

# Oracle Banking Enterprise Limits and Collateral Management

## ELCM Interface with FCUBS/OBCL/External System Integration User Guide



Release 14.7.0.0.0

F75024-01

November 2022

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# 1

## Preface

### 1.1 Introduction

This topic provides information about the Introduction data segment Preface stage.

This document is designed to help acquaint you with the integration among Oracle FLEXCUBE products namely; Oracle Banking Enterprise Limits and Collateral Management system (FCELCM), Oracle FLEXCUBE Universal Banking Solutions (FCUBS) and Oracle Banking Corporate Lending (OBCL).

Besides this user manual, while maintaining the interface related details, you can invoke the context sensitive help available for each field. This help describes the purpose of each field within a screen. You can obtain this information by placing the cursor on the relevant field and pressing the <F1> key on the keyboard.

### 1.2 Audience

Brief Introduction about the Intended Audience in the Preface stage.

This Manual is intended for the following User/User Roles:

**Table 1-1 Audience Role and Funcion**

Role	Function
Back office data entry Clerks	Input functions for maintenance related to the interface
Back office Managers/Officers	Authorization functions
End of day operators	Processing during end of day/ beginning of day
Implementation Partners	Provide customization, configuration and implementation services.

### 1.3 Documentation Accessibility

Brief Introduction about the Documentation Accessibility data segment in Preface stage.

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### 1.4 Organization

Brief Introduction about the Organization data segment in Preface stage.

**Table 1-2 Organization Chapters and Descriptions**

Chapter	Description
Chapter 1	Preface gives information on the intended audience. It also lists the various chapters covered in this User Manual.
Chapter 2	ELCM Integration with OBCL/FCUBS explains the various integration scenarios of ELCM integration with OBCL/FCUBS.
Chapter 3	Annexure provides the technical changes of integration.

## 1.5 [Acronyms and Abbreviations](#)

This topic describes about Abbreviations and descriptions data segment in Preface stage.



**Table 1-3 Abbreviations and Descriptions**

Abbreviation	Description
<b>BC</b>	Bills and Collection
<b>CD</b>	Corporate Deposit
<b>EJB</b>	Enterprise Java Beans
<b>ECM</b>	Oracle Banking Enterprise Collateral Management system
<b>ELCM</b>	Oracle Banking Enterprise Limits and Collateral Management system
<b>ELM</b>	Oracle Banking Enterprise Limits Management system
<b>FCUBS</b>	Oracle FLEXCUBE Universal Banking
<b>JDBC</b>	Java Database Connectivity
<b>JPA</b>	Java Persistence API
<b>LC</b>	Letter of Credit
<b>MM</b>	Money Market
<b>OBCL</b>	Oracle Banking Corporate Lending
<b>ODT</b>	Open Development Tools
<b>POJO</b>	Plain Old Java Object
<b>SQLJ</b>	A SQLJ program is a Java program containing embedded SQL statements.
<b>TD</b>	Term Deposit
<b>XML</b>	eXtensible Markup Language



## 1.6 [Glossary of Icons](#)

This topic describes about the icons and its functions.

**Table 1-4 Icons and Functions**

Icons	Function
	Exit
	Add row

**Table 1-4 (Cont.) Icons and Functions**

Icons	Function
	Delete row
	Option List

## 1.7 [Related Information Sources](#)

This topic describes about the information sources.

Along with this user manual, you may also refer to the following related sources:

- Gateway Services documents.

# 2

## ELCM Integration with OBCL/FCUBS

This topic describes about the ELCM Integration with OBCL/FCUBS.

The ELCM integration with OBCL/FCUBS enables the following:

- ELCM standalone integration with FCUBS and OBCL
- New services for FCUBS/OBCL integration
  - ELCM with FCUBS/OBCL-SYNC Mode
  - ELCM with FCUBS/OBCL-ASYNC Mode
- ELCM co-deployed with FCUBS/OBCL
- Linking LC contract and corporate deposits in collateral

This chapter contains the following sub topics:

[Prerequisites](#)

[Interface of standalone ELCM with FCUBS/OBCL](#)

[Integration Process](#)

[ELCM Co-deployed with FCUBS/OBCL](#)

[LC, TD, BC, CD, and MM Contract to Link in Collateral](#)

### 2.1 Prerequisites

#### 2.1.1 Prerequisites in Oracle Banking ELCM

This topic describes about the prerequisites in oracle banking ELCM Integration with OBCL/FCUBS Process.

