

# **Oracle FLEXCUBE Direct Banking**

Bulk Template Guide

Release 12.0.3.0.0

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Oracle Financial Services Software Limited  
Oracle Park  
Off Western Express Highway  
Goregaon (East)  
Mumbai, Maharashtra 400 063  
India

Worldwide Inquiries:

Phone: +91 22 6718 3000

Fax: +91 22 6718 3001

[www.oracle.com/financialservices/](http://www.oracle.com/financialservices/)

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## Intended Audience

Any interested party working on the delivery of Oracle FLEXCUBE Direct Banking may read this document. The following profile of users would find this document useful:

- Development Team

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## Structure

This manual is organized into the following categories:

- Preface gives information on the intended audience. It also describes the overall structure of the Installation Manual.
- Document explains installation procedure of Oracle FLEXCUBE Direct Banking 12.0.3.0.0 Development Workbench.

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## Introduction

This document, termed Oracle FLEXCUBE Direct Banking Bulk Template Guide is a single reference for the creation of bulk templates which can be managed, configured, extended by external parties, to create / modify new bulk templates.

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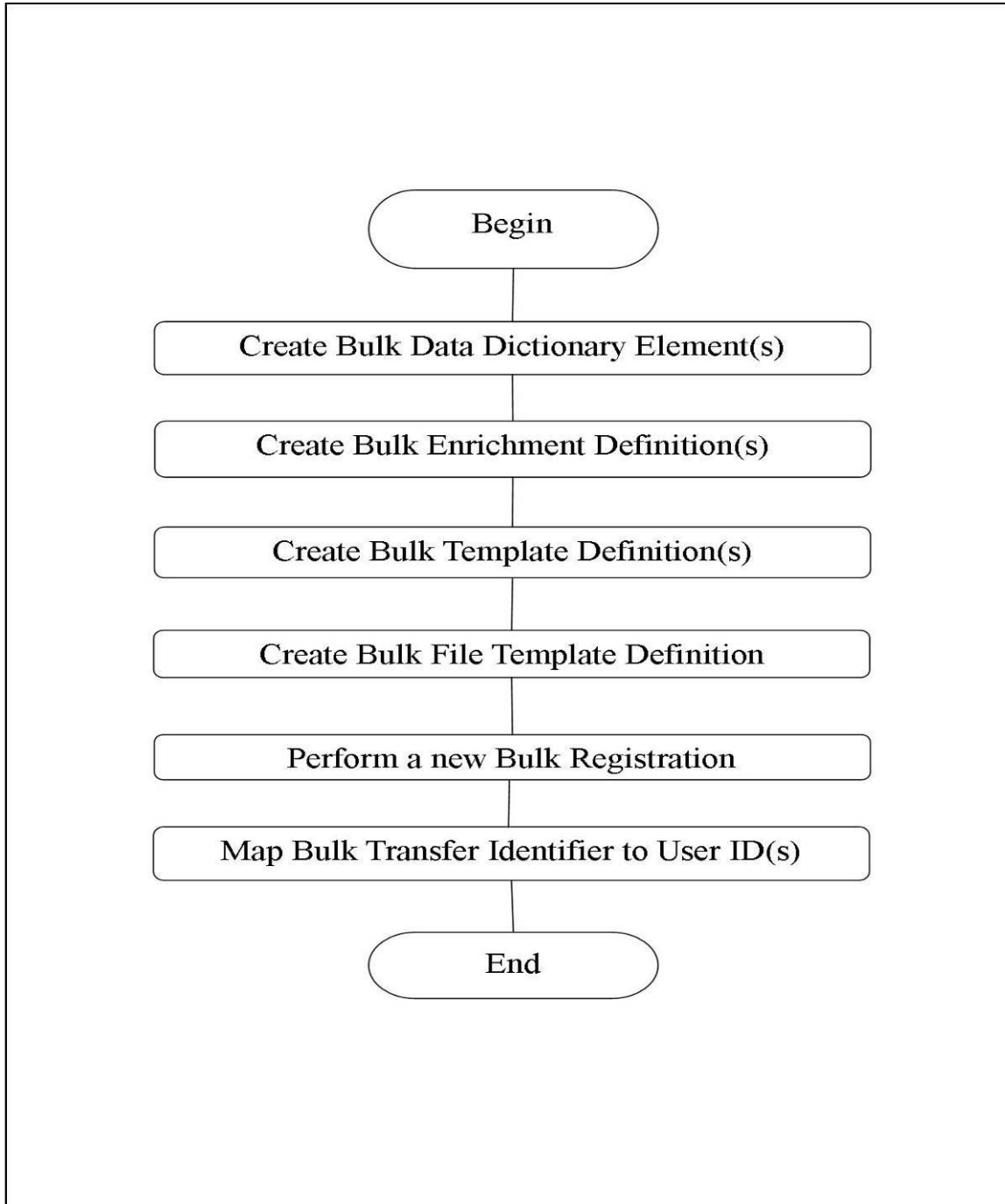
## Abbreviations

FCDB / FC DB / FC Direct Banking / Direct Banking	Oracle FLEXCUBE Direct Banking
DBA	Database Administrator
URL	Uniform Resource Locator
JNDI	Java Naming and Directory Interface
DB	Database
IP	Internet Protocol
FCAT BASE DIR	FCDB Base Working Directory
TD	Term Deposit
SMTP	Simple Mail Transfer Protocol
JMS	JAVA Message Service
ATG	Art Technology Group
RTD	Oracle Real-Time Decision

---

## Overview

The following figure explains bulk file upload template definition process that administrators are expected to follow.





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# 1. Bulk Data Dictionary

Data dictionary transaction defines the smallest element in the uploaded file. This element can be account number, branch code, bank code or some other information which you want to be part of the uploaded file. Using this transaction existing data dictionary element can also be viewed and/or modified.

