\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(30) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| YR\_MNTH | DATE | Month in which the information was changed (First day of month) |
| INC | DEC(18,2) | Monthly income declared by the customer |
| STD\_INC | DEC(18,2) | Steady income every month (Cyclical behavior) |
| OCCUP\_KEY | BYTEINT | The occupation of the customer (Industry) |
| GND | VARCHAR(1) | Gender of the customer |
| EDCTN\_KEY | BYTEINT | Education level of the customer |
| EMPLNT\_KEY | BYTEINT | Employment Detail (Self Employed/Employed/Owner) |
| DOB | DATE | Date of birth |
| CUST\_ACQ\_DT | DATE | Customer acquisition date |
| HM\_ADDR\_CITY\_KEY | BYTEINT | Home city as declared in the government documents |
| HM\_ADDR\_DIST\_KEY | BYTEINT | Home district as declared in the government documents |
| ADDR\_CITY\_KEY | BYTEINT | The city where the bank can reach out to the customer |
| ADDR\_DIST\_KEY | BYTEINT | The district where the bank can reach out to the customer |
| SALARY\_CUST\_FLG | VARCHAR(1) | Customer has Salary account in TEB (Y/N) |
| MN\_BRNCH\_KEY | BYTEINT | The main branch for the customer |
| CURR\_LIMIT | BYTEINT | Credit limit for the credit card |
| CUST\_TYPE\_KEY | BYTEINT | Refer to CUST\_TYPE lookup table |

Table 8 – CUST\_MNTH\_INFO\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For all the Customers in CUSTOMER\_BASE\_CR table, in whichever month the relevant information changed, collect following information
  + Year Month
  + Monthly income declared by the customer
  + Steady Income of the customer (Should have cyclical behavior)
  + Occupation (IT Manager, Engineer, Accountant)
  + Gender
  + Employment
  + Date of Birth
  + Customer acquisition date
  + Home city
  + Home district
  + City of current address
  + District of current address
  + Family size
  + Main branch
  + Customer Type (Affluent, Mediocre etc.)
  + Credit Card Limit (The limit is shared amongst cards)

Information/ rules for all these can be found in the lookup tables

Note that all information should be as of run-date.

### Grain

First column will form the grain for this table. We need a separate row for each customer.

### Primary Index

CUST\_ID

## Statement Information

Not ready. We had a performance problem, waiting until it’s fixed.

Reference table for product keys are created.

FILTER:

Customer\_type = Real and Business\_Line in (Individual&Star) or Portfolio\_Type in (Individual&Star)

These filters shows that customer is in target population which is real individual customers.

### Table name

STMNT\_INFO\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| CARD\_ID | VARCHAR(20) | Unique identifier for the credit card that belongs to TEB's customer |
| STMNT\_DT | DATE | Credit card statement date |
| PMNT\_DUE\_DT | DATE | Credit card payment due date |
| LST\_USE\_DT | DATE | credit card last used date in the current statement month |
| CC\_LMT | INTEGER | Credit Card limit |
| CC\_LMT\_UTL | BYTEINT | Credit Card limit utilization |
| OVD\_LMT | INTEGER | Overdraft limit |
| OVD\_LMT\_UTL | BYTEINT | Overdraft limit utilization |
| TOT\_SPNT\_AMNT | DEC(18,2) | The amount for total transactions in the current statement |
| TOT\_TRX\_CNT | DEC(18,2) | The count of total transaction for the current statement |
| DAYS\_USD | INTEGER | Count of days was the credit card used |
| TOT\_EXPSR\_TEB | DEC(18,2) | Total amount for credit products enrolled by the customer |
| TOT\_ASST\_TEB | DEC(18,2) | Total assets of the customer that reside in TEB |
| DEP\_TEB | DEC(18,2) | Sum of amount in deposit accounts |
| MIN\_PMT\_DUE | DEC(18,2) | Minimum payment due |
| INSTLMNT | BYTEINT | Installments left on the Credit card |
| INTRST\_AMNT | DEC(18,2) | Interest amount |
| INTRST\_FEE\_AMNT | DEC(18,2) | Fees related to interest amount |
| CHRGS\_AMT | DEC(18,2) | Charges related in interest amount |
| PRNCPL\_AMT | DEC(18,2) | Principal amount |