The following parameters should be set up in Oracle Banking ELCM.

- In 'CSTB\_PARAM' table, if the 'ELCM\_SETUP\_MODE' is set to 'E' then the POJO call is initiated.
- If the option 'ELCM\_SETUP\_MODE' is not set to 'E', then in 'CSTB\_PARAM' table 'OBCL-ELCM-EXT-CALL' parameter should be maintained.
- If 'OBCL-ELCM-EXT-CALL' is set to 'Y', then in 'CSTB\_PARAM' table 'ELCM-CALL\u0002MODE' parameter is verified.
- If 'ELCM-CALL-MODE' parameter value is set to 'S', then ELCM web service Sync call is made from OBCL.
- If 'ELCM-CALL-MODE' parameter value is set to 'A', then ELCM web service ASync call is made from OBCL.



## 2.2 Interface of standalone ELCM with FCUBS/OBCL

This topic describes about the interface of ELCM with FCUBS/OBCL stage in ELCM Integration with OBCL/FCUBS Process.

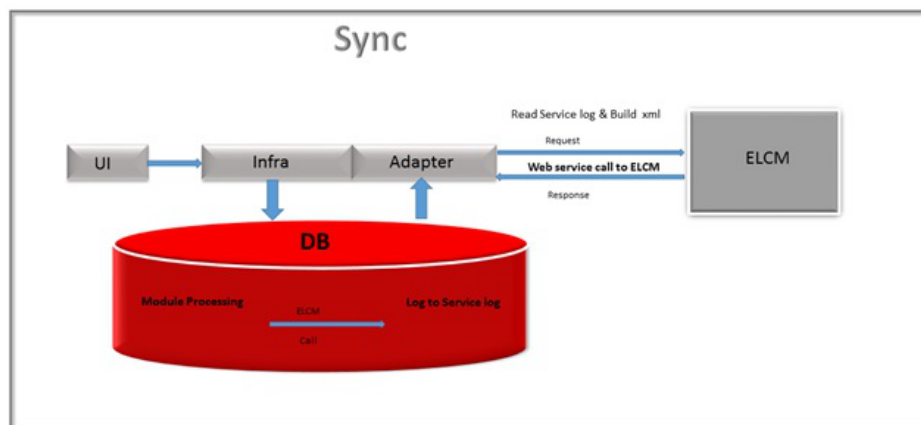
Interface between FCUBS or OBCL to ELCM supports two modes.

- ELCM with FCUBS/OBCL-SYNC mode
- ELCM with FCUBS/OBCL-ASYNC mode

### 2.2.1 ELCM with SYNC Mode

- For this implementation, a new adapter layer is created in FCUBS /OBCL system to interact with ELCM through web services.
- During contract creation, if a limit request is created, FCUBS/OBCL logs the request to the service log tables.
- Adapter layer prepares the request based on the service log entry and invokes the web service of ELCM for further processing.
- Response received from the external limit system is shown during the transaction itself.