1. Select **Bulk Data Dictionary** from the menu.

## 1.1 TO CREATE NEW DATA ELEMENT

- Click **Create New Data Element** on the Data Dictionary page.
- Enter the data in the fields based on the field information provided below:

Field Name	Description
<b>Data Element</b>	Provides the data element name.
<b>Description</b>	Gives the brief description of the data element.
<b>Field Type</b>	Gives the data type of data element.
<b>Min Length</b>	Gives the minimum length of value that data element should hold.
<b>Max Length</b>	Gives the maximum length of value that data element should hold.
<b>Field Format</b>	Tells the value format that data element should hold e.g. MM/DD/YYYY.
<b>Comments</b>	Gives extra information about the data the element.

- Click Create Data Element.

## 1.2 TO MODIFY EXISTING DATA ELEMENT

- Click on the alphabet to view the data elements starting with the clicked alphabet on the Data Dictionary page.
- Click on the name of the data element that you wish to modify.
- Edit the data element details based on the requirement.

Field Name	Description
<b>Description</b>	If required, edit the brief description of the data element.
<b>Field Type</b>	If required, edit the data type of data element.
<b>Min Length</b>	If required, edit the minimum length of value that data element should hold.
<b>Max Length</b>	If required, edit the maximum length of value that data element should hold.
<b>Field Format</b>	If required, edit the value format that data element should hold e.g. MM/DD/YYYY.
<b>Comments</b>	If required, edit any extra information about the data <b>element</b> .

- Click Modify Data Element.

---

## 2. Bulk Enrichment Definition

1. Select **Bulk Enrichment** Definition from the menu.

### 2.1 TO CREATE NEW ENRICHMENT

- Click Create Enrichment on the Enrichment Definition page.
- Enter the data in the fields based on the field information provided below:

Field Name	Description
<b>Name</b>	Gives the unique name of the enrichment.
<b>Description</b>	Gives the description of the enrichment
<b>Type</b>	It can be of two types. Select one of the following: <ul style="list-style-type: none"><li>➤ Query Based: Define query in Query field.</li><li>➤ Java Based: Enter Java class name in Java Class field.</li></ul>
<b>Parameter Number</b>	Gives the number of parameters used in the query
<b>Parameter Field</b>	Provides the name of the data elements containing the parameter value. Multiple parameter fields can be separated with '#' character. Provides Search link which gives the list of parameters. Select the parameter from the list and click OK. Parameters will be entered in Parameter Field separated by # if there is more than one parameter.
<b>Java Class</b>	Value in this field is required if the Type is "Java Based". Link for Java Class is provided that gives the list of Java class.
<b>Replace Map</b>	For future use.
<b>Query</b>	Value in this field is required if the Type is "Query Based". Link for Query is provided which gives the list of SQL query

- Click Create Enrichment.

## 2.2 TO MODIFY EXISTING ENRICHMENT

- Click on the alphabet to view the bulk enrichment definition starting with the clicked alphabet on the Enrichment Definition page.
- Click on the name of the bulk enrichment definition that you wish to modify.
- Edit the enrichment details based on the requirement

Field Name	Description
<b>Description</b>	If required, edit the description of the enrichment
<b>Type</b>	If required ,edit the Type of Enrichment: <ul style="list-style-type: none"><li>➤ Query Based: Change the query in Query field.</li><li>➤ Java Based: Change the Java class name in Java Class field.</li></ul>
<b>Parameter Number</b>	If required, edit the number of parameters.
<b>Parameter Field</b>	If Required, edit the name of the data elements containing the parameter value. Multiple parameter fields can be separated with '#' character.
<b>Java Class</b>	If required, edit the Java Class. Link for Java Class is provided that gives the list of Java class containing enrichment code.
<b>Replace Map</b>	For future use.
<b>Query</b>	If required ,edit the query .Link for Query is provided which gives the list of SQL query

- Click Modify Enrichment.

## 2.3 TO COPY ENRICHMENT

- To copy a particular enrichment, click on the alphabet with which it starts.
- Click Copy to Copy the Enrichment. Enter the New Enrichment Name and Click OK.
- The copied enrichment is seen in list of Enrichments. To modify it, refer to section To Modify Existing Enrichment

## 2.4 TO DELETE ENRICHMENT

This is done to remove the enrichment which is no longer in use.

- Select the enrichment to be deleted.
- Click on delete link for the selected enrichment.
- Click OK and confirm the deletion. Enrichment will be deleted permanently.

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## 3. Bulk Template Definition

Template definition is built using the data dictionary elements defined in the data dictionary maintenance. Template represents a single transaction record in the uploaded file which could be repeat finite amount of time in the uploaded file. The transaction record in the uploaded file is parsed and processed depending on the template definition. The uploaded file is broken down into individual elements and stored in the local database for further processing.

Maintenance screens for creating a template are as shown below. The screen accepts information like number of fields in the template, the prefix and the postfix information which is used to parse the uploaded file.

Every template is also associated with a component so that each template could be handled differently depending on the processing needs. Examples of business handler are:

1. Transaction handler
2. Control Totals handler

Customer component could be plugged in as and when business need arise.