Table 9 – STMNT\_INFO\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For all the customers in CUSTOMER\_BASE\_CR table, for each card and statement month, collect following information
  + Statement date
  + Payment due date
  + Last used date of the card. If the card was not used in the current statement month, the field will be NULL.
  + Credit Card limit
  + Credit Card limit utilization
  + Overdraft limit of the account
  + Overdraft limit utilization
  + Minimum payment due

Information/ rules for all these can be found in the lookup tables

* For each unique combination of above mentioned fields, calculate the following
  + Total spend amount in the statement month
  + Total transactions in the statement month
  + Number of days the card was used
  + Total amount of credit products (Credit Card limit, Loan amount, Mortgage amount)
  + Total Asset at TEB (Deposit, Savings, Investments, Mutual funds)
  + Deposits at TEB
  + Number of installments left on the credit card
  + Interest amount
  + Interest fee
  + Interest charges
  + Principal amount

Note that all information should be as of run-date.

### Grain

First 3 columns will form the grain for this table. We need a separate row for each unique combination of these 3 columns.

### Primary index

CARD\_ID

## Product Target Table

Ready for Loans .

Reference table for PROD\_KEY is created.

### Table name

PROD\_TGT\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| PROD\_KEY | BYTEINT | Refer to the Product lookup table(Not ready) |
| DT | DATE | Daily date |
| DAYS\_PST\_DUE | BYTEINT | Days past due. Increment everyday if the minimum payment has not been paid by the due date |
| PMT\_AMT | DEC(18,2) | Amount paid on the particular day |
| DUE\_AMT | DEC(18,2) | Amount due for the month |
| MIN\_DUE\_PMT | DEC(18,2) | Minimum due amount(Not ready) |
| Payment\_No | NUMERIC(20,0) | Unique identifier for each payment |
| Credit\_No | NUMERIC(8,0) | Unique identifier for each credit |
| Payment\_Status | VARCHAR(20) | Status of payment (Paid, UnPaid, etc.) |
| Principal\_Amt | NUMERIC(17,2) | Amount of principal capital |
| Amt\_of\_Int | NUMERIC(17,2) | Amount of interest |
| Due\_Date | TIMESTAMP | Last payment day of installment |
| Branch\_No | NUMERIC(4,0) | Branch number of credit account |
| Trx\_Date | TIMESTAMP | Payment day |
| Trx\_Exc\_Rate | NUMERIC(14,5) | Exchange rate on the payment day |
| Payment\_Type | VARCHAR(50) |  |
| Def\_Int\_Amt | NUMERIC(28,6) | Amount of default interest |
| Cancellation\_Status | VARCHAR(1) | Status of cancellation |
| Cancellation\_Date | TIMESTAMP | Cancellation Day |
| Bank\_Product\_Type\_ID | NUMERIC(8,0) | Credit type ID |
| Product\_ID | NUMERIC(8,0) | Unique identifier for Credit Account No |
| Account\_No | NUMERIC(8,0) | Credit Account No |
| Credit\_Status | NUMERIC(1,0) | Refer to the Credit Status lookup table |
| Total\_Paid\_Installment | NUMERIC(3,0) | Number of paid installments |
| Total\_Remaining\_Installment | NUMERIC(3,0) | Number of remaning installments |
| Early\_Paid\_Installment | NUMERIC(3,0) | Early paid installments |
| Final\_Installment\_Due\_Date | TIMESTAMP |  |
| Early\_Payment\_Date | TIMESTAMP | Early Closed credits payment date |
| Worst\_Payment\_Perfomance | NUMERIC(2,0) | Worst payment performance of the related credit |
| Recent\_Payment\_Perfomance | NUMERIC(2,0) | Recent payment performance of the related credit |
| Total\_Default\_Payment | NUMERIC(3,0) | Number of default payments |
| Str\_Default | VARCHAR(400) | String identifier for default payments |
| Total\_Remaining\_Principal\_Amt | NUMERIC(17,2) | Remaining amount of principal capital of credit |
| Total\_Paid\_Installment\_Amt | NUMERIC(17,2) | Amount of paid installments |
| Remaining\_Installment\_Amt | NUMERIC(17,2) | Amount of remaining installments |
| Number\_of\_Remaining\_Installment | NUMERIC(3,0) | Number of remaining installments |
| Total\_Installment\_Amt | NUMERIC(17,2) | Amount of total installments |
| Monthly\_Installment\_Amt | NUMERIC(17,2) | Monthly amount of installment |
| Currency\_Code | VARCHAR(3) | Currency Code |
| Openning\_Date | TIMESTAMP | Openning day of credit |
| Closing \_Date | TIMESTAMP | Closing day of credit |
| Follow\_Up\_Status | VARCHAR(1) | Follow Up status |
| New\_Customer\_Flag | VARCHAR(1) |  |
| Follow\_Up\_Date | TIMESTMAP | Follow Up Day |
| Follow\_Up\_Principal\_Amt | NUMERIC(13,8) | Amount of principal capital of follow up credit |
| Used\_Interest\_Rate | NUMERIC(7,4) |  |
| Current\_Interest\_Rate | NUMERIC(7,4) |  |