Figure 2-1 SYNC Mode

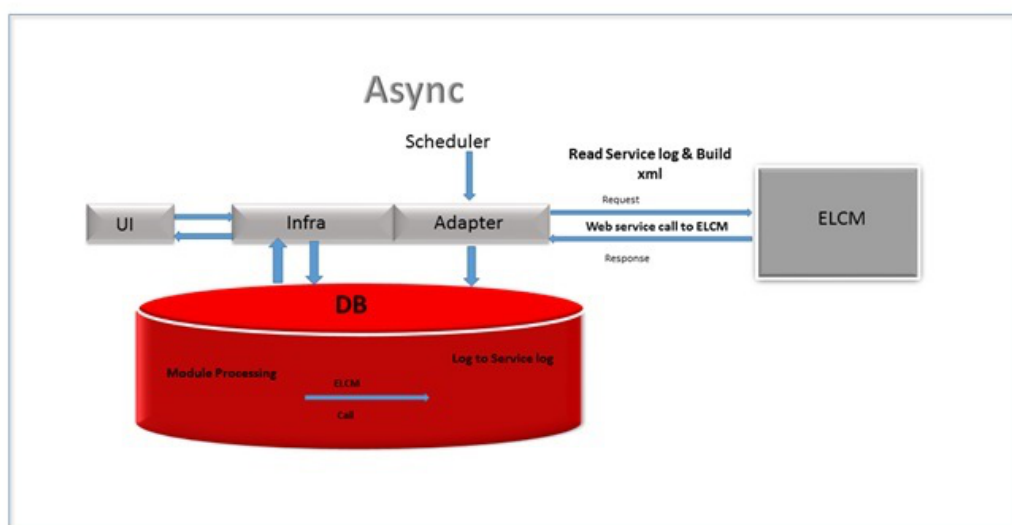


### 2.2.2 ELCM with FCUBS/OBCL-ASYNC Mode

- For ASYNC installation mode, communication between the FCUBS/OBCL and ELCM does not happen in single transaction window.
- FCUBS/OBCL transaction authorization would not be allowed until response from limit system is received.
- During contract creation, if a limit request is created, FCUBS/OBCL logs the request to the service log tables.

- A job/scheduler processes these records from this table, creates a request xml and the sends the request to ELCM for processing.
- If the processing from the ELCM side has any overrides, then an override error message is converted to an information message, sent to FCUBS side stating the record have overrides which needs to be manually accepted/rejected.
- Override error message details and request xml are logged into the override tables in ELCM and to the cstb\_override tables.
- Override Action screen is introduced for accepting or rejecting the override information. In addition, the processing of the transactions are performed after the overrides are accepted or rejected.

**Figure 2-2 ASYNC Mode**



## 2.3 Integration Process

This topic describes about integration process.

This section contains the following subtopics:

[Maintaining Override Action](#)

[Querying Valid Lines](#)

[External System Maintenance](#)

[Configure Accounting System for a Host Code](#)

[Maintain Integration Parameters](#)

[ELCM Web Services](#)

## 2.3.1 Maintaining Override Action

Specify User ID and Password, and login to Homescreeen.

- Type **GEDOVDAC** in the field at the top right corner of the application toolbar and click the adjoining arrow button.

The **Override Action** screen is displayed.

**Figure 2-3** Override action

On Maintain Override Action screen, specify the fields. For more information on fields,

**Table 2-1** Override Action fields and description

Field	Description
<b>Message ID</b>	Indicates an unique message ID. The adjoining option list displays all the valid message IDs. You can select the appropriate one.
<b>User Reference</b>	The user reference number gets defaulted once you select the message ID. The reference number is the identification that you specify for searching the messages. The User reference is the OL contract reference number and you can query the overrides based on the contract reference.
<b>Calling System</b>	Indicates the source system that calls ELCM. For example, OBCL or FCUBS.
<b>Request Sequence Number</b>	This is a DB sequence number generated by the system which is maintained along with message ID to make a composite key.
<b>Override Sequence Number</b>	Indicates the number of overrides for a single transaction. For example, if there are 2 overrides for single transaction it shows as 2 different overrides.

**Table 2-1 (Cont.) Override Action fields and description**

Field	Description
<b>Request ID</b>	Unique id for the Request XML that comes from the external system.
<b>Error Code and Error Message</b>	The overrides in the ELCM while booking the contract is displayed here along with the error message and error code. You have to accept or reject these overrides.
<b>Accept and Reject</b>	<p>If 'Accept' button is clicked, the system allows you to process the transaction.</p> <p>If 'Reject' button is clicked, the overrides are rejected and you have to delete the transaction and book a new transaction.</p> <p>Click 'Request Details', the 'Override Request Details' screen appears. The following details are fetched from the external system.</p> <ul style="list-style-type: none"> <li>• Status - The status of the override is displayed. <ul style="list-style-type: none"> <li>– O – The override is open, that is, pending for approval or rejection</li> <li>– S – Accepted</li> <li>– R - Rejected</li> </ul> </li> <li>• User Reference - Contract reference is displayed.</li> <li>• Linkage Reference Number - The reference number of Limit attached in the contract is displayed.</li> <li>• Customer Number - Indicates the customer CIF</li> <li>• Limit Type - Type of the limit attached. Collateral – C, Liability – L, Facility - F and Collateral Pool - P</li> <li>• Utilization Currency - Indicates the contract currency.</li> <li>• Utilization Amount - Indicates the contract amount.</li> <li>• Error Code - ELCM override code displaying during contract creation.</li> <li>• Calling System - Indicates the source system that calls ELCM. For example, OBCL or FCUBS.</li> </ul>

### 2.3.2 Querying Valid Lines

FCUBS requires limit details for linkages at a module level. In this case, FCUBS interacts with the ELCM systems and request for valid limit details for the customer. Response received from the limit systems are displayed for linkages.