1. Select **Bulk Template Definition** from the menu.

### 3.1 TO CREATE NEW TEMPLATE

- Click **Create New Message Template** on the Template Definition page.
- Enter the data in the fields based on the field description provided below:

Field Name	Description
<b>ID Template</b>	Enter unique bulk template ID.
<b>Template Description</b>	Give the brief description of the bulk template.
<b>Custom Validator</b>	If required, provide the Java class name that will be used as custom validator. Validators link is provided that gives the list of java classes. For the list of Validators , refer <a href="#">Section on List of Validators</a>
<b>Name Schema</b>	For future use
<b>Separator String</b>	Mandatory in case of variable files.
<b>Reference Template</b>	For future use.
<b>No. of Fields</b>	Gives the no. of data elements that will be a part of the template.
<b>Prefix</b>	Enter a prefix character that will be used to identify the start of record.
<b>Postfix</b>	Enter a postfix character that will be used to identify the end of record
<b>Terminator</b>	Enter a terminator character that will be used to indicate end of bulk template

<b>Adjustment</b>	This field is used where you need to instruct to go one position ahead or behind.
<b>Business Type</b>	Select one of the following types: <ul style="list-style-type: none"> <li>➤ A – Advice.</li> <li>➤ C – Control and Trailer.</li> <li>➤ F – Consol.</li> <li>➤ Z – No Processing</li> <li>➤ T –Instruction and Response.</li> <li>➤ <b>H – Header.</b></li> </ul>
<b>Encoding</b>	For future use
<b>Type Template</b>	Select one of the following: <ul style="list-style-type: none"> <li>➤ Normal – Ordinary template.</li> <li>➤ Placeholder – To be used in conjunction with Bulk Enrichment Definition.</li> </ul>

- Click **Next**.
- Select the data element to be part of the bulk template and click **Insert**.
- Repeat step 4 for adding multiple data elements that you want to be part of bulk template.
- Enter the relevant data in the fields based on the field description given below

Field Name	Description
<b>Sub Template Name</b>	Gives the name of the sub template that is inserted
<b>Reference Field</b>	For Future Use
<b>Data Type</b>	Gives the data type of the field
<b>Min Length</b>	Gives the minimum length of the field
<b>Max Length</b>	Gives the maximum length of the field
<b>Format</b>	Tells the value format that field e.g
<b>Allowed Characters</b>	Gives the character that is allowed and should be present in the uploaded file
<b>Request</b>	Check the box if the field request is necessary
<b>Validate</b>	Check the box if the field validation is required
<b>Mandatory</b>	Check the box if the field is mandatory
<b>Divider</b>	For Future use
<b>Clear</b>	Click the button to clear the all entries for that particular sub template

- Click Next.
- Enter the data in the fields based on the field information provided below:

Field Name	Description
<b>Custom Validator</b>	If required, provide the Java class name to be used as custom validator. Validator's link is provided that gives list of java classes. For the list of validator's , refer to <a href="#">Section on List of Validators</a>
<b>Error Code</b>	If required, provide application message ID for custom error message.

<b>Fix Length Flag</b>	Select one of the following: <ul style="list-style-type: none"> <li>➤ Fixed – Fixed length field.</li> <li>➤ Variable – Variable length field.</li> </ul>
<b>Justification</b>	Select one of the following: <ul style="list-style-type: none"> <li>➤ Left – Left justified field value.</li> <li>➤ Right – Right justified field value.</li> </ul>
<b>Fill Char</b>	Enter the fill character used to fill up the blank spaces if needed
<b>Delimiter</b>	Enter the character used for delimiting the field value. This is applicable only when the file is of variable type
<b>Param Field</b>	Select if it is used as a parameter field.
<b>Is Placeholder</b>	Select if it is got from the enrichment
<b>Enrichment</b>	It is application to get derived values or do the enrichment validation while parsing data. Select any of the enrichment. For the list of Enrichment , please refer to Enrichment Section
<b>Is Aggregate</b>	Select if the data element value is to be aggregated.
<b>Fin Field</b>	On clicking the Map FinField , you will get the list of Financial Fields .Select any of the Fin field to map the data element to it

- Click Next.
- Verify the details and click Finish.

### 3.2 TO MODIFY EXISTING TEMPLATE DEFINITION

- Click on the alphabet to view the bulk template definition starting with the clicked alphabet on the Template Definition page.
- Click on the name of the bulk template definition that you wish to modify.
- Click Modify Template.
- Edit the template details based on the modifications.

Field Name	Description
<b>Template Description</b>	If required, edit the brief description about the bulk template.
<b>Custom Validator</b>	If required, edit the Java class name to be used as custom validator. Validator's link is provided which gives the list of java classes. For the list of Validators , refer <a href="#">Section on List of Validators</a>
<b>Name Schema</b>	For future use
<b>Separator String</b>	For future use.
<b>Prefix</b>	If required, edit the prefix character that is used to identify the start of the record.

<b>Postfix</b>	If required, edit the postfix character that is identify the end of the records
<b>Terminator</b>	If required ,edit a terminator character that will be used to indicate end of bulk template
<b>Adjustment</b>	This is a numeric field which holds the value when the parser needs to go back by a certain no.
<b>Business Type</b>	If required, edit the Business Type .Business Type is given with the description
<b>Encoding</b>	For future use.
<b>Reference Template</b>	For future use.
<b>Type Template</b>	If required ,change the type of template
<b>No. of Fields</b>	If required, edit the no. of data elements that will be part of the template.
<b>Is Fin Request</b>	For Future use

- Click **next**.
- Edit the template details according to the requirement

Field Name	Description
<b>Reference Field</b>	For Future Use
<b>Format</b>	If required ,edit the value format that field e.g. MM/DD/YYYY
<b>Allowed Characters</b>	If required, modify the Allowed Character
<b>Request</b>	According to change ,check or uncheck the box of the request field
<b>Validate</b>	According to change ,check or uncheck the box of the validation field
<b>Mandatory</b>	According to change ,check or uncheck the box of the mandatory field
<b>Divider</b>	For Future use
<b>Clear</b>	<p>If the number of fields in bulk template are reduced, click clear to remove the entries for that field .Select DELETE from List of sub template and press Insert. This will ignore that particular field</p> <p>If the sub template name is to be changed, clear that particular field and then insert the new field from the List of sub template and make the necessary changes in the configurations</p>

- Click **next**.
- Edit the template details based on the modifications.