Table 10 – PROD\_TGT\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For all the customer in CUSTOMER\_BASE\_CR table, for each product, collect following information
  + Date (Every day of the year)
  + Days past due
  + Amount of payment made
  + Payment due
  + Minimum due payment for the month

Information/ rules for all these can be found in the lookup tables

Note that all information should be as of run-date.

### Grain

First 3 columns will form the grain for this table. We need a separate row for each unique combination of these 3 columns. It is a daily snapshot table.

### Primary index

CUST\_ID

## Bureau Data

Table created with stated columns below.

### Table name

BUREAU\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB’s products |
| CARD\_LMT | DEC(18,2) | Aggregation of credit card limit for all banks |
| TOT\_EXPSR | DEC(18,2) | Aggregation of credit product from all banks |
| RSK\_SCORE | BYTEINT | Risk score |
| LOAN\_CNT | BYTEINT | Count loans from all banks |
| PMT\_PRFMNC | BYTEINT | Payment performance |

Table 11 – BUREAU\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For each customer, collect the following information
  + Card limit overall
  + Total exposure overall
  + Risk score
  + Count of all loans from all the banks against the customer
  + Payment performance

All information in this table will be from the perspective of the Bureau.

Note that all information might not be as of run-date.

### Grain

First column will form the grain for this table. We need a separate row for each customer.

### Primary index

CUST\_ID

## Employment Information

Table created with stated columns below.

### Table name

EMPLMNT\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| EMPLYR\_ID | BYTEINT | Refer to the lookup table |
| CRDT\_SCORE | BYTEINT | Credit score |
| SALARY\_ACCNT\_CNT | INTEGER | Number of salary account in TEB for the employer |
| AVG\_SALARY | DEC(18,2) | Average salary that the customer gives out |
| TOP10PCT\_SALARY\_AVG | DEC(18,2) | Average salary for the top 10 percent paid employees |
| TOP10PCT\_SALARY\_MED | DEC(18,2) | Median salary for the top 10 percent paid employees |

Table 12 – EMPLMNT\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For each employer, collect following information
  + Credit score
  + Number of salary accounts
  + Average salary
  + Average of the top 10 percent of the salaries
  + Median of the top 10 percent of the salaries

Note that all information should be as of run-date.

### Grain

First column will form the grain for this table. We need a separate row for each employer ID.

### Primary index

EMPLYR\_ID

## Model Result Table

Not Ready.

### Table name

MDL\_RSLT\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| PROD\_KEY | BYTEINT | Refer to the Product lookup table |
| MDL\_ID | BYTEINT | ID of the model |
| MDL\_TYPE\_KEY | VARCHAR(20) | Type of model |
| DT | DATE | Date when the model was run |
| SCORE | BYTEINT | Score of the customer |
| SCORE\_RNG | BYTEINT | Range of scores |

Table 13 – MDL\_RSLT\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For each customer and model, collect following information
  + Product for which the model is run
  + Type of model
  + Date when the model is run
  + Score of the customer for the model
  + Range of the score.

Note that all information should be as of run-date.