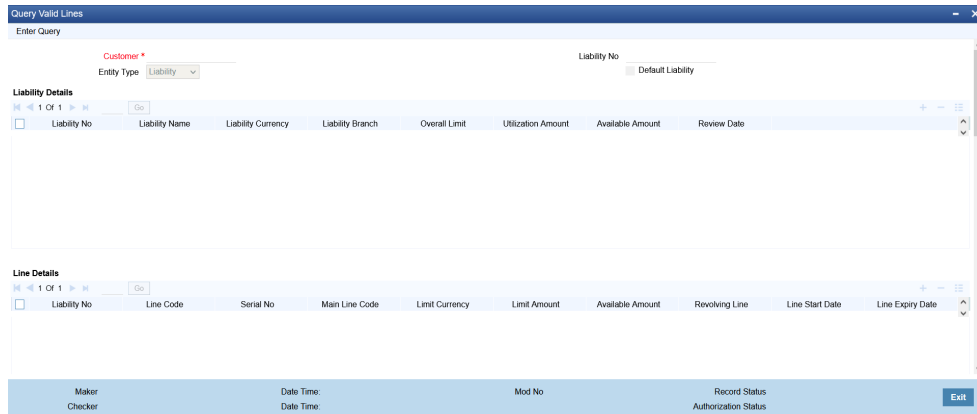
- A new web service 'ELValid Limit Service' is developed in ELCM which returns all the valid lines from facility, collateral, and collateral pool.
- 360 customer view also invokes the 'ELValidLimitService' for displaying the limit details.

ELCM process web service request from the FCUBS and sends response back to FCUBS with valid line details.

- Type **GEDQVLLN** in the field at the top right corner of the application toolbar and click the adjoining arrow button.

The **Query Valid Lines** screen is displayed.

**Figure 2-4 Query Valid Lines**



On **Query valid line** screen specify the fields. For more information on fields,

**Table 2-2 Query Valid Lines**

Fields	Description
<b>Customer</b>	Specify the customer code. The adjoining option list displays all the valid customer codes. You can select the appropriate one.
<b>Entity Type</b>	Obligation, system fetches details of collaterals of obligation type wherein customer given is the guarantor CIF.
<b>Liability No</b>	Select the Liability Number. You can query the valid lines on the basis of Customer no or/and Liability no.
<b>Default liability</b>	When a customer is linked to multiple liabilities by checking default liability, system fetches details of selected entity type/ALL entities belonging to the liability with which customer is having default linkage.  When default liability is unchecked, system fetches details of selected entity type/ALL entities belonging to the liability to which customer is linked and selected against the liability number.  When no liability number is selected, system fetches details of selected entity type/ALL entities belonging to all the liabilities to which customer is linked.

All the details of the Customer no or/and Liability no can be viewed in the Limit Type sections.

### 2.3.3 External System Maintenance

- Type **GEDEXMNT** in the field at the top right corner of the application toolbar and click the adjoining arrow button.

The **External System Maintenance** screen is displayed.

**Figure 2-5 External System Maintenance**

On **External system maintenance** screen, specify the fields. For more information on fields.

**Table 2-3 External system maintenance Fields and its description.**

Fields	Description
<b>External System Code</b>	A unique code for maintaining external system details, that is for WSDL URL. For example, external system code for OBCL is OBCL, for FCUBS it is ROFC.
<b>Description</b>	This field is optional. It describes about external system code. For example, if you have multiple ROFCs you can differentiate in description.
<b>External System</b>	Indicates external system class. You can either select 'FCUBS' or 'Others' from the dropdown list.
<b>External System User ID</b>	Indicates the user ID used for login.
<b>Module ID</b>	Indicates the module code used for external system. For example, TD, ST, OL, MM, and so on.
<b>WSDL Link</b>	Indicates the link to access the web service.

The following table indicates the maintenance required for ROFC interface.