Field Name	Description
<b>Custom Validator</b>	If required, edit the Java class name to be used as custom validator.
<b>Error Code</b>	If required, edit application message ID for custom error



	message.
<b>Fix Length Flag</b>	If required, edit Fixed Length Flag
<b>Justification</b>	If required, edit the justification
<b>Fill Char</b>	If required, edit the fill character used to fill up the blank spaces if needed
<b>Delimiter</b>	If required, edit the character used for delimiting the field value. This is applicable only when the file of variable type
<b>Param Field</b>	According to the requirement, select or deselect parameter field.
<b>Is Placeholder</b>	According to the requirement, select or deselect placeholder.
<b>Enrichment</b>	If required, edit the enrichment .For the list of Enrichment , please refer <a href="#">Section on List of Validators</a>
<b>Is Aggregate</b>	According to the requirement, select or deselect if the data element value is to be aggregated.
<b>Fin Field</b>	If required, edit the Fin field to map the data element to it

- Click **Next**.
- Verify the details and click **Finish**.

If any changes are made in the File Definition then there is need to modify Bulk Registration so that that the changes extrapolated to the BTID also.

### 3.3 TO VIEW FINANCIAL AND HANDOFF MAPPING/ENRICHMENTS

Basically a link is provided that opens a popup which lists all the financial and handoff mapping and a similar link for Enrichments on the same screen.

- In order to view the list, select the template for which details are required.
- Click on the selected bulk template.
- Click on the link for the details of enrichment and mappings respectively.
- For enrichment details like fieldname, enrichment name, type, description, parameter field and custom validator are displayed.
- Similarly for handoff details like finfield /handoff field and fieldname are displayed.

### 3.4 TO COPY BULK TEMPLATE

Typically this is done to introduce a template or use an existing template with minor modifications.

- To copy a particular Bulk Template, click on the alphabet with which it starts
- Click on the selected bulk template.
- Click Copy to copy the bulk template .Enter the New Template Name and click ok
- The New template is seen in list of templates. To modify the new template refer To Modify Existing Template Definition. If a New Identifier has been there has no need to change the file template definition.

### 3.5 TO COPY BULK CONSOL /CONTROL TEMPLATE

Typically this is done to introduce copying of consol and control in a standardized format. Dummy templates are provided for copying.

For Consol, Dummy consol is: GENCONSOL and for Control Dummy Control is: GENCONTROL

To create a particular Bulk consol/control Template, for consol type GENCONSOL and for control type GENCONTROL.

### 3.5.1 TO COPY CONSOL:

Click **Copy** to copy the bulk consol template.

- Prefix for new template: Enter the Prefix for new template name for e.g. for DRLDISB adapter if prefix is DRLDISB template created will be DRLDISBCONSOL.
- Base Template Name: IdRequest, It will be used as a key for searching all txn\_data entries for that particular template.
- Amount Field: Name of amount field defined in txn\_data coming from file.
- Max Date: Max date field entry created in txn\_data.
- Min Amount: Min Amount Field entry created in txn\_data.

These fields will passed as a parameter for enrichments. Fill all the fields and click OK. Template with PREFIXNAMECONSOL will be created.

### 3.5.2 TO COPY CONTROL:

Click **Copy** to copy the bulk control template.

- Prefix for new template: Enter the Prefix for new template name for e.g. for DRLDISB adapter if prefix is DRLDISB template created will be DRLDISBCONTROL.
- Base Template Name: IdRequest. It will be used as a key for searching all txn\_data entries for that particular template.
- Total Amount Field: Total amount field entry created in txn\_data for which isAggregate is "Y". It stores total amount
- Number of records field: Number of records field created in txn\_data. It stores total number of instructions in a file.

These fields will passed as a parameter for enrichments. Fill all the fields and click OK. Template with PREFIXNAMECONTROL will be created.

Search link will display all the records defined in txn\_data against the base template entered.

Select field for enrichment parameter and click OK.

### 3.6 TO DELETE BULK TEMPLATE

This is done to remove the bulk template which is no longer in use.

- To delete a particular Bulk Template, click on the alphabet with which it starts.
- Click Delete to delete the bulk template.
- Confirm the deletion by clicking ok.

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## 4. Bulk File Template Definition

1. Select Bulk File Template Definition from the menu.

### 4.1 TO CREATE NEW BULK FILE TEMPLATE DEFINITION

- Click Create New Bulk File Template on the Bulk File Template Definition page.
- Enter unique Base Template ID and Number of Sub Templates.
- Click Next.
- Enter the data in the fields based on the field information provided below:

Field Name	Description
<b>Template ID</b>	Select Template ID in the order in which the data will appear in the bulk data file. In case of section type template, section name appears as Template ID.
<b>Template Type</b>	Select one of the following : <ul style="list-style-type: none"><li>➤ Record: This type of template contains only one type of transactions e.g. If the file contains only cheque details, then Record Template type can be specified</li><li>➤ Section Type: This type of template contains collection of records. This template contains instruction and its corresponding annexure. If a particular pattern is replicated , then it is Section type template</li></ul>
<b>Occ Field</b>	For future use
<b>Min Occ</b>	Select minimum occurrence of the records that should be present in the bulk data file to be uploaded.
<b>Max Occ</b>	Select maximum occurrence of the records that should be present in the bulk data file to be uploaded.
<b>Keep Prefix</b>	Check the box to give the prefix for the bulk template
<b>Keep Postfix</b>	Check the box to give the postfix for the bulk template.
<b>Seq. No.</b>	Gives the sequence number of the Template ID in the bulk data file.
<b>Parent ID</b>	Parent Template ID is same as Template ID. Once the Base Template Id is defined, Parent Id field automatically gets populated.
<b>Child Count</b>	If the Template is Section Type, enter number of templates that are part of the section.