### Primary index

CUST\_ID

## Employment Employee Information

Tax is N/A. Salary amount is divided into 5 brackets (at 2500 TL intervals)

### Table name

EMPLMNT\_EMPLYE\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| EMPLYR\_KEY | BYTEINT | Refer to the lookup EMPLYR |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| YR\_MNTH | DATE | Year month (First day of month) |
| SALARY\_AMT | DEC(18,2) | Salary of the customer |
| TAX | DEC(2,2) | Tax rate |

Table 14 - EMPLMNT\_EMPLYE\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For each customer, collect following information
  + Employer name
  + Year month
  + Salary paid
  + Tax paid by customer (in terms of %)

Note that all information should be as of run-date.

### Grain

First 2 columns will form the grain for this table. We need a separate row for each unique combination of these 2 columns.

### Primary index

CUST\_ID

## Money Transfer

Not Ready.

### Table name

MNY\_TRNSFR\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| SNDR\_ID | VARCHAR(20) | The ID for the entity who sent the money |
| RCVR\_ID | VARCHAR(20) | The ID for the entity who received the money |
| DT | DATE | Date of transaction |
| SNDR\_TEB\_CUST\_FLG | VARCHAR(1) | Flag to signify if the receiver is a TEB customer |
| RCVR\_TEB\_CUST\_FLG | VARCHAR(1) | Flag to signify if the sender is a TEB customer |
| TYPE\_OF\_PMT\_KEY | BYTEINT | The type of transfer i.e. inter-bank, intra-bank etc. |
| TYPE\_OF\_TRNSFR\_KEY | BYTEINT | Monthly, Rental, Educational Payment etc. |
| AMT | DEC(18,2) | Amount transferred |

Table 15 – MNY\_TRNSFR\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For each money transfer activity, collect following information
  + ID of the sender
  + ID of the receiver
  + Date of transaction
  + Sender flag to be ‘Y’ if the entity is a TEB Customer
  + Receiver flag to be ‘Y’ if the entity is a TEB Customer
  + Type of payment
  + Type of transfer
* For each unique combination of above mentioned fields, calculate the following
  + Amount of transfer

Note that all information should be as of run-date.

### Grain

First 3 columns will form the grain for this table. We need a separate row for each unique combination of these 3 columns.

### Primary index

SNDR\_ID

### Secondary index

RCVR\_ID

## Overdraft Status

Table created with stated columns below.

### Table name

OVD\_STS\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| YR\_MNTH | DATE | Year month |
| ACCNT\_ID | VARCHAR(20) | Account Id for which the overdraft can occur |
| OVD\_LMT | DEC(18,2) | Overdraft limit |
| OVD\_LMT\_UTL | DEC(3,2) | Overdraft limit utilization |

Table 16 – OVD\_STS\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For each customer, collect following information
  + Year month
  + Account
  + Overdraft limit
  + Overdraft limit utilization

Note that all information should be as of run-date.

### Grain

First 2 columns will form the grain for this table. We need a separate row for each unique combination of these 2 columns.

### Primary index

CUST\_ID

## Insurance Information

Not Ready. Waiting data info from IT.

### Table name

INSR\_INFO\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB's products |
| INSR\_TYPE\_KEY | BYTEINT | Refer to the lookup table INSR\_KEY |
| DT | DATE | Daily date for each insurance type for the customer |
| AMT\_DUE\_DT | DATE | Due Date for the insurance |
| MIN\_PMT\_AMT | DEC(18,2) | Minimum payment amount |
| PMT\_AMT | DEC(18,2) | Payment amount |
| PMT\_DUE\_AMT | DEC(18,2) | The payment amount due |

Table 17 – INSR\_INFO\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For each customer, type of insurance and day, collect following information
  + Amount paid/Payment amount
  + Payment amounts due

Note that all information should be as of run-date.

### Grain

First 3 columns will form the grain for this table. We need a separate row for each unique combination of these 3 columns. This will be a daily snapshot table.

### Primary index

CUST\_ID

## Restructured Payments

Not Ready. Waiting data info from IT.