**Table 2-4 ROFC interface**

External System	Module	Description
ROFC	CASA	Service to be invoked in ROFC during facility modification
ROFC	OVD	Service to be invoked in case of deferred override response or dua-auth response
ROFC	OB	Service to be invoked to send guarantee collateral details
ROFC	LC	Service to send LC collateral linkage details
ROFC	TD	Service to block TD
ROFC	CD	Service to block CD

The following table indicates the maintenance required for OBCL interface.

**Table 2-5 OBCL interface**

External System	Module	Description
OBCL	OVD	Service to be invoked in case of deferred override response or dual-auth response

## 2.3.4 Configure Accounting System for a Host Code

You can configure the accounting system using host code in the **Host Parameter** screen. This screen captures all the external system details for the given host code.

- Type **GEDHSTMN** in the field at the top right corner of the application toolbar and click the adjoining arrow button.

The **Host Param Maintenance** screen is displayed.

**Figure 2-6 Host Param Maintenance**

On **External System Maintenance** screen, specify the fields. For more information on fields.

**Table 2-6 External system maintenance fields and description.**

Field	Description
<b>Host Code</b>	Specify the host code.
<b>Host Description</b>	Specify the brief description for the host
<b>Accounting System Code</b>	Specify the accounting system code.

## 2.3.5 Maintain Integration Parameters

You have to maintain integration parameters for **External LOV** and **ELCM Utilization**. This maintenance must be done for all branches. This maintenance is done through **Integration Parameters Maintenance** screen.

- Type **IFDINPRM** in the field at the top right corner of the application toolbar and click the adjoining arrow button.

The **Integration Parameters Maintenance** screen is displayed

**Figure 2-7 Integration Parameters Maintenance**

You need to maintain the integration parameters for the following:

- External Lov – ExtLovService
- ELCM Utilization – ELUtilizationService

### External Lov

**Table 2-7 External Lov - fields and description**

Fields	Description
<b>External System</b>	External system name is specified here. For example, OLELCM
<b>Service Name</b>	The service name for which the maintenance is done. For example, ELUtilization Service for ELCM and ExtLovService for External LovExtLovService.
<b>Communication Channel</b>	The communication channel like REST, CUSTOM, WEB SERVICE, and so on are specified here.
<b>Communication Mode</b>	The communication mode can be SYNC/ASYN.
<b>Rest Service IP</b>	You have to maintain the IP address. For example, ELCM IP.
<b>Rest Service Port</b>	You have to maintain port details. For example, ELCM Port.
<b>Rest Service Pattern</b>	You have to maintain rest service pattern. For example, LovService
<b>Rest Service Context</b>	You have to maintain rest service context. For example, FCJNeoWeb
<b>External User</b>	ELCM user should have access to all branches and autoauth.

### ELCM Utilization



**Table 2-8 ELCM Utilization fields and description.**

User elements	Description
<b>External System</b>	External system name is specified here. For example, OLELCM.
<b>Service Name</b>	The service name for which the maintenance is done. For example, ELUtilizationService for ELCM and ExtLovService for External LovExtLovService.
<b>Communication Channel</b>	The communication channel like REST, CUSTOM, WEB SERVICE, and so on are specified here.
<b>Communication Mode</b>	The communication mode can be SYNC/ASYNC.
<b>WS Service Name</b>	The service name needs to be maintained here. For example, ELUtilizationService.
<b>WS Endpoint URL</b>	The WSDL of the services are maintained here. For example, ELCM utilization service WSDL link
<b>WS User</b>	ELCM user should have access to all branches and autoauth.
<b>External User</b>	ELCM user should have access to all branches and autoauth.

## 2.3.6 ELCM Web Services

A new web service **ELValidLimitService** is developed in ELCM which returns all the valid lines from facility, collateral, and collateral pool. In addition, it also invokes 360 customer view.

The new header tag used in ELCM web services are the following:

### 2.3.6.1 Finalreq

- This header tag is for identifying the override information from the FCUBS system.
- FinalReq is set as “N” if there are overrides in the FCUBS system.
- FinalReq is set as “Y” if there is a no override in the FCUBS system.
- If FinalReq is set as ‘N’, then ELCM processes the records, validate all the business rules but the transaction is not persisted.
- If the FinalReq Flag is set as ‘Y’, then only the records are persisted in ELCM side and the success response is sent to the user.