- Click next.
- Verify the details and click Finish.

#### 4.2 TO MODIFY EXISTING BULK FILE TEMPLATE DEFINITION

- Click on the alphabet to view the bulk file template definition starting with the clicked alphabet on the Bulk File Template Definition page.
- Click on the name of the bulk file template definition that you wish to modify.
- Click Edit for the Template ID of which you want to modify details.
- Modify details based on the requirement.

Field Name	Description
<b>Template ID</b>	If required, edit the name of Template ID. In case of section type template; section name appears as Template ID.
<b>Template Type</b>	If required, edit the type of Template .Select one of the following : <ul style="list-style-type: none"> <li>➤ Record: This type of template contains only one type of transactions e.g. If the file contains only cheque details, then Record Template type can be specified</li> <li>➤ Section Type: This type of template contains collection of records. This template contains instruction and its corresponding annexure. If a particular pattern is replicated , then it is Section type template</li> </ul>
<b>Occ Field</b>	For future use
<b>Min Occ</b>	If required, edit the minimum occurrence of the records that should be present in the bulk data file to be uploaded.
<b>Max Occ</b>	If required, edit maximum occurrence of the records that should be present in the bulk data file to be uploaded.
<b>Keep Prefix</b>	According to change ,check or uncheck the box to give the prefix for the bulk template
<b>Keep Postfix</b>	According to change, check or uncheck the box to give the postfix for the bulk template.
<b>Seq. No.</b>	If required, edit the sequence number of the Template ID in the bulk data file.
<b>Parent ID</b>	If required, edit the Parent ID
<b>Child Count</b>	If required, edit the child count .If the Template is Section Type, enter number of templates that are part of the section.
<b>Bulk Transaction Identifier</b>	If required, edit the bulk transaction identifier. It is the data element which is used to identify the type of transaction

- Click Next.
- Verify the details and click Finish.
- If any changes in the no of template ids the File Template Definition will have to be recreated

## 5. List of Query and their descriptions

Sr.No	Query Enrichment Name	Query	Description	Parameters Passed
1	INTERNALBODYMININSTRUMENTAMT	select to_char(least(nvl(to_number(?),999999999999999999),to_number(?))) from dual	To Fetch min amount	INTERNALBODYMININSTRUMENTAMT, INTERNALBODYAMT
2	INTERNALBODYMAXINSTRUMENTAMT	select to_char(greatest(nvl(to_number(?),0),to_number(?))) from dual	To Fetch max amount	INTERNALBODYMAXINSTRUMENTAMT, INTERNALBODYAMT
3	INTERNALBODYTOTRECORDS	select to_char(nvl(?),0)+1 from dual	To count total number of records	INTERNALBODYTOTRECORDS
4	INTERNALBODYMAXTRANSDATE	select to_char(nvl(greatest(nvl(to_date(?,'DD/MM/YYYY'),sysdate),nvl(to_date(?,'DD/MM/YYYY'),to_date(?,'DD/MM/YYYY'))),sysdate),'DD/MM/YYYY') from dual	To fetch last transaction date	INTERNALBODYFORMATEFFDATE, INTERNALBODYMAXTRANSDATE, INTERNALBODYFORMATEFFDATE
5	DOMESTICENBODYMAXINSTRUMENTAMT	select to_char(greatest(nvl(to_number(?),0),to_number(?))) from dual	To Fetch max amount	DOMESTICBODYMAXINSTRUMENTAMT, DOMESTICBODYAMT
6	DOMESTICENBODYMAXTRANSDATE	select to_char(nvl(greatest(nvl(to_date(?,'DD/MM/YYYY'),sysdate),nvl(to_date(?,'DD/MM/YYYY'),to_date(?,'DD/MM/YYYY'))),sysdate),'DD/MM/YYYY') from dual	To fetch last transaction date	DOMESTICBODYFORMATEFFDATE, DOMESTICBODYMAXTRANSDATE, DOMESTICBODYFORMATEFFDATE
7	DOMESTICENBODYMININSTRUMENTAMT	select to_char(least(nvl(to_number(?),999999999999999999),to_number(?))) from dual	To Fetch min amount	DOMESTICBODYMININSTRUMENTAMT, DOMESTICBODYAMT
8	DOMESTICENBODYTOTRECORDS	select to_char(nvl(?),0)+1 from dual	To count total number of records	DOMESTICBODYTOTRECORDS

9	INTERNATIONALENBODYMAXINSTRUMENTAMT	select to_char(greatest(nvl(to_number(?),0),to_number(?))) from dual	To Fetch max amount	INTERNATIONALBODYVALUE STOREEFFDATE, INTERNATIONALBODYFORM ATEFFDATE, AUTHTYPE
10	INTERNATIONALENBODYMAXTRANDATE	select to_char(nvl(greatest(nvl(to_date(?,'DD/MM/YYYY'),sysdate),nvl(to_date(?,'DD/MM/YYYY'),to_date(?,'DD/MM/YYYY'))),sysdate),'DD/MM/YYYY') from dual	To fetch max transaction date	INTERNATIONALBODYFORM ATEFFDATE, INTERNATIONALBODYMAXT RANDATE, INTERNATIONALBODYFORM ATEFFDATE
11	INTERNATIONALENBODYMININSTRUMENTAMT	select to_char(least(nvl(to_number(?),999999999999999999),to_number(?))) from dual	To Fetch min amount	INTERNATIONALBODYMININ STRUMENTAMT, INTERNATIONALBODYAMT
12	INTERNATIONALENBODYTOTRECORDS	select to_char(nvl(?),0)+1 from dual	Total number of records in file	INTERNATIONALBODYTOTRE CORDS