### Table name

RSTRD\_PMT\_CR

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB’s products |
| PROD\_KEY | BYTEINT | Refer to the lookup table PROD |
| RSTRD\_DT | DATE | The restructuring date |
| YR\_MNTH | DATE | The month in which the payments against restructured amounts paid |
| RSTRD\_AMT | DEC(18,2) | The restructured amount |
| OUTSTD\_AMT | DEC(18,2) | The amount which is left to be paid in that particular month |
| PAID\_AMT | DEC(18,2) | The amount paid in that month |
| AMT\_DUE | DEC(18,2) | The amount that was due to be paid after restructuring |
| ORIG\_AMT | DEC(18,2) | The original amount which was later restructured |

Table 18 – RSTRD\_PMT\_CR

### Extraction Logic

Followings steps represent extraction logic:

* For each customer and credit product, collect following information
  + Restructuring date
  + Month of the year in which the payment is made after restructuring
  + Restructured amount
  + Outstanding amount
  + Amount paid
  + Amount due
  + Original amount

Note that all information should be as of run-date.

### Grain

First 4 columns will form the grain for this table. We need a separate row for each unique combination of these 4 columns.

### Primary index

CUST\_ID

## Product Ownership

Ready for loan products. Other products (cc, deposit) will be added.

### Table name

PROD\_OWNSHP

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB’s products |
| PROD\_KEY | BYTEINT | Refer to the lookup table PROD |
| YR\_MNTH | DATE | Year Month |
| BALNC | DEC(18,2) | Balance of the credit product left to be paid |
| PROD\_CNT | INTEGER | Count of products |

Table 19 – PROD\_OWNSHP

### Extraction Logic

Followings steps represent extraction logic:

* For each customer and credit product, collect following information
  + Year Month
  + Balance
* For each unique combination of above mentioned fields, including product, calculate the following
  + Count of Products

Note that all information should be as of run-date.

### Grain

First 3 columns will form the grain for this table. We need a separate row for each unique combination of these 3 columns. This is a monthly table(historical).

### Primary index

CUST\_ID

## Account Status

Ready for specified products and customers’ state (live,closed,cancelled,target).

Reference table is created.

FILTER:

Customer\_type = Real and Business\_Line in (Individual&Star) or Portfolio\_Type in (Individual&Star)

These filters shows that customer is in target population which is real individual customers.

### Table name

ACCNT\_STS

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB’s products |
| PROD\_KEY | BYTEINT | Refer to the lookup table PROD |
| YR\_MNTH | DATE | Year Month |
| STS\_KEY | BYTEINT | Refer to lookup table STS |

Table 20 – ACCNT\_STS

### Extraction Logic

Followings steps represent extraction logic:

* For each customer and credit product, collect following information
  + Year Month
  + Account Status

Note that all information should be as of run-date.

### Grain

First 3 columns will form the grain for this table. We need a separate row for each unique combination of these 3 columns. This is a historical table, it will only capture the transition of status against the customer and product, whenever it occurs.

### Primary index

CUST\_ID

## Customer Interaction

Not Ready.

### Table name

CUST\_INTRACTN

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| CUST\_ID | VARCHAR(20) | Unique identifier for each TEB customer who has an account or is availing TEB’s products |
| INTRACTN\_DATE | DATE | Interaction Date |
| CHNL\_KEY | BYTEINT | Refer to lookup table CHNL |
| INTRACTN\_RSN\_KEY | BYTEINT | Refer to INTRACTN\_RSN lookup table |
| LOC\_KEY | BYTEINT | Refer to LOC lookup table |
| INTRACTN\_CNT | INTEGER | Count of interaction |

Table 21 – CUST\_INTRACTN

### Extraction Logic

Followings steps represent extraction logic:

* For each customer, collect following information
  + Interaction Date
  + Channel for Interaction e.g. ATM, Phone, SMS, Branch
  + Interaction Reason e.g. Complaint, Info, Withdrawal
  + Location of interaction
* For each unique combination of above mentioned fields, calculate the following
  + Count of Interactions

Note that all information should be as of run-date.

### Grain

First 4 columns will form the grain for this table. We need a separate row for each unique combination of these 4 columns. This is a transactional table.