### 2.3.6.2 Mode

- This header tag is identity installation mode for the ELCM system.
- Mode can be Async(A) ,Sync(S) or default
- If FinalReq is ‘N’ and mode value is set ‘A’, then the override error message is converted to an information message and then updated in the response xml and is returned to the calling system.

### 2.3.6.3 Ext Trip Id

Ext trip is a place holder to send Multi Trip ID specific for ELCM to FCUBS/OBCL once the overrides have been accepted.

## 2.4 ELCM Co-deployed with FCUBS/OBCL

Brief introduction in ELCM Co-deployed with FCUBS/OBCL data segment in ELCM Integration with OBCL/FCUBS Stage.

In a co-deployed system of FCUBS/OBCL and ELCM, the process flow between the systems happens through Application (JPA) layer. Insulation layer is calling the GatewayEJB of ELCM with same request xml.

In the standalone version of ELCM, changes are made to process all ELCM Function IDs in the Application layer itself. To support this, the Function IDs for which persistence was done using POJO in DB was converted to JPA.

ELJBean class has been modified to route to business process flow to application layer instead of database.

## 2.5 LC, TD, BC, CD, and MM Contract to Link in Collateral

Brief Introduction in LC, TD, BC, CD, and MM Contract to Link in Collateral in ELCM Integration with OBCL/FCUBS Stage.

The TD, SB, CA, CD and MM contract can be linked to collateral using External LOV service. ExtLovService is configured for external FCUBS system through IFDINPRM screen.

These term deposits or contracts can be created as a collateral through Accounts and Contracts collateral creation screen (GCDCOLAC). Post linkage a block is created on the TD, SB, CD and CA accounts using the below services.

- TD – FCUBSCustomerService
- CD - FCUBSSTService
- SB/CA- FCUBSCustomerService

# 3

## ELCM Integration with External System

Brief Introduction in ELCM Integration with External System Stage in ELCM Interface with FCUBS/OBCL/External System Integration Process.

Oracle Banking Enterprise Limits and Collateral Management system (OBELCM) supports Oracle Banking Enterprise Limits Management system (OBELM) and Oracle Banking Enterprise Collateral Management system (OBECM) as a separate installation. In addition, it supports integration with external ELM/ECM systems.

You can use OBELM or OBECM to support seamless integration with external ELM/ECM systems.

This chapter contains the following sections:

[OBELM and OBECM co-deployed](#)

[OBELM with External ECM](#)

[OBECM and External ELM](#)

[OBECM and OBELM deployed separately](#)

[Maintenances for OBELM and OBECM](#)

### 3.1 OBELM and OBECM co-deployed

Brief Introduction in OBELM and OBECM co-deployed data segment in ELCM Integration with External System stage.

No changes to this functionality as these modules are co-deployed.

### 3.2 OBELM with External ECM

Brief Introduction in OBELM with External ECM data segment in ELCM Integration with External System stage.

- OBELM system provides external collateral pool service to populate the pool details and valid limit service to fetch the liability details of the customer.
- External ECM system creates the collateral pool in OBELM system by using the services exposed.
- External ECM system provides collateral block service to update collateral details.
- OBELM system calls the collateral block service for any change in the pools linked to facility

### 3.3 OBECM and External ELM

Brief Introduction in OBECM and External ELM data segment in ELCM Integration with External System stage.

- OBECM system provides the collateral block service and valid limit service. Valid limit service fetches the liability and collateral details for any customer.
- External ELM system uses the services exposed to get the collateral details for facility creation.
- External ELM system calls the collateral block service for any change in the collaterals linked to facility.

## 3.4 OBECM and OBELM deployed separately

Brief Introduction in OBECM and OBELM deployed separately data segment in ELCM Integration with External System stage.

- OBELM system provides external collateral pool service to populate the pool details and valid limit service to fetch the liability details of the customer.
- OBECM system creates the collateral pool in OBELM system by using the services exposed.
- OBECM system provides collateral block service to update collateral details and valid limit service to fetch liability details.
- OBELM system calls the collateral block service for any change in the pools linked to facility.

## 3.5 Maintenances for OBELM and OBECM

### 3.5.1 Valid Limit Service

The Valid Limit Service (GEDQVLLN) is modified to fetch the limit details based on limit type.

For more information on valid limit service, refer to Querying Valid Lines section.

# 4

## Annexure

### 4.1 Technical changes

Remediation for SQLJ in 12cR2 and standalone ELCM without POJO classes are introduced.