## 6. List of Java Class and their Description

Sr.No	Java Enrichment Name	Java Enrichment class	Description	Arguments Passed
1	INTERNALENBODYTOTI NSTRUMENTAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction amount	INTERNALBODYAMT
2	INTERNALENBODYFOR MATEFFDATE	com.iflex.fcat.xjava.bu lk.enrichment.Internat ionalFormatDateEnric hment	Transaction date in dd/MM/yyyy format	INTERNALBODYEFFDATE
3	INTERNALENVALUESTO REDRACC	com.iflex.fcat.xjava.bu lk.enrichment.ValueDr AccStoreEnrichment	Enrichment to store Debit account number of previous record.	INTERNALBODYVALUESTO REDRACC, INTERNALBODYDRACCOUN TNO, AUTHTYPE
4	INTERNALENVALUECHK DRACC	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare debit account of previous record and current record.	INTERNALBODYDRACCOUN TNO, INTERNALBODYVALUESTO REDRACC, AUTHTYPE
5	INTERNALENVALUESTO RECCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueSt oreEnrichment	Enrichment to store transaction currency of previous record.	INTERNALBODYVALUESTO RECCY, INTERNALBODYAMTCURRE NCY, AUTHTYPE
6	INTERNALENVALUECHK CCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare transaction currency of previous record and current record.	INTERNALBODYAMTCURRE NCY, INTERNALBODYVALUESTO RECCY, AUTHTYPE
7	INTERNALENVALUESTO REEFFDATE	com.iflex.fcat.xjava.bu lk.enrichment.ValueSt oreEnrichment	Enrichment to store effective date of transaction of previous record.	INTERNALBODYVALUESTO REEFFDATE, INTERNALBODYFORMATEF FFDATE, AUTHTYPE
8	INTERNALENVALUECHK EFFDATE	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare effective date of previous record and current record.	INTERNALBODYFORMATEF FFDATE, INTERNALBODYVALUESTO REEFFDATE, AUTHTYPE
9	INTERNALENBODYUSER KEY	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Key from user context	USERKEY
10	INTERNALENVALUESTO REDRCCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueSt oreEnrichment	Enrichment to store debit account currency of previous record.	INTERNALBODYVALUESTO REDRCCY, INTERNALBODYDRCURREN CY, AUTHTYPE
11	INTERNALENVALUECHK DRCCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare debit account currency of previous record and	INTERNALBODYDRCURREN CY, INTERNALBODYVALUESTO



Sr.No	Java Enrichment Name	Java Enrichment class	Description	Arguments Passed
			current record.	REDRCCY, AUTHTYPE
12	INTERNALENVALUESTO REDBRN	com.iflex.fcat.xjava.bu lk.enrichment.ValueSt oreEnrichment	Enrichment to store debit account branch of previous record.	INTERNALBODYVALUESTO REDBRN, INTERNALBODYDRBRANCH , AUTHTYPE
13	INTERNALENVALUECHK DRBRN	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare debit account branch of previous record and current record.	INTERNALBODYDRBRANCH , INTERNALBODYVALUESTO REDBRN, AUTHTYPE
14	INTERNALENCONSOLT OTAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction amount	INTERNALBODYTOTINSTRU MENTAMT
15	INTERNALENCONSOLM AXAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	To Fetch max amount	INTERNALBODYMAXINSTR UMENTAMT
16	INTERNALENCONSOLM AXTRANDATE	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	To fetch last transaction date	INTERNALBODYMAXTRAN DATE
17	INTERNALENCONSOLM INAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	To Fetch min amount in file	INTERNALBODYMININSTR UMENTAMT
18	INTERNALENCONSOLD RBRANCH	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Debit account branch	INTERNALBODYDRBRANCH
19	INTERNALENCONSOLD EBITACCNO	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Debit account number	INTERNALBODYDRACCOUN TNO
20	INTERNALCONSOLAMT CURR	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction currency	INTERNALBODYAMTCURRE NCY
21	INTERNALENCONSOLD RCURR	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Debit account currency	INTERNALBODYDRCURRE NCY
22	INTERNALENCONTROLT OTAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction amount	INTERNALBODYTOTINSTRU MENTAMT
23	INTERNALENCONTROLT OTREC	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Total number of records in file	INTERNALBODYTOTRECOR DS
24	DOMESTICENBODYFOR MATEFFDATE	com.iflex.fcat.xjava.bu lk.enrichment.Internat ionalFormatDateEnric	Transaction date in dd/MM/yyyy format	DOMESTICBODYEFFDATE