### Primary index

CUST\_ID

## Customer Events

### Table name

CUST\_EVENT

### Attributes

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| cmusno | VARCHAR(20) | cmusno |
| event\_id | VARCHAR(5) | Unique event id (5 digits) |
| event\_date | DATETIME | Event Date in timestamp format. If there is no time info, 00:00:00 is used. |
| domain\_type | VARCHAR(30) | Related product or service info. |
| event1 | VARCHAR(90) | Event name.(ex: credit card open) |
| event2 | VARCHAR(90) | Event detail.(ex: supplementary credit card open) |
| event3 | VARCHAR(90) | Necessity of this field will be decided later. |
| channel\_name | VARCHAR(90) | Channel information if exists. |

Table 22 – CUST\_EVENT

### Extraction Logic

Followings steps represent extraction logic:

* For each customer, collect following information
  + Event Domain
  + Event Name
  + Event Detail
  + Channel Name

Note that all information should be as of run-date.

### Grain

First 4 columns will form the grain for this table. We need a separate row for each unique combination of these 4 columns. This is a transactional table.

### Primary index

CMUSNO

## Lookup Tables

Following are the lookup tables

### MERCH

|  |  |  |
| --- | --- | --- |
| **MERCH\_KEY** | **MERCH\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 23 - MERCH

### CURR

|  |  |  |
| --- | --- | --- |
| **CURR\_KEY** | **CURR\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 24 - CURR

### LOC

|  |  |  |
| --- | --- | --- |
| **LOC\_KEY** | **LOC\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 25 - LOC

### CARD\_TYPE

|  |  |  |
| --- | --- | --- |
| **CARD\_TYPE\_KEY** | **CARD\_TYPE\_NAME** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 26– CARD\_TYPE

### CUST\_TYPE

|  |  |  |
| --- | --- | --- |
| **CUST\_TYPE\_KEY** | **CUST\_TYPE\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 27 – CUST\_TYPE

### CARD\_SEG

|  |  |  |
| --- | --- | --- |
| **CARD\_SEG\_KEY** | **CARD\_SEG\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 28– CARD\_SEG

### OCCUP

|  |  |  |
| --- | --- | --- |
| **OCCUP\_KEY** | **OCCUP\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 29 - OCCUP

### EMPLNT

|  |  |  |
| --- | --- | --- |
| **EMPLNT\_KEY** | **EMPLNT\_NM** | **DESCR** |
| 1 |  |  |
| 2 |  |  |

Table 30 - EMPNT

### CITY

|  |  |  |
| --- | --- | --- |
| **CITY\_KEY** | **CITY\_NM** | **DESCR** |
| 1 |  |  |
| 2 |  |  |

Table 31 - CITY

### DIST

|  |  |  |
| --- | --- | --- |
| **DIST\_KEY** | **DIST\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 32 - DIST

### MN\_BRNCH

|  |  |  |
| --- | --- | --- |
| **MN\_BRNCH\_KEY** | **MN\_BRNCH\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 33 – MN\_BRNCH

### PROD

|  |  |  |
| --- | --- | --- |
| **PROD\_KEY** | **PROD\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 34 - PROD

### MDL\_TYPE

|  |  |  |
| --- | --- | --- |
| **MDL\_TYPE\_KEY** | **MDL\_TYPE\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 35 - MDL\_TYPE

### TYPE\_OF\_PMT

|  |  |  |
| --- | --- | --- |
| **TYPE\_OF\_PMT\_KEY** | **TYPE\_OF\_PMT\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

Table 36 – TYPE\_OF\_PMT

### TYPE\_OF\_TRNSFR

|  |  |  |
| --- | --- | --- |
| **TYPE\_OF\_TRNSFR\_KEY** | **TYPE\_OF\_TRNSFR\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 37 – TYPE\_OF\_TRNSFR

### INSR\_TYPE

|  |  |  |
| --- | --- | --- |
| **INSR\_TYPE\_KEY** | **INSR\_TYPE\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 38 – INSR\_TYPE

### STS

|  |  |  |
| --- | --- | --- |
| **STS\_KEY** | **STS\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |
|  |  |  |

Table 39 – STS

### CHNL

|  |  |  |
| --- | --- | --- |
| **CHNL\_KEY** | **CHNL\_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 40 – CHNL

### INTRACTN\_RSN

|  |  |  |
| --- | --- | --- |
| **INTRACTN\_RSN\_KEY** | **INTRACTN\_RSN \_NM** | **DESC** |
| 1 |  |  |
| 2 |  |  |

Table 41 – INTRACTN\_RSN