Sr.No	Java Enrichment Name	Java Enrichment class	Description	Arguments Passed
		hment		
25	DOMESTICENBODYTOT INSTRUMENTAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction amount	DOMESTICBODYAMT
26	DOMESTICENBODYUSE RKEY	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Key from user context	USERKEY
27	DOMESTICENVALUECH KCCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare transaction currency of previous record and current record.	DOMESTICBODYAMTCURR ENCY, DOMESTICBODYVALUESTO RECCY, AUTHTYPE
28	DOMESTICENVALUECH KDRACC	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare debit account of previous record and current record.	DOMESTICBODYDRACCOU NTNO, DOMESTICBODYVALUESTO REDRACC, AUTHTYPE
29	DOMESTICENVALUECH KDRBRN	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare debit account branch of previous record and current record.	DOMESTICBODYDRBRANC H, DOMESTICBODYVALUESTO REDRBRN, AUTHTYPE
30	DOMESTICENVALUECH KDRCCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare debit account currency of previous record and current record.	DOMESTICBODYDRCURRE NCY, DOMESTICBODYVALUESTO REDRCCY, AUTHTYPE
31	DOMESTICENVALUECH KEFFDATE	com.iflex.fcat.xjava.bu lk.enrichment.ValueC heckEnrichment	Enrichment to compare effective date of previous record and current record.	DOMESTICBODYFORMATEF FDATE, DOMESTICBODYVALUESTO REEFFDATE, AUTHTYPE
32	DOMESTICENVALUEST ORECCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueSt oreEnrichment	Enrichment to store transaction currency of previous record.	DOMESTICBODYVALUESTO RECCY, DOMESTICBODYAMTCURR ENCY, AUTHTYPE
33	DOMESTICENVALUEST OREDRACC	com.iflex.fcat.xjava.bu lk.enrichment.ValueDr AccStoreEnrichment	Enrichment to compare debit account of previous record and current record.	DOMESTICBODYVALUESTO REDRACC, DOMESTICBODYDRACCOU NTNO, AUTHTYPE
34	DOMESTICENVALUEST OREDRBRN	com.iflex.fcat.xjava.bu lk.enrichment.ValueSt oreEnrichment	Enrichment to store debit account branch of previous record.	DOMESTICBODYVALUESTO REDRBRN, DOMESTICBODYDRBRANC H, AUTHTYPE

Sr.No	Java Enrichment Name	Java Enrichment class	Description	Arguments Passed
35	DOMESTICENVALUEST OREDRCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueSt oreEnrichment	Enrichment to store debit account currency of previous record.	DOMESTICBODYVALUESTO REDRCY, DOMESTICBODYDRCURRE NCY ,AUTHTYPE
36	DOMESTICENVALUEST OREFFDATE	com.iflex.fcat.xjava.bu lk.enrichment.ValueSt oreEnrichment	Enrichment to store effective date of transaction of previous record.	DOMESTICBODYVALUESTO REEFFDATE, DOMESTICBODYFORMATEF FDATE, AUTHTYPE
37	DOMESTICCONSOLAM TCURR	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction currency	DOMESTICBODYAMTCURR ENCY
38	DOMESTICENCONSOLD EBITACCNO	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Debit account number	DOMESTICBODYDRACCOU NTNO
39	DOMESTICENCONSOLD RBRANCH	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Debit account branch	DOMESTICBODYDRBRANC H
40	DOMESTICENCONSOLD RCURR	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Debit account currency	DOMESTICBODYDRCURRE NCY
41	DOMESTICENCONSOL MAXAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	To Fetch max amount	DOMESTICBODYMAXINSTR UMENTAMT
42	DOMESTICENCONSOL MAXTRANDATE	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	To fetch last transaction date	DOMESTICBODYMAXTRAN DATE
43	DOMESTICENCONSOL MINAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	To Fetch min amount in file	DOMESTICBODYMININSTR UMENTAMT
44	DOMESTICENCONSOLT OTAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction amount	DOMESTICBODYTOTINSTR UMENTAMT
45	DOMESTICENCONTROL TOTAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction amount	DOMESTICBODYTOTINSTR UMENTAMT
46	DOMESTICENCONTROL TOTREC	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Total number of records in file	DOMESTICBODYTOTRECOR DS
47	INTERNATIONALENBOD YFORMATEFFDATE	com.iflex.fcat.xjava.bu lk.enrichment.Internat ionalFormatDateEnric hment	Transaction date in dd/MM/yyyy format	INTERNATIONALBODYEFFD ATE

<b>Sr.No</b>	<b>Java Enrichment Name</b>	<b>Java Enrichment class</b>	<b>Description</b>	<b>Arguments Passed</b>
48	INTERNATIONALENBODYTOTINSTRUMENTAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFromEnrichment	Transaction amount	INTERNATIONALBODYAMT
49	INTERNATIONALENBODYUSERKEY	com.iflex.fcat.xjava.bu lk.enrichment.CopyFromEnrichment	Key from user context	USERKEY
50	INTERNATIONALENBODYUECHKCCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueCheckEnrichment	Enrichment to compare transaction currency of previous record and current record.	INTERNATIONALBODYAMT CURRENCY, INTERNATIONALBODYVALUESTORECCY, AUTHTYPE
51	INTERNATIONALENBODYUECHKDRACC	com.iflex.fcat.xjava.bu lk.enrichment.ValueCheckEnrichment	Enrichment to compare debit account of previous record and current record.	INTERNATIONALBODYDRAC COUNTNO, INTERNATIONALBODYVALUESTOREDRACC, AUTHTYPE
52	INTERNATIONALENBODYUECHKDRBRN	com.iflex.fcat.xjava.bu lk.enrichment.ValueCheckEnrichment	Enrichment to compare debit account branch of previous record and current record.	INTERNATIONALBODYDRB RANCH, INTERNATIONALBODYVALUESTOREDRBRN, AUTHTYPE
53	INTERNATIONALENBODYUECHKDRCCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueCheckEnrichment	Enrichment to compare debit account currency of previous record and current record.	INTERNATIONALBODYDRC URRENCY, INTERNATIONALBODYVALUESTOREDRCCY, AUTHTYPE
54	INTERNATIONALENBODYUECHKEFFDATE	com.iflex.fcat.xjava.bu lk.enrichment.ValueCheckEnrichment	Enrichment to compare effective date of previous record and current record.	INTERNATIONALBODYFOR MATEFFDATE, INTERNATIONALBODYVALUESTOREEFFDATE, AUTHTYPE
55	INTERNATIONALENBODYUESTORECCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueStoreEnrichment	Enrichment to store transaction currency of previous record.	INTERNATIONALBODYVALUESTORECCY, INTERNATIONALBODYAMT CURRENCY, AUTHTYPE
56	INTERNATIONALENBODYUESTOREDRACC	com.iflex.fcat.xjava.bu lk.enrichment.ValueDrAccStoreEnrichment	Enrichment to compare debit account of previous record and current record.	INTERNATIONALBODYVALUESTOREDRACC, INTERNATIONALBODYDRAC COUNTNO, AUTHTYPE
57	INTERNATIONALENBODYUESTOREDRBRN	com.iflex.fcat.xjava.bu lk.enrichment.ValueStoreEnrichment	Enrichment to store debit account branch of previous record.	INTERNATIONALBODYVALUESTOREDRBRN, INTERNATIONALBODYDRB RANCH, AUTHTYPE
58	INTERNATIONALENBODYUESTOREDRCCY	com.iflex.fcat.xjava.bu lk.enrichment.ValueStoreEnrichment	Enrichment to store debit account currency of previous record.	INTERNATIONALBODYVALUESTOREDRCCY, INTERNATIONALBODYDRC URRENCY, AUTHTYPE

<b>Sr.No</b>	<b>Java Enrichment Name</b>	<b>Java Enrichment class</b>	<b>Description</b>	<b>Arguments Passed</b>
59	INTERNATIONALENVAL ESTOREEFFDATE	com.iflex.fcat.xjava.bu lk.enrichment.ValueSt oreEnrichment	Enrichment to store effective date of transaction of previous record.	INTERNATIONALBODYVALU ESTOREEFFDATE, INTERNATIONALBODYFOR MATEFFDATE, AUTHTYPE
60	INTERNATIONALENCO NSOLAMTCURR	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction currency	INTERNATIONALBODYAMT CURRENCY
61	INTERNATIONALENCO NSOLDEBITACCNO	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Debit account number	INTERNATIONALBODYDRA CCOUNTNO
62	INTERNATIONALENCO NSOLDRBRANCH	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Debit account branch	INTERNATIONALBODYDRB RANCH
63	INTERNATIONALENCO NSOLDRCURR	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Debit account currency	INTERNATIONALBODYDRC URRENCY
64	INTERNATIONALENCO NSOLMAXAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	To Fetch max amount	INTERNATIONALBODYMAXI NSTRUMENTAMT
65	INTERNATIONALENCO NSOLMAXTRANDATE	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	To fetch last transaction date	INTERNATIONALBODYMAX TRANDATE
66	INTERNATIONALENCO NSOLMINAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	To Fetch min amount in file	INTERNATIONALBODYMINI NSTRUMENTAMT
67	INTERNATIONALENCO NSOLTOTAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Transaction amount	INTERNATIONALBODYTOTI NSTRUMENTAMT
68	INTERNATIONALENCO NTROLTOTAMT	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Total transaction amount	INTERNATIONALBODYTOTI NSTRUMENTAMT
69	INTERNATIONALENCO NTROLTOTREC	com.iflex.fcat.xjava.bu lk.enrichment.CopyFr omEnrichment	Total number of records in file	INTERNATIONALBODYTOTR ECORDS

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## 7. List of Validators and their descriptions

Validator Name	Functional Importance
<b>com.iflex.fcat.xjava.data.BulkDateValidator</b>	<b>Validates</b> format of date
<b>com.iflex.fcat.xjava.data.BulkInternalTxnCurrValidator</b>	Validates whether transaction currency is same as source account currency and debit account currency.
<b>com.iflex.fcat.xjava.data.BulkAccountNoValidator</b>	Validates account number
com.iflex.fcat.xjava.data.BulkInstructionDateValidator	<b>Checks transaction date should be more than or equal to current date.</b>
com.iflex.fcat.xjava.bulk.validators.GenericValidator	Checks whether value returned from field is Y or N.Used for enrichments.
com.iflex.fcat.xjava.bulk.validators.BulkBICCodeDomesticValidator	Validates national clearing code
com.iflex.fcat.xjava.data.CurrencyValidator	Validates currency
<b>com.iflex.fcat.xjava.bulk.validators.IBANValidator</b>	Validates IBAN
<b>com.iflex.fcat.xjava.bulk.validators.BulkBICCodeValidator</b>	Validates SWIFT code

## 8. List of Fin Mapping

### 8.1 FOR BODY

Sr.No	Fin Mapping	Mandatory / Optional	Description
1.	AMOUNT	M	Transaction amount
2.	BENEACCTCCY	M	Beneficiary account currency
3.	BENEBANKBRANCH	M	Beneficiary Bank branch
4.	BENENAME	M	Beneficiary name
5.	CRACCOUNT	M	Beneficiary account
6.	DATE	M	Value date
7.	DRACCOUNT	M	Source account
8.	DRBRANCH	M	Source account branch
9.	DRCCY	M	Source account currency
10.	NAME	O	Beneficiary Name
11.	TXNCURRENCY	M	Transaction currency
12.	BANKCOUNTCODE	O	Beneficiary bank country code
13.	BENEBANKNM	O	Beneficiary bank name
14.	BENECITY	O	Beneficiary city
15.	BENECOUNTRY	O	Beneficiary country
16.	BICCODE	O	BIC code
17.	ABACOD	O	Bank ABA code

### 8.2 FOR CONSOL

Sr.No	Fin Mapping	Mandatory / Optional	Description
18.	DRCCY	O	Debit account currency
19.	TOTAMOUNT	O	Total transaction amount
20.	TXNCURRENCY	O	Transaction currency
21.	COMMONDATE	O	Transaction date
22.	DRBRANCH	O	Debit Account branch
23.	DRACCOUNT	O	Debit Account Number

### 8.3 FOR CONTROL / TRAILER

Sr.No	Fin Mapping	Mandatory / Optional	Description
1.	CRAMOUNT	O	Total amount of transaction
2.	CRCOUNT	O	Total number of records